



# 5G, Edge and IoT/Embedded Building Block Solutions

Connecting the Intelligent World from Devices to the Cloud

Long-life Cycle · High-Efficiency · Compact Form Factor · High Performance · Global Services



Hyper-E



Ultra Short-Depth



Outdoor Edge



Rackmount



Wall-Mount



IPC



SuperEdge



Fanless Compact



Fanless Gateway



Top-Loading Storage

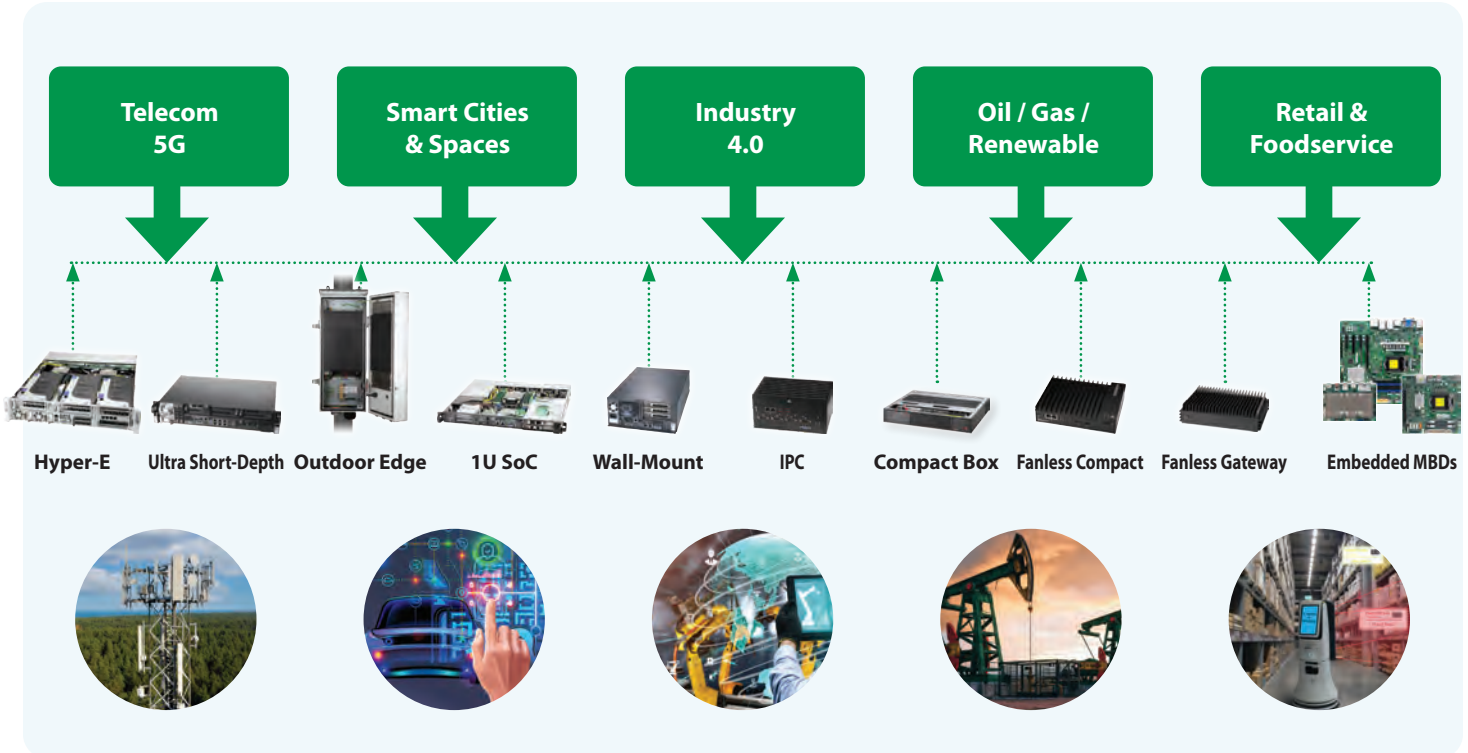


Supermicro Building Block Solutions for 5G Networks, the Intelligent Edge, and Embedded Applications

September 2022

# Vertically Driven – Horizontally Focused

The Supermicro portfolio spans from data center-class performance with the latest 3rd Gen Intel® Xeon® Scalable processors and NVIDIA Ampere GPUs down to embedded-optimized Intel® Atom™ and Core SoCs. 5G/Edge systems now part of Supermicro's Global SKU program.



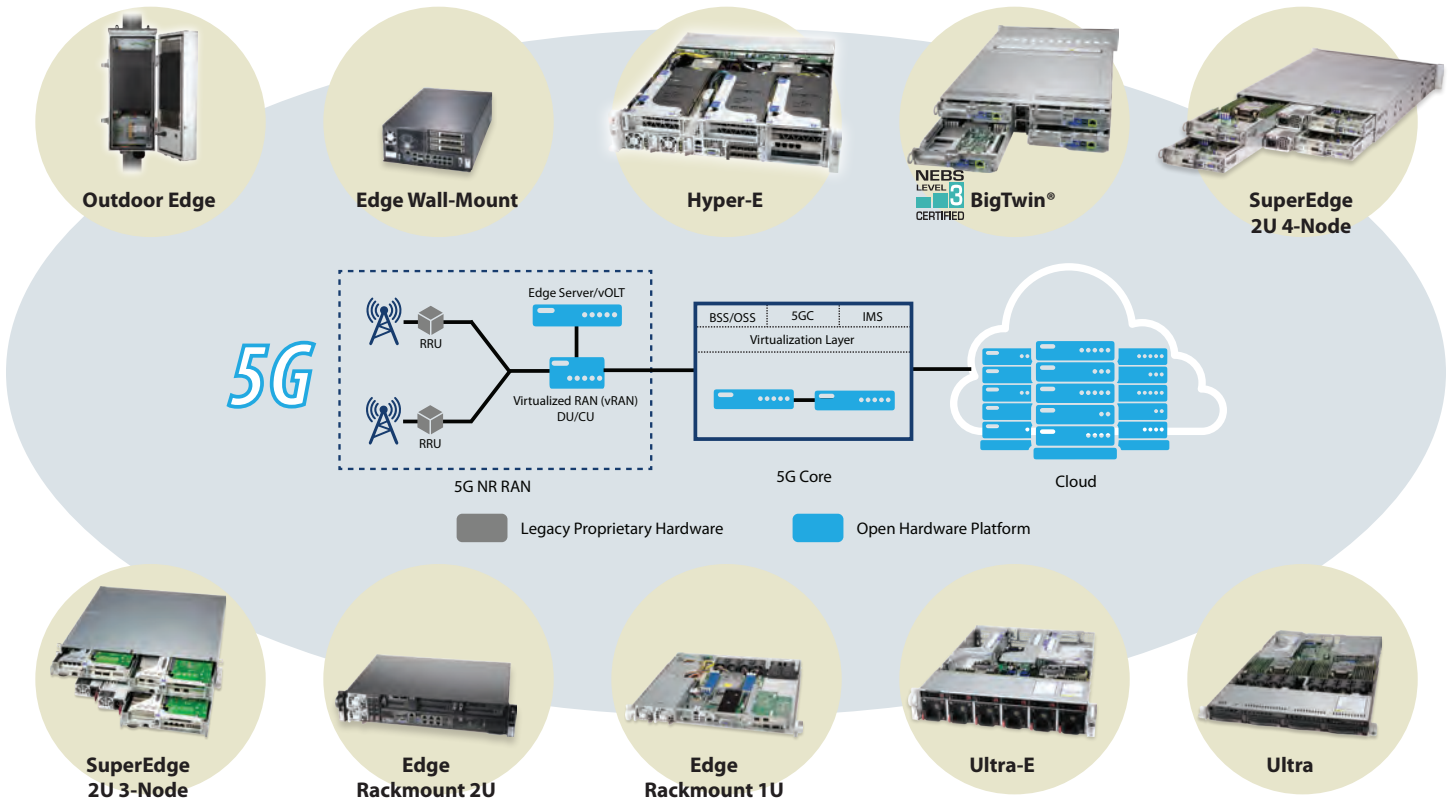
## Supermicro Strengths and Highlights

Supermicro commitment to Telco requirements and demanding environments:







- World-class engineering delivering rapid time-to-market solutions
- Complete platform encompassing Edge – Core – Cloud
- Enhanced scalability & flexibility vs traditional siloed, bare metal, approaches
- High availability and resiliency in architecture enabling non-disruptive upgrades
- Cost effective: procure infrastructure components as needed
- Easily adapted to meet new performance demands
- Flexibility with incorporating new technologies: allows for heterogeneous environments
- Commercial flexibility: OpEx platform as a service (PaaS)
- Extensive partner network: deployment, servicing, B2B relationships
- Integration, lab, and engineering services
- Telecom-compliant systems: NEBS Level 3 certification, DC power supply options, short-depth chassis, front I/O, IP65-rated enclosures



# Optimized Platform for 5G/Telco Applications



## Highlight Systems

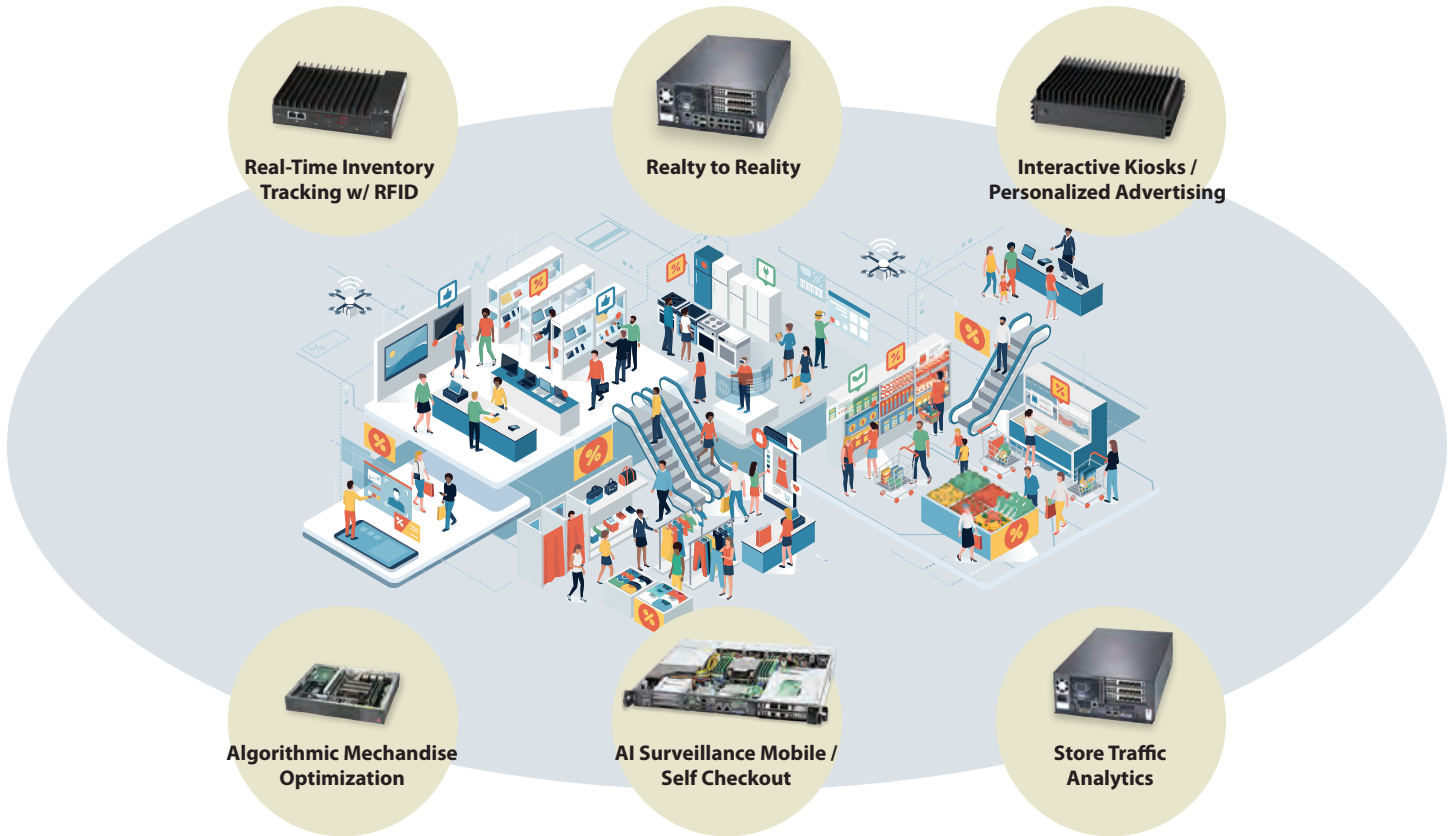
<p><b>NEW!</b></p>  <p><b>SuperEdge</b> SYS-210TP-HPTR SYS-210TP-HPTRD</p> <p>2U 4-node server with 3rd Gen Intel® Xeon® Scalable processor and 2000W redundant and rear access AC and DC power supply options</p>	<p><b>NEW!</b></p>  <p><b>SuperEdge</b> SYS-210SE-31A SYS-210SE-31D</p> <p>2U 3-node short-depth server with 3rd Gen Intel® Xeon® Scalable processor, front access IO and tool-less serviceability</p>	 <p><b>Hyper-E</b> SYS-220HE-FTNRD SYS-220HE-FTNR</p> <p>High-performance, highly-configurable 2U Edge server with dual 3rd Gen Intel® Xeon® Scalable processors and AC and DC power supply options</p>	 <p><b>Edge Rackmount 2U</b> SYS-210P-FRDNGT</p> <p>Ultra short-depth 2U rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor and redundant DC power supplies</p>	 <p><b>Edge Rackmount 1U</b> SYS-110P-FDWTR</p> <p>Short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor and redundant DC power supplies</p>	 <p><b>Outdoor Edge</b> SYS-E403-9D-16C-IPD2 SYS-E403-9D-14CN-IPD2 SYS-E403-9D-16C-IP</p> <p>Configurable Edge server with Intel® Xeon® D processor in an environmentally-hardened enclosure with IP-65 rating and AC and DC power supply options.</p>
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## Solutions






- 5G and LTE virtual RAN including O-RAN DU and CU
- Multi-access Edge computing (MEC) with AI accelerators, VPUs, and FPGAs

# Intelligent Retail and Foodservice

- Providing disruptive AI-based solutions to help retailers, hospitality, and restaurants to take advantage of technological and societal advancements
- Improving customer experience using AI, augmented/virtual reality, digital signage, kiosks, and analytics
- Support for highly secure, Zero Trust, high availability systems to provide complete, optimized solutions – ensuring 100% uptime



## Highlight Systems

					
<b>SYS-E403-12P-FN2T</b>	<b>SYS-110P-FRN2T</b>	<b>SYS-210P-FRDN6T</b>	<b>SYS-E300-9D-8CN8TP</b>	<b>SYS-E302-9A</b>	<b>SYS-E100-12T-E</b>
<i>Configurable wall-mount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Ultra short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Compact server with Intel® Xeon® D processor</i>	<i>Ruggedized compact fanless server with Intel® Xeon® D processor</i>	<i>Ruggedized ultra-compact fanless server with Intel® Core™ processor</i>

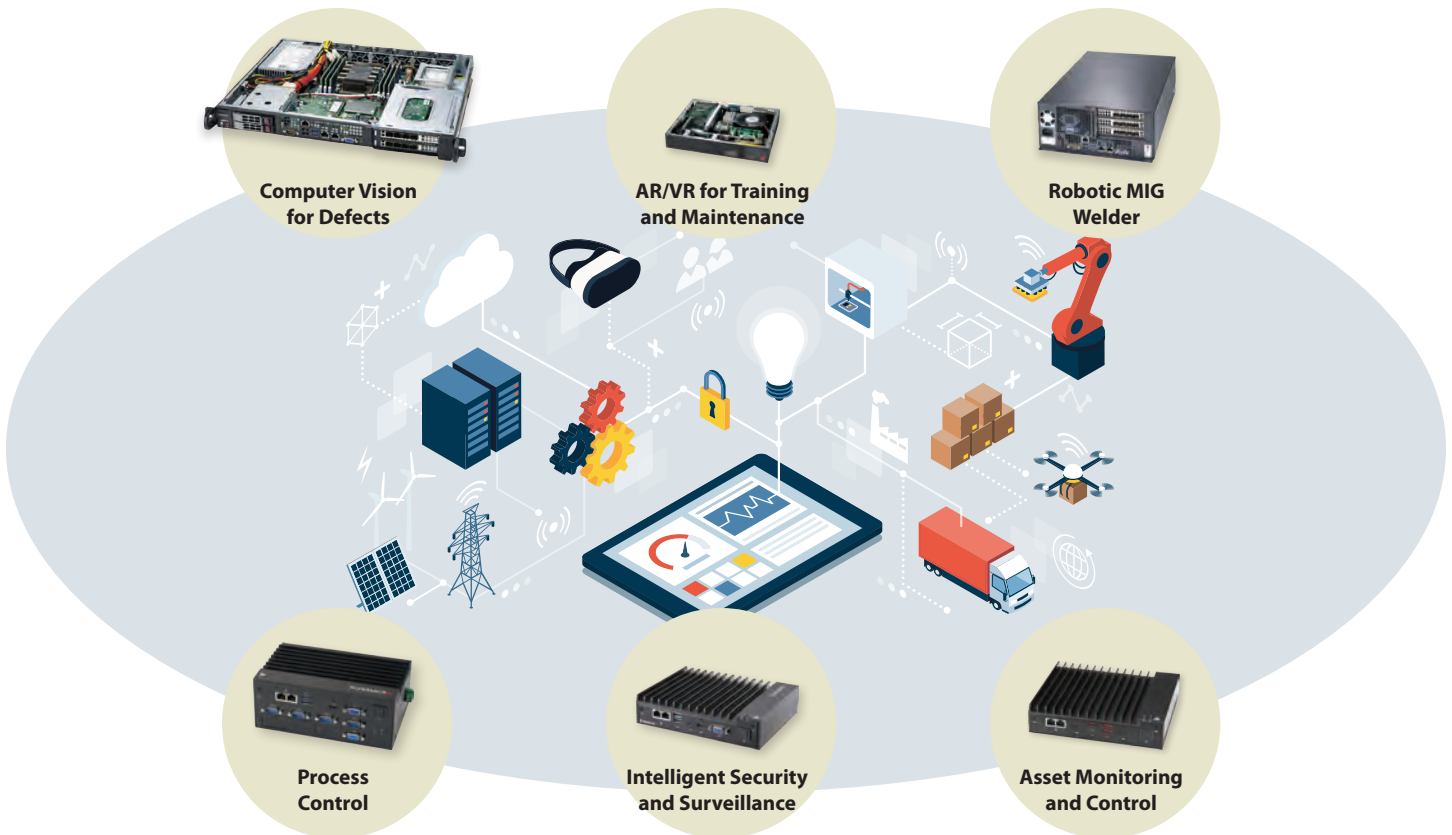
## Solutions

- Retail Edge platforms that orchestrate distributed computing in multiple locations with centralized management
- On-premises analytic platforms for real-time insights into operational and customer dynamics



# Industry 4.0

- Solutions for device connectivity and intelligence at the Edge, enabling streamlined operation and increased automation
- Supporting AI- and computer vision-based controls to improve quality, worker safety, and increased revenue
- Reliable operation of a wide range of optimized compute architectures such as Edge AI in extreme environments



## Highlight Systems



**SYS-E403-12P-FN2T**

*Configurable wall-mount Edge server with 3rd Gen Intel® Xeon® Scalable processor*



**SYS-E302-9A**

*Compact fanless server with Intel® Atom® processor*



**SYS-E100-9W-IA-H**

*Ruggedized compact fanless industrial PC with Intel® Core™ processor*



**SYS-110P-FRN2T**

*Short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor*



**SYS-220HE-FTNR**

*High-performance, highly-configurable 2U Edge server with dual 3rd Gen Intel® Xeon® Scalable processors*



**Embedded MBDs**

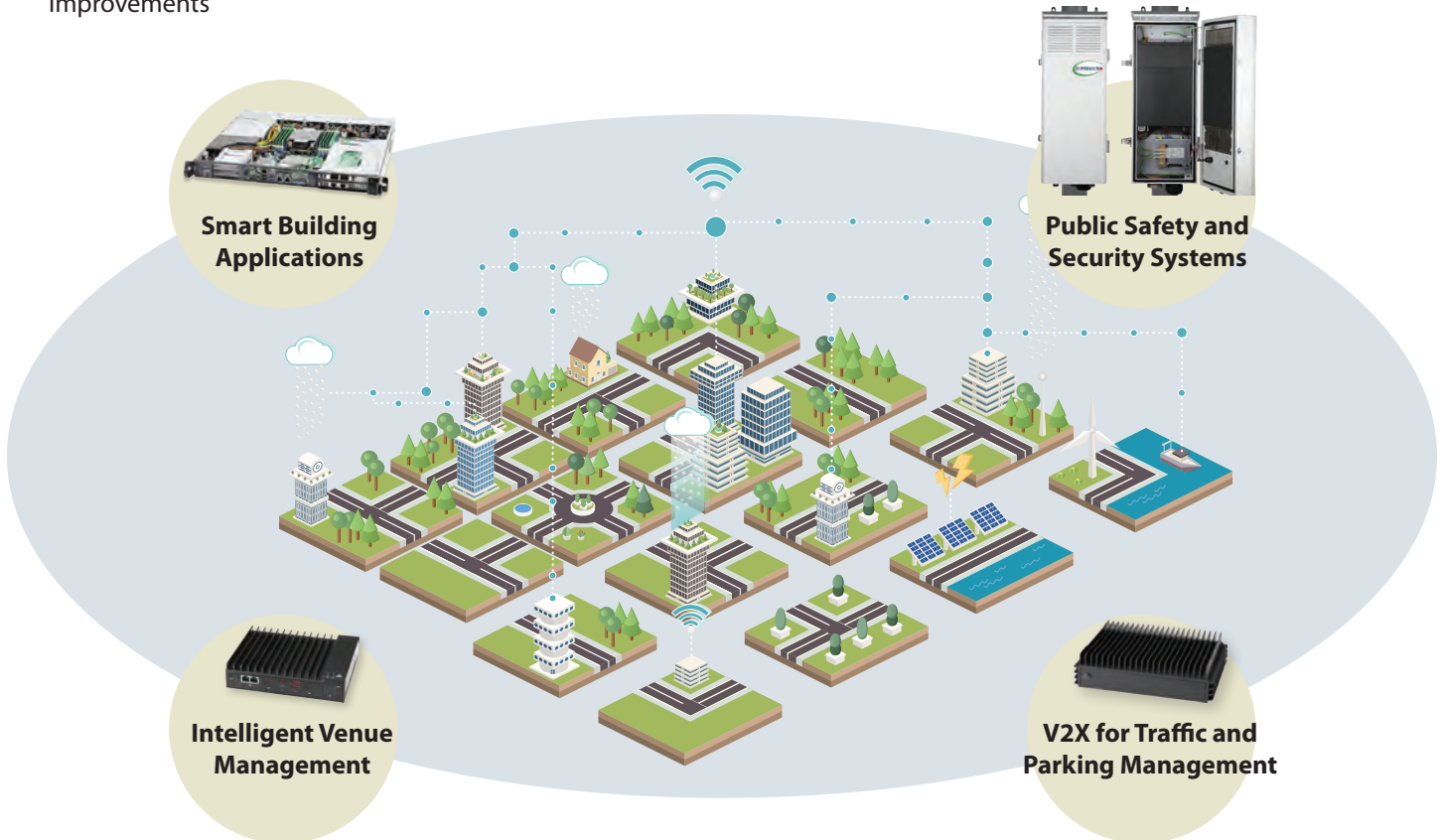
*Power-efficient boards for embedded industrial applications*

## Solutions

- Industry 4.0 Edge AI solutions for robotic controls and logistics
- Industrial systems and applications for production and manufacturing
- Computer vision for quality control including defect detection

# Smart Cities and Smart Spaces

- Edge computing distributed across multiple locations supporting transportation, security, venues, cities, and buildings to improve community safety and quality of experience (QoE) with innovative connected applications
- AI inferencing and visual computing in Outdoor Edge locations, enabling intelligent surveillance and accurate incident reporting for faster response times
- Supporting V2X for parking, traffic, and pedestrian safety, autonomous vehicle support, and public transportation improvements



## Highlight Systems



SYS-E403-9D-16C-IPD2

Configurable Edge server with Intel® Xeon® D processor in an environmentally-hardened enclosure.



SYS-220HE-FTNR

High-performance, highly-configurable 2U Edge server with dual 3rd Gen Intel® Xeon® Scalable processors



SYS-E403-12P-FN2T

Configurable wall-mount Edge server with 3rd Gen Intel® Xeon® Scalable processor



SYS-110P-FRN2T

Short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor



SYS-E302-9D

Ruggedized compact fanless server with Intel® Xeon® D processor



SYS-E100-12T-E

Ruggedized ultra-compact fanless server with Intel® Core® processor

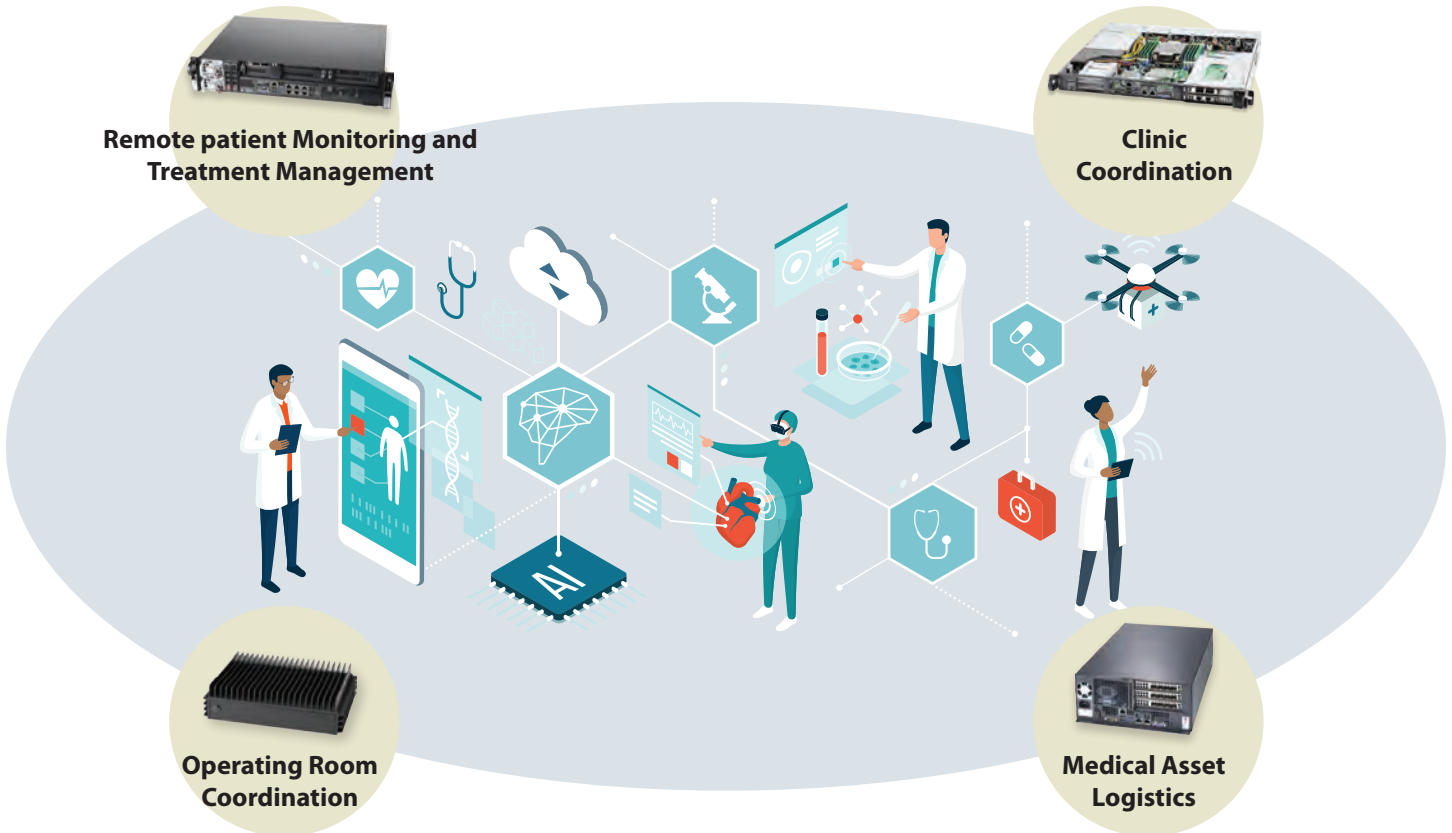
## Solutions

- Distributed AI-powered pole-mount systems for safety and security
- Smart stadium system to provide absolute best fan experience with interactive, responsive services










# Smart Healthcare

- Local Edge computing to optimize the use of critical resources in emergency situations
- Distributed Edge computing to implement contact tracing via real-time analytics
- Remote patient monitoring, augmented by Edge AI inferencing, to improve patient quality of life and outcomes
- Fanless, silent server hardware ideal for delicate medical environments



## Highlight Systems

						
<b>SYS-E403-12P-FN2T</b>	<b>SYS-110P-FRN2T</b>	<b>SYS-210P-FRDN6T</b>	<b>SYS-E300-9D-8CN8TP</b>	<b>SYS-E302-9A</b>	<b>SYS-E100-12T-E</b>	<b>Embedded MBDs</b>
<i>Configurable wall-mount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Ultra short-depth rackmount Edge server with 3rd Gen Intel® Xeon® Scalable processor</i>	<i>Compact server with Intel® Xeon® D processor</i>	<i>Ruggedized compact fanless server with Intel® Xeon® D processor</i>	<i>Ruggedized ultra-compact fanless server with Intel® Core® processor</i>	<i>Power-efficient boards for embedded medical applications</i>

## Solutions

- Remote patient monitoring (RPM) for at-home, in-clinic, and remote locations
- ICU bed optimization for real-time ICU shortfalls and availability, and medical asset management

# X12 3rd Gen Intel® Xeon® Scalable processors

High-efficiency, High-performance Portfolio with Compact Form Factors and Long-life Cycle



The 3rd Gen Intel® Xeon® Scalable processors are the latest CPUs designed for a range of workloads. From the Edge to on-prem and cloud data centers, this new Intel® CPU offers outstanding performance on several benchmarks and includes new features that enable a new level of security and AI acceleration. With more cores at higher frequencies than previous generations of CPUs, the 3rd Gen Intel® Xeon® Scalable processors enable new and innovative applications to be created and deployed from 5G/Telco applications to large-scale analytics. The increase in I/O performance due to PCI-E 4.0 allows faster communication to accelerator options. The amount of directly addressable memory is also increased, allowing more data to be kept in memory.

Data center-class processing at the Edge

Connecting the intelligent world from devices to the cloud

Low-power high-efficiency computing

Long-life cycle

Compact form factors

**Hyper-E**  
Front I/O, DC or AC Power, Optimized for 5G and Telco



SYS-220HE-FTNR-NEBS  
SYS-220HE-FTNRD-NEBS

## System Solutions

SuperEdge	Hyper-E	2U Compact	1U Embedded	1U Embedded	1U Embedded	Wall-mount
<b>NEW!</b> SYS-210TP-HPTR SYS-210TP-HPTRD	<b>NEW!</b> SYS-220HE-FTNRD SYS-220HE-FTNR	SYS-210P-FRDN6T	SYS-110P-FDWTR	SYS-110P-FRDN2T	SYS-110P-FRN2T	SYS-E403-12P-FN2T

## Expanding our Product Portfolio to address 5G, Edge Computing, and Emerging IoT Systems

Supermicro provides innovative and first-to-market technologies that are the building blocks for today's embedded computing platforms. Rapid growth in embedded markets and open standards are driving the need for higher levels of product integration and optimization through virtualization, AI inferencing, network connectivity, remote management, mobile communication, expanded I/O, and device-to-device communications using space and power efficient configurations.

Supermicro's family of high-performance embedded products are optimized for a wide range of applications and solutions.

The Hyper-E Edge server features NEBS Level 3 certification and is purpose built for far-edge deployments to operate in harsh environments with challenging thermal conditions, and withstand seismic events. Hyper-E is designed to meet the performance demands and energy consumption restrictions required by high-density Tier 1 Telco providers, while providing long-lifecycles and maximum uptime.

Supermicro offers many flexible and customized solutions for critical OEM projects, as well as advanced designs for stringent environments, firmware customization, BOM enhancements, and a wide range of legacy IO support.



# X11 Intel® Xeon® Scalable Processors

Single/Dual Processor System Solutions (Cascade Lake/Skylake, LGA 3647)

Supermicro's X11 DP/UP Embedded Motherboards and Systems offer the highest levels of performance, efficiency, security and scalability in the industry with up to: 3TB DDR4 2666MHz in 24 DIMM slots per node, 7 PCI-E slots, SAS 3.0/SATA 3.0/NVMe hot-swap HDD/SSD support, 10GBase-T/10G SFP+/56Gbps FDR InfiniBand networking options, SATA Disk-on-Module (DOM), and IPMI 2.0 plus KVM with dedicated LAN, and can support new SKU of 2nd Gen Intel® Xeon® Scalable processors. The embedded boards offer 7 year life cycle.

## System Solutions



SYS-1019P-FHN2T

Compact • Front Access • 1U WIO System



SYS-E403-9P-FN2T

3-Slot • Wall-Mount • Edge System

## UP Motherboard Solutions

C621 | 28 cores | 165W



X11SPL-F

C622 | 28 cores | 205W



X11SPH-nCTF/nCTPF

C622 | 28 cores | 205W



X11SPW-TF/CTF

C622 | 28 cores | 205W



X11SPi-TF

C622 | 28 cores | 165W



X11SPM-F/TF/TPF

## DP Motherboard Solutions

-N: C621 | 28 cores | 205W  
-NT: C622 | 28 cores | 205W



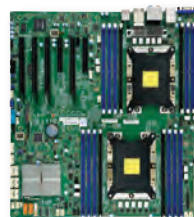
X11DPi-N/NT

C624 | 28 cores | 165W



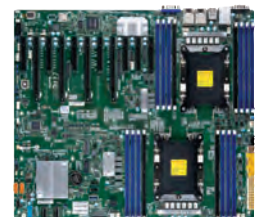
X11DPH-T

C621 | 28 cores | 205W



X11DAi-N

C621 | 28 cores | 205W



X11DPX-T

# X12 Intel® Xeon® D-1700 and D-2700 Processors

*High Core, High Performance*

Supermicro X12 systems support Intel® Xeon® D-1700 and Intel® Xeon® D-2700 processors. The E300, 110D and 510D lines of servers are uniquely designed for ruggedized environments where the power and performance of the new generation Intel Xeon D processors are needed to meet demanding SLAs.

The SYS-E300-12D incorporates an Intel® Xeon® D-1700 processor with 4, 8, or 10 cores and up to 256GB of DDR4 memory in a 1U mini-server case. The SYS-510D model offers larger amounts of storage and a total of 4x1G and 2x25G ethernet ports, while the SYS-110D servers contain Intel Xeon D-2700 series CPUs with up to 20 cores and 512GB of memory.

## System Solutions



SYS-110D-4C-FRAN8TP  
SYS-110D-8C-FRAN8TP  
SYS-110D-16C-FRAN8TP  
SYS-110D-20C-FRAN8TP

*Intel® Xeon® D-2700 series*  
4/8/16/20 cores



SYS-110D-4C-FRDN8TP  
SYS-110D-8C-FRDN8TP  
SYS-110D-16C-FRDN8TP  
SYS-110D-20C-FRDN8TP

*Intel® Xeon® D-2700 series*  
4/8/16/20 cores



SYS-510D-4C-FN6P  
SYS-510D-8C-FN6P  
SYS-510D-10C-FN6P

*Intel® Xeon® D-1700 series*  
4/8/10 cores



SYS-E300-12D-4CN6P  
SYS-E300-12D-8CN6P  
SYS-E300-12D-10CN6P

*Intel® Xeon® D-1700 series*  
4/8/10 cores

## Motherboard Solutions

D-2712T | 4 Core |  
65W



X12SDV-4C-SPT8F

D-2733NT | 8 Core |  
80W



X12SDV-8C-SPT8F

D-2775TE | 16 Core |  
100W



X12SDV-16C-SPT8F

D-2796NT | 20 Core |  
120W



X12SDV-20C-SPT8F

D-1718T | 4 Core |  
46W



X12SDV-4C-SP6F

D-1736NT | 8 Core |  
67W



X12SDV-8C-SP6F

D-1747NTE | 10 Core |  
80W



X12SDV-10C-SP6F



# X11 Intel® Xeon® D-2100 Processors

High Core, High Performance (FCBGA 2518, SoC)

Supermicro X11 Generation of Motherboards/Servers support Intel® Xeon® D-2100 (Formerly Skylake-D) series system-on-chip (SoC) processors.

Systems include up to four integrated ports of 10 Gigabit Intel® Ethernet, and up to 512GB of addressable memory with Error Correcting Code (ECC), and Intel® QuickAssist Technology (QAT) provides up to 100Gbps of hardware acceleration for compute-intensive, such as cryptography, encryption, and description.

## System Solutions



SYS-1019D-16C-RAN13TP+  
SYS-1019D-14CN-RAN13TP+  
SYS-1019D-4C-RAN13TP+

Intel® Xeon® D-2100IT/2100NT series  
4/14/16 cores



SYS-1019D-16C-RDN13TP+  
SYS-1019D-14CN-RDN13TP+  
SYS-1019D-4C-RDN13TP+

Intel® Xeon® D-2100IT/2100NT series  
4/14/16 cores



SYS-E403-9D-16C-IPD2  
SYS-E403-9D-14CN-IPD2

Intel® Xeon® D2100IT/D2100NT series  
14/16 cores



SYS-E302-9D

Intel® Xeon® D-2100IT series  
4 cores



SYS-E403-9D-4C-FRN13+  
SYS-E403-9D-14CN-FRN13+  
SYS-E403-9D-16C-FRN13+

Intel® Xeon® D-2100IT/2100NT series  
4/14/16 cores



SYS-E403-9D-4C-FN13TP  
SYS-E403-9D-12C-FN13TP  
SYS-E403-9D-14C-FN13TP  
SYS-E403-9D-16C-FN13TP  
SYS-E403-9D-8CN-FN13TP  
SYS-E403-9D-14CN-FN13TP

Intel® Xeon® D-2100IT/2100NT series  
4/8/12/14/16 cores



SYS-5019D-RN8TP

Intel® Xeon® D-2100IT/2100NT series  
4/14/16 cores



SYS-1019D-16C-FRN5TP  
SYS-1019D-14C-FRN5TP  
SYS-1019D-12C-FRN5TP  
SYS-1019D-FRN5TP

Intel® Xeon® D-2100IT series  
8/12/14/16 cores



SYS-1019D-FHN13TP  
SYS-1019D-4C-FHN13TP  
SYS-1019D-14CN-FHN13TP  
SYS-1019D-16C-FHN13TP

Intel® Xeon® D-2100IT/2100NT series  
4/8/14/16 cores



SYS-E300-9D-8CN8TP  
SYS-E300-9D-4CN8TP  
SYS-E301-9D-8CN8TP

Intel® Xeon® D-2100IT/2100NT series  
4/8 cores



SYS-5019D-FN8TP  
SYS-5019D-4C-FN8TP

Intel® Xeon® D-2100IT/2100NT series  
4/8 cores



SYS-1019D-FRN8TP

Intel® Xeon® D-2146NT  
8 cores

## Motherboard Solutions

D-2123IT | 4 Core |  
60W



X11SDV-4C-TLN2F

D-2141I | 8 Core |  
65W



X11SDV-8C-TLN2F  
X11SDV-8C+-TLN2F

D-2166NT | 12 Core |  
85W



X11SDV-12C-TLN2F

D-2183IT | 16 Core |  
100W



X11SDV-16C-TLN2F  
X11SDV-16C+-TLN2F

D-2146NT | 8 Core |  
80W



X11SDV-8C-TP8F

D-2166NT | 12 Core |  
85W



X11SDV-12C-TP8F

D-2183IT | 16 Core |  
100W



X11SDV-16C-TP8F

# X11 Intel® Xeon® E-2100 and E-2200 Processors

High Core, High Performance (FCLGA 1151)

Supermicro X11 Motherboards and Servers support Intel® Xeon® E-2100 and E-2200 (Coffee Lake / Refresh) Series processors with enterprise-class reliability and performance, offering server-class motherboards and entry-level servers. Intel® Xeon® E introduces the first 6-core/12-Thread processors with optimized 14 nm technology. These processors offer thermal design power (TDP) options of (35W - 95W) to fit specific designs configurations with performance and low-power requirements. The E series processors are ideally suited for a wide range of embedded/IoT, Networking and Storage Applications.

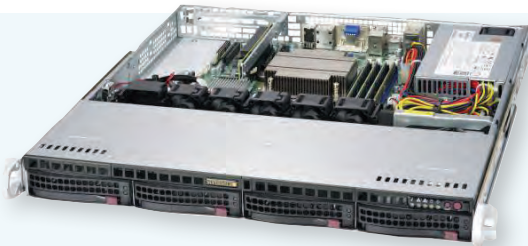
## System Solutions

### SYS-1019C-FHTN8 1U • 15" depth

- Up to 128GB ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- 8x 1GbE, 1 dedicated IPMI LAN
- 1 VGA, 2 USB 3.1, 2 USB 2.0
- 1 PCI-E 3.0 x16
- Dual M.2 M key (22110/2280)
- 2x 2.5" Hot Swap, 2x 2.5" Internal SATA3 Drive Bay



X11SCM-F  
8 cores | 80W



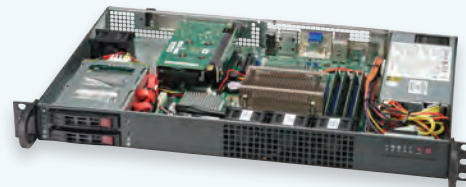
X11SCZ-F  
8 cores | 95W

### SYS-5019C-MHN2 1U • 19.8" depth

- Up to 128GB ECC UDIMM, up to DDR4-2666MHz; 4 DIMM slots
- 1 PCI-E 3.0 x16 slot
- 4 Hot-swap 3.5" drive bays
- Dual LAN with Intel® Ethernet Controller i219LM and i210AT
- 1U 350W Multi-output Platinum Level power supply

### SYS-1019C-HTN2 1U • 111.3" depth

- Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- Remote management via dedicated IPMI BMC
- 4 USB 3.1
- 2 DP, DVI-I, VGA, Audio
- PCI-E 3.0 x 16 HH/HF slot; M.2 (M key, 22110/80, PCI-E 3.0 x4/SATA)



X11SCZ-F  
Up to 8 cores | 80W

## Motherboard Solutions

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W



X11SCM-F



X11SCM-LN8F



X11SCH-F



X11SCH-LN4F



X11SCZ-F



X11SCW-F

# X12 Intel® Xeon® W-1200/10th Gen Core Processors

Up to 10 Cores with W480E or Q470E Chipset (Comet Lake, LGA 1200)

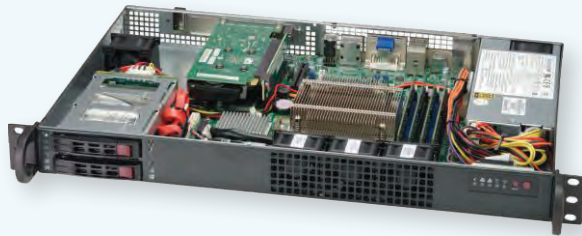


Supermicro's newest generation X12 UP Embedded Motherboards with Intel's Xeon® W-1200 series and 10th Generation Core i9/i7/i5/i3/Pentium/Celeron series processor offer the highest levels of performance, efficiency, security and scalability in the industry with up to: 128GB DDR4 2933MHz in four DIMM slots, CPUs up to 10 cores, PCI-E slots with bifurcation support, USB 3.2 Gen 2, M.2 E/M-keys, and SATA 3.0 (6Gbps).

Designed with performance, reliability, manageability, and long-life support in mind, Supermicro's single processor motherboards are the perfect solution for a variety of multitasking and heavy workload applications.

## System Solutions

Compact 1U Embedded System



SYS-110C-FHN4T

Mini-1U Embedded System



SYS-E300-12C

## Motherboard Solutions

W480E  
Up to 10 cores | 125W  
2 x 10G Base-T + 2 x 1G Base-T



X12SCZ-TLN4F

W480E  
Up to 10 cores | 65W  
2W Audio Amplifier



X12SCV-LVDS

W480  
Up to 10 cores | 125W



X12SAE

W480  
Up to 10 cores | 125W



X12SCA-F

W480E  
Up to 10 cores | 125W  
2 x 1G Base-T



X12SCZ-F

Q470E  
Up to 10 cores | 125W  
VGA, HDMI, DVI-D, DP



X12SCQ

Q470E  
Up to 10 cores | 125W  
2 x 1G Base-T



X12SCZ-QF



# X10 Intel® Xeon® D-1500 Processors

High Core, High Performance, Low Power (FCBGA 1667, SoC)

Supermicro X10 Motherboards and Servers support Intel® Xeon® D-1500 (Formerly Broadwell-DE) series system-on-chip (SoC) processors. Based on Intel's third-generation 64-bit system on a chip (SoC) and 14 nm silicon technology, the Supermicro product lineup offers processor scalability from two up to sixteen cores, making it the perfect choice for a broad range of high-density, high-performing, midrange-power solutions (TDP ~25W to 65W) that brings superior design solutions to the intelligent Edge.

The Intel® Xeon® processor D-1500 product family is offered with a seven-year extended supply life and 10-year reliability for Internet of Things designs.

## Mini-ITX System Solutions

### SYS-5018D-FN4T\*1U • 9.8" depth

- Front I/O, Space-efficient, compact design
- Intel® Xeon® processor D-1541, Single socket FCBGA 1667; 8-Core, 45W
- 1 PCI-E 3.0 x 16, 1x M.2 PCI-E 3.0 x4 (Supports NVMe, AHCI) 2242/2280
- Up to 128GB ECC RDIMM DDR4 2400MHz or 64GB ECC/non-ECC UDIMM in 4 sockets
- Dual 10GbE LAN and Intel® i350-AM2 dual port GbE LAN



Intel® Xeon® D-1541  
8 cores | 45W

D-1587 | 16 Core  
| 65W



X10SDV-16C+-TLN4F

D-1557 | 12 Core  
| 45W



X10SDV-12C-TLN4F

D-1528 | 6 Core  
| 35W



X10SDV-6C-TLN4F

D-1567 | 12 Core  
| 65W



X10SDV-12C+-TLN4F

D-1518 | 4 Core  
| 35W



X10SDV-4C+-TLN4F

D-1518 | 4 Core  
| 35W



X10SDV-TP8F

D-1508 | 2 Core  
| 25W



X10SDV-2C-TLN2F

D-1567 | 65W



X10SDV-12C+-TP8F

D-1541 | 8 Core | 45W



X10SDV-TLN4F

D-1541 | 8 Core | 45W



X10SDV-8C-TLN4F

D-1541 | 8 Core | 45W



X10SDV-F

D-1541 | 8 Core | 45W



X10SDV-8C+-LN2F

D-1518 | 4 Core | 35W



X10SDV-4C-TLN4F

D-1587 | 16 Core | 65W



X10SDV-7TP8F

D-1521 | 4 Core | 45W

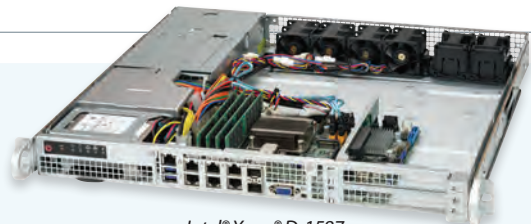


X10SDV-4C-TLN2F

## Flex-ATX System Solutions

### SYS-1018D-FRN8T1U • 16.9" depth

- Intel® Xeon® SoC 16 Core, 32 Threads, 65W, 1.7~2.3GHz
- VT-d/x, TXT, AES-NI, Intel® Xeon® RAS, Built-in 10GbE
- Up to 128GB 2133MHz DDR4 RDIMM or 64GB 2133MHz ECC/Non-ECC UDIMM
- IPMI 2.0 with KVM Dedicated port
- 6x GbE LAN and Dual 10G SFP+



Intel® Xeon® D-1587  
16 cores | 65W

D-1587 | 16 Core  
| 65W



X10SDV-7TP8F

D-1518 | 4 Core | 35W



X10SDV-TP8F

D-1537 | 8 Core | 35W



X10SDV-7TP4F

D-1518 | 4 Core | 35W



X10SDV-4C-7TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-7TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-TP8F

D-1518 | 4 Core | 35W



X10SDV-4C+-TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-TP4F

\* Microsoft Azure Certified. Please see page 44 for complete list.

# X11 Intel® Xeon® E3-1200 v6/v5

(Kabylake/Skylake, FCLGA 1151)

Supermicro X11 Single Processor servers now support E3-1200 v6/v5 (Kabylake/Skylake) series processors. Server motherboards coupled with the long-life C236 PCH Chipset provide up to 7 years of extended life for embedded applications. These systems deliver breakthrough performance, high performance graphics, stronger security and power efficiency over previous generation products. The systems are ideal for a wide range of IoT applications, including industrial control and automation, retail kiosks and medical devices.

## System Solutions

### SYS-5019S-M2, 1U • 19.85" depth

- Up to 4 DIMMs, 64 GB of 2400MHz DDR4 UDIMM ECC/NON-ECC
- Intel® Xeon® E3-1200 v6/v5 & 7th/6th Gen Intel® Core™ i7, i5, i3, Pentium®, Celeron® processor in LGA1151 | C236
- 2 DP, DVI-I, total 3x independent display
- 4x 3.5" SATA3 hot-swap drive bays
- Intel® vPro™ and AMT
- 2 Gigabit LAN with AMT
- 1 PCI-E 3.0 x16 FH, HL slot
- 7 year life cycle



Intel® C236  
4 cores | 80W

## Motherboard Solutions

4 cores | 80W



X11SSH-F

4 cores | 80W



X11SSH-LN4F

4 cores | 80W



X11SSH-TF

4 cores | 80W



X11SSH-CTF

4 cores | 80W



X11SSM

4 cores | 80W



X11SSM-F

4 cores | 80W



X11SSL

4 cores | 80W



X11SSL-F

4 cores | 80W



X11SSL-CF

4 cores | 80W



X11SSL-nF

4 cores | 80W



X11SSW-F

4 cores | 80W



X11SSW-TF

4 cores | 80W



X11SSW-4TF

4 cores | 80W



X11SSI-LN4F

4 cores | 80W



X11SSA-F

4 cores | 80W



X11SAE

4 cores | 80W



X11SAE-F

4 cores | 80W



X11SAE-M

4 cores | 80W



X11SSZ-F

4 cores | 80W



X11SSZ-QF

4 cores | 80W



X11SSZ-TLN4F

# A2 Intel® Atom™ C3000

High Density, Low Power Solutions (Denverton, FCBGA 1310)

Supermicro A2 Generation of Motherboards/Servers support Intel® Atom™ Processors C3000 (Formerly Denverton) series system-on-chip (SoC) Processors.

Based on low-power Goldmont microarchitecture and 14-nanometer process technology, this product family extends the scalability of Supermicro Products into industry-leading performance per watt, low thermal design power (TDP), and unprecedented levels of configurable high-speed I/O for accelerated innovation across networking, storage, Internet of Things (IoT), and Scalable solutions. It also offers hardware assist Intel® QuickAssist Technology (Intel® QAT) to accelerate storage compression and cryptographic workloads.

## System Solutions

### SYS-5019A-FTN41U • 9.8" depth

- 1x 3.5" or 4x 2.5" internal drive bays
- 1 PCI-E 3.0 x4, 1 M.2 (M key for SSD, 2242/2280, PCI-E 3.0 x2 or SATA3)
- Up to 256GB ECC RDIMM DDR4 2400MHz or 64GB ECC/non-ECC UDIMM in 4 DIMM slots
- 4 GbE LAN, 1 dedicated IPMI LAN



Intel® Atom™ C3758  
8 cores | 25W

### SYS-5019A-FN5T1U • 9.8" depth

- 1 PCI-E 3.0 x8, 1 M-Key 2242/80 supports PCI-E 3.0 x2/SATA  
1 B-Key 3042/2280 supports PCI-E 3.0 x2/SATA/USB
- 4x 10GbE LAN ports, 1x 1GbE LAN port (IPMI shared LAN), 1x COM, 4x USB 3.0
- SoC controller for 2 SATA3 (6Gbps) ports
- 1x 3.5" or 2x 2.5" HDD



Intel® Atom™ C3958  
16 cores | 31W

Intel® Atom™ C3558  
4 cores | 16W



Intel® Atom™ C3558  
4 cores | 16W

Intel® Atom™ C3758  
8 cores | 25W

Intel® Atom™ 3850  
12 core | 25W

Intel® Atom™ C3338  
2 core | 9W



SYS-E302-9A



SYS-E200-9A



SYS-E300-9A-8CN10P



SYS-5019A-12TN4



SYS-5029A-2TN4

## Motherboard Solutions

### Mini-ITX

C3338: 2 cores | 9W    C3558: 4 cores | 16W    C3758: 8 cores | 25W    C3858: 12 cores | 25W    C3958: 16 cores | 31W    C3958: 16 cores | 31W    C3958: 16 cores | 31W



A2SDi-2C-HLN4F



A2SDi-4C-HLN4F



A2SDi-8C/8C+-HLN4F



A2SDi-12C-HLN4F



A2SDi-16C-HLN4F



A2SDi-H-TP4F



A2SDi-16C-TP8F

### Mini-ITX

C3758: 8 cores | 25W

C3858/C3850: 12 cores | 25W

C3708: 8 cores | 17W

C3858: 12 cores | 25W

C3958: 16 cores | 31W

C3558: 4 cores | 16W

C3758: 8 cores | 25W



A2SDi-H-TF



A2SDi-TP8F/LN4F



A2SDV-8C-TLN5F



A2SDV-12C+-TLN5F



A2SDV-16C-TLN5F



A2SDV-4C-LN8F  
A2SDV-4C-LN10PF



A2SDV-8C-LN8F  
A2SDV-8C-LN10PF



# A1 Intel® Atom™ C2000

High Density, Low Power Solutions (Rangley & Avoton, FCBGA 1283)

Supermicro A1 Generation of Motherboards/Servers support Intel® Atom™ Processors C2000 (Formerly Avoton, Rangeley) series system-on-chip (SoC) Processors.

Based on low-power Silvermont microarchitecture and 22-nanometer process technology, this product family extends the scalability of Supermicro Products into smaller footprints, low power, and hardware assisted encryption/compression engines for networking communications, storage and intelligent systems applications.

This product family offers multi-core processing capabilities (from two cores to eight cores), a range of thermal design power (TDP) from 7 to 20 watts, supports energy-efficient network designs with dual 1G to Dual 10G LAN Ports, Multiple Display capabilities, including fanless embedded designs.

## System Solutions

### SYS-5018A-LTN4 1U • 9.8" depth

- Up to 2 DIMMs, 16GB of DDR3 ECC SODIMM 1333MHz
- 2x 3.5" or optional 4x 2.5" internal SATA2 and SATA3 Drive Bays
- 1x PCI-E 2.0 x8 Slot, 2x USB 3.0, 2x USB 2.0, VGA, COM,
- Quad GbE LAN ports, IPMI 2.0 on Dedicated LAN port
- 200W Gold Level Low-Noise Power Supply



Intel® Atom™ C2358  
2 cores | 7W



Intel® Atom™ C2758  
8 cores | 20W

### SYS-5028A-TN4 Mini Tower

- 4 DIMMs / 64GB of DDR3 ECC SODIMM 1600MHz
- 4x 3.5" hot-swap SATA trays: 2x 2.5" internal HDD Drive Bays
- 1 PCI-E 2.0 x8 Slot, 2 USB 3.0, 2 USB 2.0, VGA, COM,
- Quad GbE LAN ports, IPMI 2.0 on Dedicated LAN port
- 250W Bronze Level Low-Noise Power Supply

Intel® Atom™ C2550  
4 cores | 14W



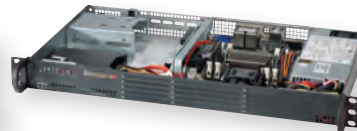
SYS-5018A-MLTN4

Intel® Atom™ C2758  
8 cores | 20W



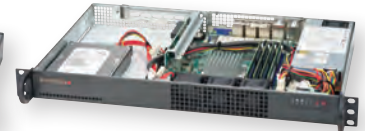
SYS-5018A-FTN4

Intel® Atom™ C2750  
8 cores | 20W



SYS-5018A-TN4\*

Intel® Atom™ C2758  
8 cores | 20W



SYS-5018A-TN7B

## Motherboard Solutions

Mini-ITX		Proprietary		mATX	
-2550F: C2550   4 cores   14W	C2358   2 cores   7W	-2558F: C2558   4 cores   15W	-2550F: C2550   4 cores   14W	-2550F: C2550   4 cores   14W	-2750F: C2750   8 cores   20W
-2750F: C2750   8 cores   20W		-2758F: C2758   8 cores   20W	-2750F: C2750   8 cores   20W	-2750F: C2750   8 cores   20W	
A1SAi-2550F/2750F	A1SRi-2358F	A1SRi-2558F/2758F	A1SA7-2550F/2750F	A1SAM-2550F/2750F	

\* Microsoft Azure Certified. Please see page 44 for complete list.

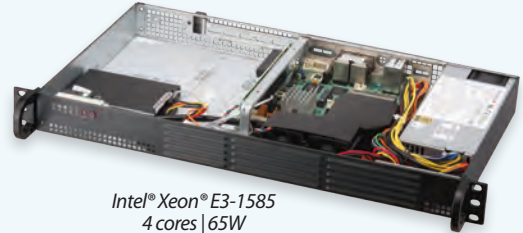
# Intel® Xeon® E3-1500 v5

Pro Graphics P580 GTe4 (FCBGA 1440)

Supermicro X11 Single Processor servers with E3-1500 v5 (Skylake-H) series processors provide up to 26% higher graphics performance than the previous-generation E3-1200 v4 processors. For dense and high-capacity media processing over the net, these systems can deliver up to 18 AVC streams or 8 HEVC streams at 1080p 30 frames per second (FPS), or 2 HEVC streams at 4K 30 FPS.

## SYS-5019S-TN4 1U • 9.8" depth

- Single socket FCBGA 1440 supports Intel® Xeon® processor E3-1585 v5, 8 Threads
- Intel® C236 chipset
- 1x 3.5" or 4x 2.5" HDD
- Up to 32GB Unbuffered ECC SO-DIMM DDR4 2133MHz; 2 DIMM slots
- 1 PCI-E 3.0 x16, 1 Mini-PCI-E with mSATA, 1 M.2 (M Key, 2242/2280)



Intel® Xeon® E3-1585  
4 cores | 65W

4 cores | 45W



X11SSV-M4

4 cores | 65W



X11SSV-M4F

# X11 Intel® Core™ i9, i7, i5, i3, 8th/9th Gen Single Processor

Up to 6 cores with Q370 Chip Set (Coffee-Lake, FCBGA 1151)

Supermicro single processor X11 designs feature the Intel® B360/Q370/H310 chipset which support the Intel® 8th Generation Core™ i7/i5/i3 processor family. With outstanding features that include up to 64GB non-ECC fast DDR4 DRAM in 4 DIMMs, USB 3.0/USB 3.1, PCI-E 3.0 M.2, and SATA 3.0 (6Gbps) HDD. With support for next generation graphics controller, 4K HD graphics resolution and multiple displays. Designed with performance, reliability, manageability and long-life in mind, Supermicro's single processor motherboards are the perfect solution for a variety of multi-tasking, heavy workload applications.

## SYS-E300-9C, Mini-1U • 10" width

- 2 Internal 2.5" fixed drive bays with bracket
- 1 PCI-E 3.0 x16 AOC slot (LP) open slot (space share with top 2.5" drive bay)
- Up to 64GB unbuf. non-ECC SO-DIMM, DDR4-2666Mz; in 2 DIMM slots
- M.2 M key: SATA/PCI-E 3.0 x4, support 2242/2280 length
- M.2 E key: PCI-E 3.0 x1, support 2230 length
- 2x GbE LAN ports, 4 USB 3.1 (2 type A and 2 type C)



Intel® Q370  
8 cores | 65W

Intel® H310: 6 cores | 65W



X11SCV-L

Intel® Q370: 6 cores | 65W



X11SCV-Q

Intel® Q370: 8 cores | 95W



X11SCQ

Intel® H310: 8 cores | 95W



X11SCQ-L

Intel® Q370: 8 cores | 95W



X11SCZ-Q

# Intel® Core™ i7, i5, i3 Single Processor

Higher Performance with improved graphics and better power efficiency (Skylake-S/Kabylake-S)

The 7th/6th Gen Intel® Core™ processors deliver significant improvements in graphics performance that offers stunning visuals for gaming as well as compelling 4K content creation and media playback via AVX 2.0. Offers enhanced security through AES instructions for faster encryption as well as BIOS/FW protection, new I/O connectivity and multiple independent display capabilities.

## System Solutions

### SYS-1019S-M2 Compact 1U • 16.9" depth

- Up to 64GB Unbuffered non-ECC, DDR4-2400MHz in 4 DIMM slots
- Intel® 7th/6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®
- Remote management via IPMI or vPro | Q170
- 2 Gigabit LAN ports, 2x DP, DVI-I, 3 independent displays
- Full Height and Full Length add on card support
- Power redundancy or BBP® support



Intel® Q170  
4 cores | 80W

### SYS-5019S-M2 1U • 19.85" depth



Intel® C236  
4 cores | 80W

- Up to 4 DIMMs, 64 GB of 2400MHz DDR4 UDIMM ECC/NON-ECC
- Intel® Xeon® E3-1200 v6/v5 & 7th/6th Gen Intel® Core™ i7, i5, i3, Pentium®, Celeron® processor in LGA1151 | C236
- 2 DP, DVI-I, total 3x independent display
- 4x 3.5" SATA3 hot-swap drive bays
- Intel® vPro™ and AMT
- 2 Gigabit LAN with AMT
- 1 PCI-E 3.0 x16 FH, HL slot
- 7 year life cycle

### SYS-5029S-TN2 Mini Tower



Intel® Q170  
4 cores | 65W

- Compact Mini Tower 7th/6th Gen. Intel® i7/i5/i3 Core™ Server
- 32GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- 7th/6th Generation Intel® Core™ i7/i5/i3, Pentium and Celeron Processor in LGA1151 Socket | Q170
- Up to 4 Hot-Swap 3.5" SATA3 HDD, 1 internal 2.5" fixed HDD and 1 M.2 (M key 2242/80 PCI-E 3.0 x4)
- 2 Gigabit LAN ports
- Embedded long-life
- Quiet Operation
- 1 slim DVD-ROM drive bay (shared with 1 internal 2.5" drive bay)

## Motherboard Solutions

4 cores | 91W



X11SSQ/L

4 cores | 91W



X11SSZ-QF

4 cores | 91W



X11SSZ-TLN4F/F

4 cores | 91W



X11SSV-Q

4 cores | 91W



X11SSV-LVDS



# Intel® Atom™/ Pentium™ / Celeron® Processors

(Apollo Lake)

Supermicro X11/A2 Generation of Motherboards/Servers support Intel® Atom™ processor x5-E3900, Pentium™ N4200 and Celeron® J3455 (Formerly Apollo Lake) series system-on-chip (SoC) Processors.

Based on Goldmont architecture and utilizing Intel's industry-leading 14 nm process technology, the Supermicro high density, low-power Motherboard/Server solutions provide great options for value-segment buyers who need basic functionality at an affordable price. The solutions are ideal as IoT Gateway/Edge Computing, that focus more strongly on data collection and real-time communication over networks, provide telemetry and usage information helping to drive predictive analytics, even perform inference locally to take actions without latency. Empowers real-time computing in intelligent AIoT applications for retail, industrial and medical, and more.

## System Solutions

### SYS-E50-9AP-WIFI\*

- Built-in Wifi/BT combo module and 2T2R antenna
- IP51 with plastic chassis design for water/dust proof
- Cable-less design for increased reliability and cost efficiency
- Fanless design with palm-size dimension



Intel® Atom™ x5-E3940  
4 cores | 9.5W

Atom™ x5-E3940  
4 cores | 9.5W



SYS-E50-9AP\*

Atom™ x5-E3940  
4 cores | 9.5W



SYS-E50-9AP-L

Atom™ x5-E3940  
4 cores | 9.5W



SYS-E50-9AP-N5

Atom™ x5-E3940  
4 cores | 9.5W



SYS-E100-9AP\*

Atom™ x5-E3940  
4 cores | 9.5W



SYS-E100-9AP-IA\*

Atom™ x5-E3930  
2 cores | 6.5W



SYS-E102-9AP-L\*

**NEW!**  
-C: Celeron J3455 4 cores | 10W  
-E: Atom™ x5-E3940 4 cores | 9.5W



SYS-E102-9AP-LN4-C  
SYS-E102-9AP-LN4-E

Atom™ x5 3940  
4 cores | 9.5W



SYS-E200-9AP

Atom™ x5-E3940  
4 cores | 9.5W



SYS-5029AP-TN2

Pentium™ N4200  
4 cores | 6W



SYS-E100-9APP\*

Pentium™ N3700  
4 cores | 6W



SYS-E200-9B

## Motherboard Solutions

-H/-E: 4 cores | 9.5W  
-L: 2 cores | 6.5W



A2SAP-E/H/L

**NEW!**  
A2SAP-L1: 4 Core/9.5W



A2SAP-L1

-H/-E: 4 cores | 9.5W  
-L: 2 cores | 6.5W



A2SAN-E/H/L

**NEW!**  
-LN4-C: 4 Cores, 10W  
-LN4-E: 4 Cores, 9.5W



A2SAN-LN4-E/C

-H/-E-WOHS: 4 cores | 9.5W  
-L-WOHS: 2 cores | 6.5W



A2SAN-E/H/L-WOHS  
(without heatsink)

4 cores | 9.5W



A2SAV

-L: 4 cores | 9.5W  
-2C-L: 2 cores | 6.5W



A2SAV(-2C)-L

4 cores | 6W



X11SAN  
(with heatsink)

4 cores | 6W



X11SAN-WOHS  
(without heatsink)

4 cores | 6W



X11SAA

4 cores | 6W



X11SBA-F

4 cores | 6W



X11SBA-LN4F

\* Microsoft Azure Certified. Please see page 44 for complete list.







# X13 12th Generation Intel® Mobile Core Processor

Intel® Core™ U-Series multi-chip package (MCP FCBGA-1744)





Supermicro X13 Generation of Motherboards/Servers features the Intel® 12th Generation Core™ i7/i5/i3/ Celeron® processor. Ultra-low-power, Alder Lake U-Series 15W, with 10 Cores/12 threads for balance of power and performance. Outstanding features include up to 64GB of fast DDR5 DRAM in 2 SODIMM, 4 USB 3.2 Gen2, 4 USB 2.0, 1 USB3.0, 3 M.2 with M/B/E-key, 1 Nano-SIM Slot, 4 COM ports, 1 SlimSAS, 12-24V wide range power input and SATA 3.0 (6Gbps) HDD. Up to 96 EU with Intel® Iris® Xe graphics capable of 4K HD graphics resolution and 4 4K displays with 2 HDMI 2.0b/1.4b and two DP1.4 (by type-C Alt mode). Ideal for small form factor, energy-efficient, reliability, manageability, fanless and long-life applications. Suitable for application such as AI Edge , Video conference, Surveillance , Machine vision , Broadcasting POS/KIOSK, Automation Robotic, and Medical Instrument.

## Fanless Compact System Solutions

<b>NEW!</b> Alder Lake-U	<b>NEW!</b> Alder Lake-U	<b>NEW!</b> Alder Lake-U	<b>NEW!</b> Alder Lake-U
			
<b>SYS-E100-13AD-C</b>	<b>SYS-E100-13AD-L</b>	<b>SYS-E100-13AD-E</b>	<b>SYS-E100-13AD-H</b>
12th Generation Intel® Celeron® Processor 7305E Processor, CPU TDP 15W	12th Generation Intel® Core™ i3-1215UE Processor, CPU TDP 15W	12th Generation Intel® Core™ i3-1245UE Processor, CPU TDP 15W	12th Generation Intel® Core™ i3-1265UE Processor, CPU TDP 15W
<ul style="list-style-type: none"> <li>• 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>• 4 USB 3.2 Gen 2</li> <li>• Dual 2.5GbE LAN</li> <li>• 0°C to 50°C Operating Temperature</li> <li>• 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>• 4 COM (2 RS-232/422/485, 2 RS-232)</li> <li>• 8-bit configurable GPIO via DB9</li> <li>• 1 TPM2.0 onboard</li> <li>• +12-24V wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>• 4 USB 3.2 Gen 2</li> <li>• Dual 2.5GbE LAN</li> <li>• 0°C to 50°C Operating Temperature</li> <li>• 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>• 4 COM (2 RS-232/422/485, 2 RS-232)</li> <li>• 8-bit configurable GPIO via DB9</li> <li>• 1 TPM2.0 onboard</li> <li>• +12-24V wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>• 4 USB 3.2 Gen 2</li> <li>• Dual 2.5GbE LAN</li> <li>• 0°C to 50°C Operating Temperature</li> <li>• 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>• 4 COM (2 RS-232/422/485, 2 RS-232)</li> <li>• 8-bit configurable GPIO via DB9</li> <li>• 1 TPM2.0 onboard</li> <li>• +12-24V wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>• 4 USB 3.2 Gen 2</li> <li>• Dual 2.5GbE LAN</li> <li>• 0°C to 50°C Operating Temperature</li> <li>• 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>• 4 COM (2 RS-232/422/485, 2 RS-232)</li> <li>• 8-bit configurable GPIO via DB9</li> <li>• 1 TPM2.0 onboard</li> <li>• +12-24V wide range power input</li> </ul>
SUPER® X13SAN-C-WOHS	SUPER® X13SAN-L-WOHS	SUPER® X13SAN-E-WOHS	SUPER® X13SAN-H-WOHS

## Motherboard Solutions

	
<b>NEW!</b>	<b>NEW!</b>
<b>X13SAN-H/E/L/C (with Heatsink)</b>	<b>X13SAN-H/E/L/C-WOHS (without Heatsink)</b>
<ul style="list-style-type: none"> <li>• 12th Generation Intel® Core™ i7-1265UE /i5-1245UE/i3-1215UE, Celeron® 7305E</li> <li>• Single SOC FCBGA-1744 supported, CPU TDP supports up to 15W TDP</li> <li>• 3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)</li> <li>• Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots</li> <li>• Four 4K displays support, 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP1.4 (Type-C Alt Mode)</li> <li>• M.2 2242/3042/2280 B-Key (SATA or PCIe x1/USB3/USB2) with nano SIM holder</li> <li>• M.2 2230 E-Key (PCIe x1/USB2/CNVi)</li> <li>• M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support</li> <li>• Dual LAN with Intel® Ethernet Controller I225-IT,TSN, Industrial Grade</li> <li>• 1 HD audio header, 1 speaker out header with 3W amplifier</li> <li>• 4 COM ports (2-RS-232/422/485, 2 RS-232) (via header), 8-bit GPIO (via header)</li> <li>• 4 USB 2.0 ports (4 via headers); 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C), 1 USB3.0 (1 vis box header)</li> <li>• 1 SlimSAS and 1 SATA port</li> <li>• TPM 2.0 onboard</li> <li>• +12-24V wide range power input</li> <li>• 0°C to 60°C Operating Temperature</li> </ul>	<ul style="list-style-type: none"> <li>• 12th Generation Intel® Core™ i7-1265UE /i5-1245UE/i3-1215UE, Celeron® 7305E</li> <li>• Single SOC FCBGA-1744 supported, CPU TDP supports up to 15W TDP</li> <li>• 3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)</li> <li>• Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots</li> <li>• Four 4K displays support, 1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP1.4 (Type-C Alt Mode)</li> <li>• M.2 2242/3042/2280 B-Key (SATA or PCIe x1/USB3/USB2) with nano SIM holder</li> <li>• M.2 2230 E-Key (PCIe x1/USB2/CNVi)</li> <li>• M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support</li> <li>• Dual LAN with Intel® Ethernet Controller I225-IT,TSN, Industrial Grade</li> <li>• 1 HD audio header, 1 speaker out header with 3W amplifier</li> <li>• 4 COM ports (2-RS-232/422/485, 2 RS-232) (via header), 8-bit GPIO (via header)</li> <li>• 4 USB 2.0 ports (4 via headers); 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C), 1 USB3.0 (1 vis box header)</li> <li>• 1 SlimSAS and 1 SATA port</li> <li>• TPM 2.0 onboard</li> <li>• +12-24V wide range power input</li> <li>• 0°C to 70°C Operating Temperature</li> </ul>

\* Microsoft Azure Certified. Please see page 44 for complete list.

# X11 8th Generation Intel® Mobile Core Processor

Intel® Core™ U-Series multi-chip package (MCP FCBGA 1528)

Supermicro's single processor Socket FCBGA1528 MCP feature the Intel® 8th Generation Core™ i7/i5/i3/ Celeron® processor ultra-low-power U-series with 4 Cores/8 threads for balance of power and performance. Outstanding features include up to 64GB of fast DDR4 DRAM in 2 DIMMs, 4 USB 3.1 Gen2, 3 M.2 with B/M/E-key, 1 Nano-SIM Slot, 6 COM ports, 12-24V wide range power input and SATA 3.0 (6Gbps) HDD. Support for next generation graphics controller, 4K HD graphics resolution and 3 displays with LVDS, HDMI and DP++ ports. Ideal for small form factor, energy-efficient, reliability, manageability, fanless and long-life applications.

## Fanless Compact System Solutions

### SYS-E100-9W-H/E/L/C, 3.5" SBC

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- 1 HDMI and 1 Display Port
- 4 USB 3.1 Gen2, 4 USB 2.0, 4 COM (RS-232/422/485), 8-bit configurable GPIO via DB9
- 2 Gigabit Ethernet Ports
- TPM 2.0 onboard
- Up to 64GB Unbuffered non-ECC SO-DIMM,
- DDR4-2400MHz, in 2 DIMM slots
- M.2 2242/3042/2280 B-Key (USB 3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- +12-24V wide range power input
- Lockable 12V DC 60W power adapter
- Fanless Cooling System
- Dimensions: 195 x 44 x 151mm (7.68" x 1.73" x 5.94")
- +12-24VDC wide range power input
- 0°C ~ 50°C Operating Temperature



### SYS-E102-9W-H/E/L/C, 3.5" SBC

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- 1 HDMI and 1 Display Port, 4 USB 3.1 Gen2, 4 COM (RS-232/422/485), 8-bit configurable GPIO via DB9
- 2 Gigabit Ethernet Ports
- 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key
- 3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Single LAN with Intel® Ethernet Controller I210IT
- Single LAN with Intel® PHY I219LM LAN controller
- +12-24VDC wide range power input
- 0°C ~ 50°C Operating Temperature



## Motherboard Solutions



X11SWN-H/-E/-L/-C (with Heatsink)

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Dual LAN with Intel® Ethernet Controller i210IT & Intel® PHY I219LM LAN controller
- 3 independent displays, Dual channel 48-bit LVDS, HDMI 1.4, DP++
- M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- 4 USB 3.1 Gen2 ports (4 rear, Type A), 4 USB 2.0 ports (4 header),
- 6 COM ( 2 RS-232/422/485, 4 RS-232)
- 1 Audio (Line-out/Mic-in), 1 8-bit GPIO header
- TPM 2.0 onboard
- +12-24V wide range power input
- 0°C ~60°C Operating Temperature



X11SWN-H/-E/-L/-C-WOHS (without Heatsink)

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Dual LAN with Intel® Ethernet Controller i210IT & Intel® PHY I219LM LAN controller
- 3 independent displays, Dual channel 48-bit LVDS, HDMI 1.4, DP++
- M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- 4 USB 3.1 Gen2 ports (4 rear, Type A), 4 USB 2.0 ports (4 header),
- 6 COM ( 2 RS-232/422/485, 4 RS-232)
- 1 Audio (Line-out/Mic-in), 1 8-bit GPIO header
- TPM 2.0 onboard
- +12-24V wide range power input
- 0°C ~70°C Operating Temperature

\* Microsoft Azure Certified. Please see page 44 for complete list.

# X10 Intel® Xeon® E5-2600 v4/v3 Processors

Dual Processor System Solutions (Broadwell)

## Broadwell Support

All X10 Dual Processor motherboards now support Intel's latest E5-2600 v4 series (Broadwell) processor for even faster performance. Coupled with the long-life C612 PCH that provides up to 7 years of extended availability, the E5-2600 v4 processor brings unparalleled performance, efficiency, scalability, and flexibility to handle the most demanding embedded and embedded cloud workloads for years to come.

## NVMe Capability

Many X10 models now support U.2 (NVMe) storage capabilities for unmatched performance (throughput and latency), true hot-swap capability, and cost-effectiveness that is better than using traditional add-on card based flash storage solutions.

## System Solutions



Intel® Xeon® E5-2600  
22 cores | 145W

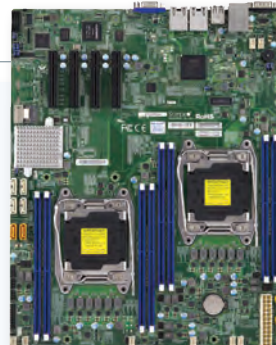
### SYS-6018R-MD Compact • 16.9"

- Short-Depth Chassis for X11/X10 DP Solutions
- 500W **Platinum Level** High-efficiency Power Supply
- 1x 3.5" or 4x 2.5" HDD
- 4x 40x56mm PWM fans
- 2 Full-Height I/O Expansion slot

## Motherboard Solutions

### X10DRD-i(N)T 22 cores | 145W

- Dual E5-2600 v4/v3 CPUs up to 145W
- 8 DIMM DDR4 2133MHz (Up to 1TB)
- 10 SATA 3.0 HDD/SSD ports
- 4 PCI-E 3.0 x16 + 3 PCI-E 3.0 x8 + 1 PCI-E 3.0 x4 in x8 + 1 PCI-E 2.0 x4 in x8
- 7 USB 3.0, 2 SuperDOM, TPM support
- 13.05" x 10.5" ATX Form Factor
- 10 SATA3 HDD/SDD ports, Optional dual NVMe Ports (-N Option)



22 cores | 145W

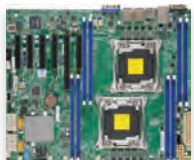
22 cores | 145W

22 cores | 145W

22 cores | 145W

22 cores | 145W

22 cores | 145W



X10DRL-i



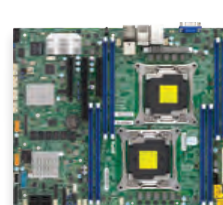
X10DAi/C



X10DAi/C



X10DAi/C



X10DRL-CT



X10DDW-i

22 cores | 145W

22 cores | 145W

22 cores | 145W

22 cores | 145W

22 cores | 145W

22 cores | 145W



X10DRD-iTP



X10DRC-T4+/LN4+



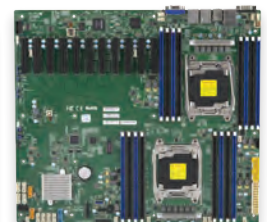
X10DRi-(T)



X10DRi-T4+/LN4+



X10DRW-i(T)



X10DRX

# X12 SuperEdge

(For Complete System Only)



4 hot-pluggable systems (nodes) in 2U



4 hot-pluggable systems (nodes) in 2U



MODEL	SYS-210TP-HPTR	SYS-210TP-HPTRD
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;
Key Applications	<ul style="list-style-type: none"> <li>• Enterprise Edge Computing</li> <li>• Telecom DRAN, CRAN, and Edge Core Application</li> <li>• Flex-RAN, Open-RAN vBBU</li> <li>• Multi-Access Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise Edge Computing</li> <li>• Telecom DRAN, CRAN, and Edge Core Application</li> <li>• Flex-RAN, Open-RAN vBBU</li> <li>• Multi-Access Edge Computing</li> </ul>
Outstanding Features	• Four rear hot-swappable nodes with single CPU socket and 8 DIMM design	• Four rear hot-swappable nodes with single CPU socket and 8 DIMM design
Serverboard	SUPER® X12SPT-PT	SUPER® X12SPT-PT
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	8 DIMM slots Up to 2TB ECC RDIMM/LRDIMM, DDR4-3200MHz	8 DIMM slots Up to 2TB ECC RDIMM/LRDIMM, DDR4-3200MHz
Expansion Slots	2 PCIe 4.0 x16 FHHL, PCIe 4.0 x16 LP	2 PCIe 4.0 x16 FHHL, PCIe 4.0 x16 LP
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE SFP+ with Intel® X710-BM	2x 10GbE SFP+ with Intel® X710-BM
VGA/Audio	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	6x 2.5" hot-swap SATA drive bays;	6x 2.5" hot-swap SATA drive bays;
Peripheral Bays	None	None
Power Supply	2000W 100-240VAC/50-60Hz power supply	2000W -48Vdc single output power supply
Cooling System	4 heavy duty fan(s)	4 heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 438 x 88 x 730mm (17.25" x 3.5" x 28.75") Package: 526 x 250 x 965mm (20.7" x 9.8" x 38")	2U Rackmount Enclosure: 438 x 88 x 730mm (17.25" x 3.5" x 28.75") Package: 526 x 250 x 965mm (20.7" x 9.8" x 38")



# X12 SuperEdge

(For Complete System Only)

**NEW!**

3rd Gen Intel® Xeon® Scalable processors Supported



3 hot-pluggable systems (nodes) in 2U



3 hot-pluggable systems (nodes) in 2U



MODEL	SYS-210SE-31A	SYS-210SE-31D
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 205W;	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 205W;
Key Applications	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>	<ul style="list-style-type: none"> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>
Serverboard	SUPERMICR® X12SPED-F	SUPERMICR® X12SPED-F
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	8 DIMM slots Up to 2TB ECC RDIMM/LRDIMM, DDR4-3200MHz	8 DIMM slots Up to 2TB ECC RDIMM/LRDIMM, DDR4-3200MHz
Expansion Slots	2 PCIe 4.0 x16 FHHL, PCIe 4.0 x16 LP	2 PCIe 4.0 x16 FHHL, PCIe 4.0 x16 LP
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	1x 1GbE RJ45 port(s)	1x 1GbE RJ45 port(s)
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SuperDoctor® 5
Drive Bays	0x NVMe drive bays;	0x NVMe drive bays;
Peripheral Bays	None	None
Power Supply	2000W AC Redundant PSU	2000W DC Redundant PSU
Cooling System	4 heavy duty fan(s)	4 heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")



Front I/O, DC Power  
Optimized for 5G and Telco



Front I/O, AC Power  
Optimized for 5G and Telco



MODEL	SYS-220HE-FTNRD	SYS-220HE-FTNR
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s
Key Applications	<ul style="list-style-type: none"> <li>• Cloud Computing</li> <li>• Network Function Virtualization</li> <li>• AI Inference and Machine Learning</li> <li>• Telecom Micro Data Center</li> <li>• 5G Core and Edge</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud Computing</li> <li>• Network Function Virtualization</li> <li>• AI Inference and Machine Learning</li> <li>• Telecom Micro Data Center</li> <li>• 5G Core and Edge</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• NEBS level 3 certified for telecommunication</li> <li>• Front I/O, tool-less design</li> </ul>	<ul style="list-style-type: none"> <li>• NEBS level 3 certified for telecommunication</li> <li>• Front I/O, tool-less design</li> </ul>
Serverboard	SUPER <sup>®</sup> X12DHM-6	SUPER <sup>®</sup> X12DHM-6
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	32 DIMM slots Up to 8TB ECC LRDIMM, DDR4-3200MHz Up to 8TB Intel® DCPMM, DDR4-3200MHz Up to 8TB ECC RDIMM, DDR4-3200MHz	32 DIMM slots Up to 8TB ECC LRDIMM, DDR4-3200MHz Up to 8TB Intel® DCPMM, DDR4-3200MHz Up to 8TB ECC RDIMM, DDR4-3200MHz
Expansion Slots	3 PCI-E 4.0 x16 DW FHFL or 6 x8 SW FHFL slot(s) 1 PCI-E 4.0 x16 SW FHFL or 2 x8 SW FHFL slot(s)	3 PCI-E 4.0 x16 DW FHFL or 6 x8 SW FHFL slot(s) 1 PCI-E 4.0 x16 SW FHFL or 2 x8 SW FHFL slot(s)
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	<ul style="list-style-type: none"> <li>1x 1Gb port(s) with Aspeed 2600</li> <li>2x 25GbE SFP28 with BCM57414 (optional)</li> <li>2x 100GbE QSFP28 with BCM57508 (optional)</li> <li>2x 1GbE RJ45 with Intel® i350-AM2 (optional)</li> <li>4x 1GbE C or 4x 1GbE SFP with Intel® i350-AM4 (optional)</li> <li>2x 10GbE RJ45 with Intel® X550-AT2 (optional)</li> <li>2x 10GbE SFP+ with Intel® X710-BM2 (optional)</li> <li>4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)</li> <li>4x 10GbE SFP+ with Intel® XL710-BM1 (optional)</li> <li>4x 25GbE RJ45/SFP28 with CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM</li> </ul>	<ul style="list-style-type: none"> <li>1x 1Gb port(s) with Aspeed 2600</li> <li>2x 25GbE SFP28 with BCM57414 (optional)</li> <li>2x 100GbE QSFP28 with BCM57508 (optional)</li> <li>2x 1GbE RJ45 with Intel® i350-AM2 (optional)</li> <li>4x 1GbE C or 4x 1GbE SFP with Intel® i350-AM4 (optional)</li> <li>2x 10GbE RJ45 with Intel® X550-AT2 (optional)</li> <li>2x 10GbE SFP+ with Intel® X710-BM2 (optional)</li> <li>4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)</li> <li>4x 10GbE SFP+ with Intel® XL710-BM1 (optional)</li> <li>4x 25GbE RJ45/SFP28 with CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM</li> </ul>
VGA/Audio	1 VGA port	1 VGA port
Management	SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API	SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API
Drive Bays	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via RAID Controller AOC 2x M.2 slots M key for SSD via PCI-E & SATA interface, 2280/22110	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via RAID Controller AOC 2x M.2 slots M key for SSD via PCI-E & SATA interface, 2280/22110
Peripheral Bays	None	None
Power Supply	1300W Redundant -48v DC Power Supplies	2000W or 1200W AC redundant Titanium Level (typical 96%)
Cooling System	6x 6cm heavy duty fan(s)	6x 6cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6") Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9")	2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6") Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9")

# X12 5G/Edge

(For Complete System Only)

**NEW!**

3rd Gen Intel® Xeon® Scalable processors Supported



Front I/O, Front DC PSU



Front I/O, Rear DC PSU



MODEL	SYS-110P-FDWTR	SYS-110P-FRDN2T
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU up to 205W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU up to 205W TDP
Key Applications	<ul style="list-style-type: none"> <li>• Telecom, 5G RAN DU Application</li> <li>• Multi-Access Edge Computing (MEC)</li> <li>• Network Function Virtualization (NFV)</li> <li>• Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-Access Edge Computing (MEC)</li> <li>• Network Function Virtualization (NFV)</li> <li>• Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>• Industrial Automation, Retail, Smart Medical Expert Systems</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• 8-DIMM, DDR4 -3200MHz, up to 2TB ECC, RDIMM(3DS), LRDIMM(3DS)</li> <li>• 2x PCI-E 4.0 x16 FHFL slots, 1x PCI-E 4.0 x16 low profile slot</li> <li>• 600W DC Redundant power supplies</li> <li>• 2x 10G Based-T LAN Ports</li> </ul>	<ul style="list-style-type: none"> <li>• 8-DIMM, DDR4 -3200MHz, ECC, up to 2TB RDIMM(3DS), LRDIMM(3DS)</li> <li>• 2x PCI-E 4.0 x16 FHFL slots</li> <li>• 600W DC Redundant power supplies</li> <li>• 2x 10G Based-T LAN Ports</li> </ul>
Serverboard	SUPER● X12SPW-TF	SUPER● X12SPW-TF
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	8-DIMM, DDR4 -3200MHz, Up to 2TB ECC, RDIMM(3DS), LRDIMM(3DS)	8-DIMM, DDR4 -3200MHz, Up to 2TB ECC, RDIMM(3DS), LRDIMM(3DS)
Expansion Slots	2x PCI-E 4.0 x16 FHFL slots 1x PCI-E 4.0 x16 low profile slot	2x PCI-E 4.0 x16 FHFL slots
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10G Based-T LAN Ports	2x 10G Based-T LAN Ports
VGA/Audio	1x onboard VGA port	1x onboard VGA port
Management	KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API	KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API
Drive Bays	2x Internal 2.5" SATA drive bays	2x Internal 2.5" SATA drive bays
Peripheral Bays	N/A	N/A
Power Supply	600W DC Redundant power supplies	600W DC Redundant power supplies
Cooling System	6x (40x40x56 mm) cooling fans	5x (40x40x56 mm) cooling fans
Form Factor	1U rackmount (Front I/O) Enclosure: 437 x 429 x 43mm (17.2" x 16.9" x 1.7")	1U rackmount (Front I/O) Enclosure: 437 x 399 x 43mm (17.2" x 15.7" x 1.7")

# X12 5G/Edge

**NEW!**

3rd Gen Intel® Xeon® Scalable processors Supported



2U Compact Rackmount



Front I/O, Rear AC Power



Wall-mount, 3 PCI-E Slots



MODEL	SYS-210P-FRDN6T	SYS-110P-FRN2T	SYS-E403-12P-FN2T
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 250W;	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU up to 205W TDP	3rd Gen Intel® Xeon® Scalable processors, Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports up to 205W
Key Applications	<ul style="list-style-type: none"> <li>• Cloud Computing</li> <li>• Network Function Virtualization</li> <li>• AI Inference and Machine Learning</li> <li>• 5G Core and Edge</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-Access Edge Computing (MEC)</li> <li>• Network Function Virtualization (NFV)</li> <li>• Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>• Industrial Automation, Retail, Smart Medical Expert Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-Access Edge Computing (MEC)</li> <li>• Universal Customer Premise Equipment (uCPE)</li> <li>• Network Function Virtualization (NFV)</li> <li>• Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>• Industrial Automation, Retail, Smart Medical Expert Systems</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Front I/O</li> <li>• Ultra-Short Depth Chassis (300mm)</li> <li>• Redundant 600W -48V DC Power</li> <li>• Up to 4 PCI-E 4.0 I/O Slots (CPU Dependent)</li> </ul>	<ul style="list-style-type: none"> <li>• 8-DIMM, DDR4 -3200MHz, ECC, up to 2TB RDIMM(3DS), LRDIMM(3DS)</li> <li>• 2x PCI-E 4.0 x16 FHFL slots</li> <li>• 800W AC Redundant power supplies</li> <li>• 2x 10G Based-T LAN Ports</li> </ul>	<ul style="list-style-type: none"> <li>• Single Socket Intel® Xeon-SP (Ice Lake) up to 32 Cores</li> <li>• 3x PCIe 4.0 x16 slot (FHFL)</li> <li>• 2x 10 Gigabit Ethernet Ports</li> <li>• 4x USB 3.0, 2x USB 2.0</li> <li>• 4x 2.5" Internal Drive Bays</li> </ul>
Serverboard	SUPER <sup>®</sup> X12SPM-LN6TF	SUPER <sup>®</sup> X12SPW-TF	SUPER <sup>®</sup> X12SPW-TF
Chipset	Intel® C621A	Intel® C621A	Intel® C621A
System Memory (Max.)	8 DIMM slots Up to 2TB ECC LRDIMM, DDR4-3200MHz Up to 2TB ECC RDIMM, DDR4-3200MHz	8-DIMM, DDR4 -3200MHz, Up to 2TB ECC, RDIMM(3DS), LRDIMM(3DS)	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 2TB 3DS ECC LRDIMM, DDR4-3200MHz, up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots
Expansion Slots	2 PCI-E 4.0 x16 FHHL slot(s) PCI-E 4.0 x16 FHHL in certain configurations slot(s) PCI-E 4.0 x16 Low Profile or 2 x8 Low Profile slot(s) PCI-E 4.0 x8 FHHL in certain configurations slot(s)	2x PCI-E 4.0 x16 FHFL slots	3 PCI-E4.0 x16 (FHFL)
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® C621A
Connectivity	2x 1/10GbE and 4x 1GbE port(s)	2x 10G Based-T LAN Ports	2x 10GbE, 1x Dedicated IPMI LAN, 4 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA
VGA/Audio	1 VGA port	1x onboard VGA port	One VGA port from ASPEED AST2600 BMC
Management	SuperDoctor® 5; Watch Dog; NMI; KVM with dedicated LAN; SPM; Intel® Node Manager; IPMI 2.0; Redfish API; SSM; SUM	KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" hot-swap SATA drive bays;	2x Internal 2.5" SATA drive bays	4x 2.5" SATA 3.0 Internal Drive Bays
Peripheral Bays	None	N/A	N/A
Power Supply	600w -48V DC Redundant Power Supplies	800W AC Redundant power supplies	600W Multi-output power supply, 80Plus Gold
Cooling System	4 heavy duty fan(s)	5x (40x40x56 mm) cooling hot swap fans	3x 80x38mm PWM hot swap fans
Form Factor	2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2" x 3.5" x 11.8") Package: 490 x 188 x 590mm (19.3" x 7.4" x 23.3")	1U rackmount (Front I/O) Enclosure: 437 x 399 x 43mm (17.2" x 15.7" x 1.7")	267 x 109 x 406mm (10.5" x 4.3" x 16")



# X12 IoT/Embedded

Coming Soon!

Coming Soon!

**NEW!**

Intel® Xeon®  
D-2700 Processors  
Supported



MODEL	<b>SYS-110D-4C-FRAN8TP</b> <b>SYS-110D-8C-FRAN8TP</b> <b>SYS-110D-16C-FRAN8TP</b> <b>SYS-110D-20C-FRAN8TP</b>	<b>SYS-110D-4C-FRDN8TP</b> <b>SYS-110D-8C-FRDN8TP</b> <b>SYS-110D-16C-FRDN8TP</b> <b>SYS-110D-20C-FRDN8TP</b>
Processor Support	Intel® Xeon® Processor D-2700 Series; Single Socket FCBGA-2579 supported; -4C: TDP up to 65W; -8C: TDP up to 80W; -16C: TDP up to 100W; -20C: TDP up to 120W	Intel® Xeon® Processor D-2700 Series; Single Socket FCBGA-2579 supported; -4C: TDP up to 65W; -8C: TDP up to 80W; -16C: TDP up to 100W; -20C: TDP up to 120W
Key Applications	• Intel® QuickAssist Technology	• Intel® QuickAssist Technology
Outstanding Features	<ul style="list-style-type: none"> <li>• Intel® Xeon® Processor D-2712T</li> <li>• Up to 256GB Registered ECC RDIMM, DDR4-3200MHz; Up to 512GB LRDIMM LRDIMM, DDR4-3200MHz, in 4 DIMM slots</li> <li>• 2x Internal 2.5" drive bays(2x PCI-E 4.0 NVMe x8 SlimSAS and 1x OcuLink options)</li> <li>• 4x GbE, 2x 25G SFP28 and 2x 10G Base-T</li> <li>• 1x M.2 M-Key 2242/2280 (SATA/PCI-E 3.0 x4)</li> <li>• 5x 40x56mm Hot-swap Counter-rotation PWM Fans</li> <li>• Redundant 800 W, 100-240 Vac</li> </ul>	<ul style="list-style-type: none"> <li>• Intel® Xeon® Processor D-2712T</li> <li>• Up to 256GB Registered ECC RDIMM, DDR4-3200MHz; Up to 512GB LRDIMM LRDIMM, DDR4-3200MHz, in 4 DIMM slots</li> <li>• 2x Internal 2.5" drive bays(2x PCI-E 4.0 NVMe x8 SlimSAS and 1x OcuLink options)</li> <li>• 4x GbE, 2x 25G SFP28 and 2x 10G Base-T</li> <li>• 1x M.2 M-Key 2242/2280 (SATA/PCI-E 3.0 x4)</li> <li>• 5x 40x56mm Hot-swap Counter-rotation PWM Fans</li> <li>• Redundant 600 W, -48 Vdc</li> </ul>
Serverboard	-4C: SUPER● X12SDV-4C-SPT8F -8C: SUPER● X12SDV-8C-SPT8F -16C: SUPER● X12SDV-16C-SPT8F -20C: SUPER● X12SDV-20C-SPT8F	-4C: SUPER● X12SDV-4C-SPT8F -8C: SUPER● X12SDV-8C-SPT8F -16C: SUPER● X12SDV-16C-SPT8F -20C: SUPER● X12SDV-20C-SPT8F
Chipset	Intel® SoC	Intel® SoC
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, DDR4-3200MHz; Up to 512GB LRDIMM LRDIMM, DDR4-3200MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-3200MHz; Up to 512GB LRDIMM LRDIMM, DDR4-3200MHz, in 4 DIMM slots
Expansion Slots	x PCIe 4.0 x 16 FHFL	x PCIe 4.0 x 16 FHFL
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	4x GbE, 2x 25G SFP28 and 2x 10G Base-T	4x GbE, 2x 25G SFP28 and 2x 10G Base-T
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SuperDoctor® 5
Drive Bays	2x 2.5" SATA/PCIe drive bays;	2x 2.5" SATA/PCIe drive bays;
Peripheral Bays	None	None
Power Supply	Redundant 800W Platinum level (94%)	600W DC Redundant PSU
Cooling System	5 heavy duty fan(s)	5 heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 399mm (17.2" x 1.7" x 15.7") Package: 680 x 200 x 605mm (26.7" x 7.9" x 23.8")	1U Rackmount Enclosure: 437 x 43 x 399mm (17.2" x 1.7" x 15.7") Package: 680 x 200 x 605mm (26.7" x 7.9" x 23.8")

# X12 IoT/Embedded

**NEW!**

Intel® Xeon®  
D-2700 Processors  
Supported

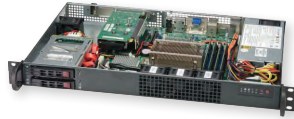


MODEL	SYS-510D-4C-FN6P SYS-510D-8C-FN6P SYS-510D-10C-FN6P	SYS-E300-12D-4CN6P SYS-E300-12D-8CN6P SYS-E300-12D-10CN6P
Processor Support	Intel® Xeon® Processor D-1700 Series Single Socket FCBGA-2227 supported -4C: TDP up to 46W; -8C: TDP up to 67W; -10C: TDP up to 46W;	-4CN6P: Intel® Xeon® Processor D-1718T, 4 Cores/8 Threads. Single Socket SoC supported, TDP up to 46W -8CN6P: Intel® Xeon® Processor D-1736NT, 8 Cores/16 Threads. Single Socket SoC supported, TDP up to 67W -10CN6P: Intel® Xeon® Processor D-1747NTE, 10 Cores/20 Threads . Single Socket SoC supported, TDP up to 80W
Key Applications	Intel® QuickAssist Technology	<ul style="list-style-type: none"> <li>• Gateway</li> <li>• Firewall</li> <li>• Retail Applications</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Intel® Xeon® Processor D-1700 SERIES</li> <li>• Up to 256GB Registered ECC RDIMM, DDR4-2933MHz, in 4 DIMM slots</li> <li>• 4x GbE and 2x 25G SFP28</li> <li>• 1x Internal 3.5" or 4x Internal 2.5" drive bays</li> <li>• 1x M.2 M-Key 2280 (SATA/PCI-E 3.0 x4) 1x M.2 B-Key 2280/3042/3052 (USB/SATA/PCI-E 3.0 x2) 1x M.2 E-Key 2230 (PCI-E 3.0 x1)</li> <li>• 3x 40x28mm 4-PIN PWM fans</li> <li>• 200W Low-noise AC-DC power supply</li> <li>• 1x VGA, 2 USB 3.0</li> </ul>	<ul style="list-style-type: none"> <li>• High Density ICX-D SoC processor for edge network computing</li> <li>• 1 Dedicated IPMI LAN</li> <li>• 6 Networking Interface (2 x25G SFP28, 4 x 1GbE)</li> <li>• 1x 2.5" SATA drives and 1x 2280 M.2</li> </ul>
Serverboard	-4C: SUPERMICR® X12SDV-4C-SP6F -8C: SUPERMICR® X12SDV-8C-SP6F -10C: SUPERMICR® X12SDV-10C-SP6F	-4CN6P: SUPERMICR® X12SDV-4C-SP6F -8CN6P: SUPERMICR® X12SDV-8C-SP6F -10CN6P: SUPERMICR® X12SDV-10C-SP6F
Chipset	Intel® SoC	Intel® SoC
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, DDR4-2933MHz, in 4 DIMM slots	4 DIMM slots Up to 256GB ECC RDIMM, DDR4-2933MHz
Expansion Slots	x PCIe 4.0 x 16 FHHL	x PCIe 4.0 x16 LP
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	4x GbE and 2x 25G SFP28	
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SSM Agent; SuperDoctor® 5; Watch Dog
Drive Bays	4x 2.5" SATA/PCIe drive bays;	1x 2.5" SATA/PCIe drive bays;
Peripheral Bays	None	None
Power Supply	1U 200W Multi-output 80Plus Gold Power Supply	
Cooling System	3 heavy duty fan(s)	3 heavy duty fan(s)
Form Factor	Mini-1U Rackmount Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8") Package: 655 x 155 x 465mm (25.8" x 6.1" x 18.3")	Mini-1U Rackmount Enclosure: 254 x 43 x 226mm (10" x 1.7" x 8.9") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59")

# X12 IoT/Embedded



Xeon® W-1200, 10th Gen. Core™ i  
Compact 1U Embedded System



Xeon® W-1200, 10th Gen. Core™ i  
Mini-1U Embedded System



MODEL	SYS-110C-FHN4T	SYS-E300-12C
Processor Support	Intel® Comet Lake, Xeon® W-1200, 10th Gen. Core™ i9 ~ i3, Pentium®, Celeron® Processor, LGA-1200, W480E Chipset, CPU TDP support up to 125W TDP	Intel® Comet Lake, Xeon® W-1200, 10th Gen. Core™ i9 ~ i3, Pentium®, Celeron® Processor, LGA-1200, W480E Chipset, CPU TDP support up to 65W TDP
Key Applications	<ul style="list-style-type: none"> <li>• Edge Computing Server</li> <li>• Video processing and streaming</li> <li>• Software Defined WAN</li> <li>• uCPE Network Appliance</li> <li>• Network Security</li> <li>• Security Appliance and Video Surveillance</li> </ul>	<ul style="list-style-type: none"> <li>• Surveillance Security Server</li> <li>• AI Inference and Machine Learning</li> <li>• Digital Signage</li> <li>• Medical Applications</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Intel® Comet Lake, Xeon® W-1200, 10th Gen. Core™ i9 ~ i3, Pentium®, Celeron® Processor</li> <li>• IPMI (Intelligent Platform Management Interface)</li> <li>• 4 USB 3.2</li> <li>• 2 DP, DVI-I, VGA, Audio</li> <li>• PCIe 3.0 x16,</li> </ul>	<ul style="list-style-type: none"> <li>• Intel® 10th Gen Comet Lake</li> <li>• Embedded long-life</li> <li>• 1U Box Edge Devices</li> <li>• TPM onboard</li> </ul>
Serverboard	SUPERMICRO X12SCZ-TLN4F	SUPERMICRO X12SCV-LVDS
Chipset	Intel® W480E chipset	Intel® W480E chipset
System Memory (Max.)	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 64GB DDR4 ECC/non-ECC SO-DIMM, DDR4-2933MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16	1 PCI-E 3.0 x16
Onboard Storage Controller	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® W480E controller for 2 SATA3 (6 Gbps) ports; RAID 0,1
Connectivity	1 RJ45 dedicated IPMI, 2x RJ45 10GBase-T, 2x RJ45 GbE	2x RJ45 GbE LAN
VGA/Audio	ASPEED AST2500 BMC, Intel® HD Graphics, ALC 888S HD Audio	Intel® HD Graphics, ALC 888S HD Audio
Management	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog
Drive Bays	2x 2.5" hot swap HDD (SATA3)	2x 2.5" fixed drive bay with bracket (when AOC area is not occupied) Or 1x 2.5" fixed drive bay with AOC support
Peripheral Bays	N/A	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC, Gold Certified	180W DC Power Adapter
Cooling System	4x 40x28mm chassis fan 4-PIN PWM FAN	2 x 4028 mm 4 PIN PWM FAN
Form Factor	437 x 43 x 287mm (17.2" x 1.7" x 11.3")	254 x 43 x 226mm (10" x 1.7" x 8.9")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Cascade Lake & Cascade Lake Refresh  
Compact Front Access  
1U WIO System

Cascade Lake Wall-mount System  
with 3 PCI-E Slots\*

Compact System with  
600W DC Redundant Power and  
Hot-Swappable Fan Tray

Compact System with  
800W AC Redundant Power and  
Hot-Swappable Fan Tray



MODEL	SYS-1019P-FHN2T	SYS-E403-9P-FN2T	SYS-1019P-FRDN2T	SYS-1019P-FRN2T
Processor Support	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support up to 205W TDP. <i>Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</i>	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support up to 205W TDP. <i>Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</i>	2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support up to 205W TDP	2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support up to 205W TDP
Key Applications	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE), Advanced Network Security</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>Retail, Smart Medical Expert Systems</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE), Advanced Network Security</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE), Advanced Network Security</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Intel® Cascade Lake-SP Scalable Processors</li> <li>2x PCI-E 3.0 x16 FHFL</li> <li>2x 10 Gigabit Ethernet Ports</li> <li>2x USB 3.0, 2x USB 2.0</li> <li>2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Cascade Lake-SP Scalable Processors</li> <li>1x PCI-E 3.0 x16 + 2x PCI-E 3.0 x8, or 2x PCI-E 3.0 x16 (FHFL, 300mm)</li> <li>2x 10 Gigabit Ethernet Ports</li> <li>4x USB 3.0, 2x USB 2.0</li> <li>4x 2.5" Internal Drive Bays</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Cascade Lake-SP Scalable Processors</li> <li>2x PCI-E 3.0 x16 FHFL</li> <li>2x 10 Gigabit Ethernet Ports</li> <li>2x USB 3.0, 2x USB 2.0</li> <li>600W DC Redundant Power Supply</li> <li>5x Hot-Swappable Fan Tray</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Cascade Lake-SP Scalable Processors</li> <li>2x PCI-E 3.0 x16 FHFL</li> <li>2x 10 Gigabit Ethernet Ports</li> <li>2x USB 3.0, 2x USB 2.0</li> <li>800W AC Redundant Power Supply</li> <li>5x Hot-Swappable Fan Tray</li> </ul>
Serverboard	SUPER● X11SPW-TF	SUPER● X11SPW-TF	SUPER● X11SPW-TF	SUPER● X11SPW-TF
Chipset	Intel® C622 chipset	Intel® C622 chipset	Intel® C622 chipset	Intel® C622 chipset
System Memory (Max.)	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots
Expansion Slots	2x PCI-E 3.0 x16 FHFL	1x PCI-E 3.0 x16 + 2x PCI-E 3.0 x8, or 2x PCI-E 3.0 x16 (FHFL, 300mm)	2 PCI-E 3.0 x16 (FHFL)	2 PCI-E 3.0 x16 (FHFL)
Onboard Storage Controller	Intel® C622 controller; RAID 0,1,5,10	Intel® C622 controller; RAID 0,1,5,10	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE, 1x Dedicated IPMI LAN, 2x USB 3.0, 2x USB 2.0, 1x COM, 1x VGA	2x 10GbE, 1x Dedicated IPMI LAN, 4 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA	2x 10GbE, 1x Dedicated IPMI LAN, 2 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA	2x 10GbE, 1x Dedicated IPMI LAN, 2 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional)	4x 2.5" SATA 3.0 Internal Drive Bays	2x Fixed 2.5" Drive Bays	2x Fixed 2.5" Drive Bays
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	1U 500W multi-output <b>Platinum Level</b> power supply w/ PMBus	600W multi-output Gold Level power supply	<b>600W DC</b> Redundant Power Supplies	<b>800W AC</b> Redundant Power Supplies
Cooling System	6x 40x28mm PWM fans	3x 80x38mm PWM hot swap fans	5x 40x56 Hot-Swappable Fan Tray	5x 40x56 Hot-Swappable Fan Tray
Form Factor	437 x 43 x 381mm (17.2" x 1.7" x 15")	267 x 109 x 406mm (10.5" x 4.3" x 16")	437 x 43 x 399mm (17.2" x 1.7" x 15.7")	437 x 43 x 399mm (17.2" x 1.7" x 15.7")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Short Depth

Short Depth

Short Depth



MODEL	SYS-5019D-RN8TP	SYS-110A-24C-RN10SP	SYS-110A-16C-RN10SP
Processor Support	Intel® Skylake Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W † BIOS version 2.0 or above is required	Intel® Atom® Processor, Socket FCBGA-2106 supported, CPU TDP support 83W TDP	Intel® Atom® Processor, Socket FCBGA-2106 supported, CPU TDP support 71W TDP
Key Applications	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• SDN-WAN, vCPE controller box</li> <li>• NFV Edge Computing Server</li> <li>• Virtualization Server</li> <li>• IoT Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>• Network Appliance</li> <li>• Embedded IoT Computing</li> <li>• Software Defined WAN (SD-WAN), Network Function Virtualization (NFV)</li> <li>• Hyper Converged Infrastructure</li> <li>• Network Security Appliance</li> </ul>	<ul style="list-style-type: none"> <li>• Network Appliance</li> <li>• Embedded IoT Computing</li> <li>• Software Defined WAN (SD-WAN), Network Function Virtualization (NFV)</li> <li>• Hyper Converged Infrastructure</li> <li>• Network Security Appliance</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Built in Intel® QAT up to 40Gbps Crypto/Compression</li> <li>• Supports up to 8C high Density SKL-D SoC for Retail MEC</li> <li>• 4 DDR4 DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz, Max memory capacity up to 512GB on LRDIMM</li> <li>• 8 LAN ports support(2x 10G SFP+, 2x 10G Based-T, 4x 1GbE)</li> </ul>	<ul style="list-style-type: none"> <li>• Cost Effective 1U Short-Depth Chassis and 2x 2.5" hot swap drive bays</li> </ul>	<ul style="list-style-type: none"> <li>• Cost Effective 1U Short-Depth Chassis and 2x 2.5" hot swap drive bays</li> </ul>
Serverboard	SUPER® X11SDV-8C-TP8F	SUPER® A3SSV-24C-SPLN10F	SUPER® A3SSV-16C-SPLN10F
Chipset	System On Chip	System On Chip	System On Chip
System Memory (Max.)	4x DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC	DDR4 up to 2933MT/s up to 256GB RDIMM, up to 64GB for ECC/Non-ECC UDIMM	DDR4 up to 2933MT/s up to 256GB RDIMM, up to 64GB for ECC/Non-ECC UDIMM
Expansion Slots	1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots	1 PCI-E 3.0 x8, M-Key M.2: 2280/42, B-Key M.2 2280/3042, E-Key M.2 2230	1 PCI-E 3.0 x8, M-Key M.2: 2280/42, B-Key M.2 2280/3042, E-Key M.2 2230
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 6 ports	SoC controller for 6 ports
Connectivity	2x 10G SFP+, 2x 10G Based-T, 4x 1GbE, 1x dedicated IPMI LAN, 2 USB 3.0	8 x1GbE and 2x 25GbE SFP28 LANs, 1x dedicated IPMI LAN, 2x USB 3.0	8 x1GbE and 2x 25GbE SFP28 LANs, 1x dedicated IPMI LAN, 2x USB 3.0
VGA/Audio	VGA via BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	IPMI 2.0	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x hot-swap 2.5" drive trays	2x hot-swap 2.5" drive trays	2x hot-swap 2.5" drive trays
Peripheral Bays	N/A	N/A	N/A
Power Supply	300W AC Redundant power supplies	300W AC Redundant power supplies	300W AC Redundant power supplies
Cooling System	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
Form Factor	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")

\* Please check with your Supernova sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Gen 8th Coffee Lake-S  
Compact 1U Embedded System

Intel® Gen 8th Coffee Lake-S  
Compact 1U Embedded System

Short-Depth

Intel® Xeon® D-2123IT  
SoC, 4 Core, 8 Thread  
Short Depth System



MODEL	SYS-1019C-HTN2	SYS-1019C-FHTN8	SYS-5019C-MHN2	SYS-5019D-4C-FN8TP
Processor Support	Intel® 8th/9th Generation Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® series Processor, Intel® Xeon® E-2100 series and E-2200 series Processor. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP, A graphic integrated CPU is required to have onboard video from the DVI and DP ports	8th/9th Generation Intel® Core™ i3 Processors, Intel® Xeon® E-2100/2200 processor Server. Socket LGA 1151 supported, CPU TDP support up to 80W TDP	Intel® 8th/9th Generation Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® series Processor, Intel® Xeon® E-2100 and E-2200 Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support up to 95W TDP A graphic integrated CPU is required to have onboard video from the DVI and DP ports	Intel® Xeon® D-2123IT, 4 Cores, 60W
Key Applications	<ul style="list-style-type: none"> <li>Digital Signage</li> <li>DVR/NVR</li> <li>POS</li> <li>Office Server</li> <li>Network Security</li> <li>Security Appliance and Video Surveillance</li> </ul>	<ul style="list-style-type: none"> <li>uCPE Network Appliance</li> <li>Network Security Appliance</li> <li>Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>General purpose, SMB, Web Hosting</li> <li>Application and data serving</li> <li>Archiving, Mail/Finance, Security</li> </ul>	<ul style="list-style-type: none"> <li>Network Security Appliance</li> <li>SDN-WAN, vCPE controller box</li> <li>NFV Edge Computing Server</li> <li>Virtualization Server</li> <li>IoT Edge Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>2x 2.5" Hot Swap SATA3 Drive Bay</li> <li>M.2 (M key), Onboard TPM</li> <li>Coffee Lake-S, Xeon® E-2100, 8th Gen Core i3, Pentium, Celeron</li> <li>Remote management via dedicated IPMI BMC</li> <li>4 USB 3.1</li> <li>2 DP, DVI-I, VGA, Audio</li> <li>PCI-E 3.0 x16</li> </ul>	<ul style="list-style-type: none"> <li>8th/9th Generation Intel® Core™ i3 Processors, Intel® Xeon® E-2100/2200 processor</li> <li>8x 1GbE, 1 dedicated IPMI LAN</li> <li>1 VGA, 2 USB3.1, 2 USB2.0</li> <li>1 PCI-E3.0 x16</li> <li>Dual M.2 M key (22110/2280)</li> <li>2x 2.5" Hot Swap, 2x 2.5" Internal SATA3 Drive Bay</li> </ul>	<ul style="list-style-type: none"> <li>Short-Depth (19.8"D)</li> <li>Quick Release Rails</li> </ul>	<ul style="list-style-type: none"> <li>8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> <li>1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support</li> </ul>
Serverboard	SUPER● X11SCZ-F	SUPER● X11SCM-LN8F	SUPER● X11SCZ-F	SUPER● X11SDV-4C-TP8F
Chipset	Intel® C246 chipset	Intel® C246 chipset	Intel® C246 chipset	System On Chip
System Memory (Max.)	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	4 x DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
Expansion Slots	PCI-E 3.0 x 16 half height half length expansion slot; M.2 (M key, 22110/80, PCI-E3.0 x4/SATA)	PCI-E 3.0 x 16 full height full length expansion slot (limited to two drives populated);	1 PCI-E 3.0 x16	1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
Onboard Storage Controller	Intel® C246 controller for 2 SATA3 (6 Gbps) ports; RAID 0,1;	Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;	Intel® C246 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10;	SoC controller for 4 SATA3 (6 Gbps) ports
Connectivity	Dual GbE LAN, 1 dedicate IPMI, 4 USB3.1 (3 TYPE A and 1 TYPE C)	8x 1GbE LAN, 1 dedicate IPMI LAN, 2 USB3.1, 2 USB2.0	Dual LAN with Intel® Ethernet Controller I210-AT	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC	Aspeed AST2500 BMC, Intel® HD Graphics	VGA via BMC
Management	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog	IPMI 2.0
Drive Bays	2 x 2.5" hot swap HDD (SATA3)	2x 2.5" Hot Swap, 2x 2.5" Internal(SSD recommended) SATA3 drive bays	4x 3.5" hot-swap SAS/SATA	1x 3.5" or 4x 2.5"
Peripheral Bays	N/A	N/A	1x Slim DVD-ROM Drive	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC, Gold Certified	350W AC-DC multiple output <b>Platinum Level</b> power supply	350W AC-DC multiple output <b>Platinum Level</b> power supply	200W Low Noise AC-DC power supply with PFC
Cooling System	4x 40x28mm chassis fan 4-PIN PWM FAN	4x 40x28mm PWM fan	5x 40x28mm PWM fan, 1x 40x28mm PWM fan	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
Form Factor	437 x 43 x 287mm (17.2" x 1.7" x 11.3")	437 x 43 x 381mm (17.2" x 1.7" x 15")	437 x 43 x 483mm (17.2" x 1.7" x 19.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# Outdoor Edge

Embedded Weatherproof Intel® Xeon® D Server



Embedded Weatherproof Intel® Xeon® D Server



Embedded Weatherproof Intel® Xeon® D Server



Embedded Weatherproof Intel® Xeon® D Server



MODEL	SYS-E403-9D-16C-IPD2	SYS-E403-9D-14CN-IPD2	SYS-E403-9D-16C-IP	SYS-E403-9P-16C-IP
Processor Support	Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W	Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W
Key Applications	<ul style="list-style-type: none"> <li>5G Radio Access Network (RAN)</li> <li>Multi-Access Edge Computing (MEC)</li> <li>Edge AI Inference</li> <li>Vehicle to Everything (C-V2X/V2X)</li> <li>Virtualized Functions and Services</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>IP65 enclosure for harsh outdoor environments</li> <li>GR-3108-CORE / GR-487-CORE compliant</li> <li>Operating Temperature -40°C ~ 50°C (-40°F ~ 122°F)</li> <li>Cabinet intrusion detection and self-diagnosis</li> <li>Redundant power supplies and cooling fans</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W</li> <li>Operating Temperature -40°C ~ 50°C (-40°F ~ 122°F)</li> <li>GR-3108-CORE / GR-487-CORE compliant</li> <li>Fan/Power Redundancy, Intrusion Detection, Fan Failure Alarms</li> <li>Supports dual power input</li> <li>300W Heater</li> </ul>	<ul style="list-style-type: none"> <li>Operating Temperature -40°C ~ 46°C (-40°F ~ 114.8°F)</li> <li>GR-487-CORE compliant</li> <li>Tamperproof design</li> <li>Noise 71 dBA</li> <li>100-240 Vac, Est. Max Power consumption: 1200W (instantaneous)/ 900W (stable)</li> <li>620W heater (Initiating power: 900W)</li> </ul>	<ul style="list-style-type: none"> <li>Operating Temperature -40°C ~ 46°C (-40°F ~ 114.8°F)</li> <li>GR-487-CORE compliant</li> <li>Temper-proof design</li> <li>Noise 71 dBA</li> <li>100-240 Vac, Est. Max Power consumption: 1200W (instantaneous)/ 900W (stable)</li> <li>620W heater (Initiating power: 900W)</li> </ul>
Serverboard	SUPER● X11SDW-16C-TP13F+	SUPER● X11SDW-14CN-TP13F+	X11SDW-16C-TP13F	SUPER● X11SDW-16C-TP13F
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots
Expansion Slots	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	4x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	4x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Design Capacity: -40Vdc to -59Vdc, 900W	Design Capacity: -44Vdc to -59Vdc, 900W	600W 100-240 VAC, Multi-output power supply w/ PMbus, 80Plus Gold	1200W 100-240 VAC, Multi-output power supply w/ PMbus, 80Plus Gold
Cooling System	3x 80x80mm PWM redundant fans (Server), 6x 80x38mm IP68 Fans (Cabinet)	3x 80x80mm PWM redundant fans (Server), 6x 80x38mm IP68 Fans (Cabinet)	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans
Form Factor	319 x 821 x 258mm (12.56" x 32.31" x 10.16")	319 x 821 x 258mm (12.56" x 32.31" x 10.16")	516 x 650 x 450mm (20.3" x 25.6" x 17.7")	516 x 650 x 450mm (20.3" x 25.6" x 17.7")

# IoT/Embedded

Intel® Xeon® D-2146NT  
SoC, 8 Cores System

Intel® Atom® C3850,  
SoC, 12 Cores, Rear I/O  
Short-Depth System

Intel® Atom® C3758,  
SoC, 8 Cores, Front I/O  
Short-Depth System

AMD EPYC 3000 Series  
8C 1U Edge Platform



MODEL	SYS-5019D-FN8TP	SYS-5019A-12TN4	SYS-5019A-FTN4	AS -5019D-FTN4
Processor Support	Intel® Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W † BIOS version 2.0 or above is required	Intel® Atom™ C3850, SoC, 12 Cores, 25W	Intel® Atom™ C3758, SoC, 8 Cores, 25W	AMD EPYC™ 3251 Processor
Key Applications	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• SDN-WAN, vCPE controller box</li> <li>• NFV Edge Computing Server</li> <li>• Virtualization Server</li> <li>• IoT Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>• Virtual Router</li> <li>• FireWall Applications</li> <li>• Virtualization</li> <li>• Low Power, Low Cost Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• Edge Computing Server</li> <li>• Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>• SD-WAN and vCPE/uCPE</li> <li>• Network Security Appliance</li> <li>• Software Defined WAN</li> <li>• Embedded IoT Computing</li> <li>• Hyper-Converged Appliance</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• 8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> <li>• 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support</li> </ul>	<ul style="list-style-type: none"> <li>• Short Depth</li> <li>• Low Power</li> </ul>	<ul style="list-style-type: none"> <li>• Intel® QAT up to 20Gbps crypto + 20Gbps compression</li> <li>• Intel® Quick Assist Technology</li> <li>• 256GB DDR4 ECC RDIMM/64GB ECC UDIMM</li> </ul>	<ul style="list-style-type: none"> <li>• AMD Embedded EPYC™ 3251 SoC Processor, 8 Core/16 Thread</li> <li>• 1 M.2 M-key for NVMe, 2242/80</li> <li>• 1 PCIe3.0 x16 expansion for AOC</li> <li>• Up to 2x 3.5" or 4x 2.5" SATA3 device</li> <li>• Dedicated management port</li> </ul>
Serverboard	SUPER● X11SDV-8C-TP8F	SUPER● A2SDi-LN4F	SUPER● A2SDi-8C-HLN4F	SUPER● M11SDV-8C-LN4F
Chipset	System On Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)	4 x DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz or 64GB Unbuffered ECC/ Non-ECC DDR4-2400MHz; in 4 DIMM slots	512 GB up to 2666MHz DDR4 LRDIMM or 256GB RDIMM
Expansion Slots	1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,	1 PCI-E 3.0 x4, 1 mini-PCI-E with mSATA supports (half card only), 1 M.2(M Key for SSD 2242/80, PCI-E/ SATA3.0)	1 PCI-E 3.0 x4, 1 x M.2 (M key for SSD, 2242/80, PCI-E3.0 x2 or SATA3)	1 PCI-E 3.0 x16
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports	4x 1GbE, 1x Dedicated IPMI 2, USB 3.0 1x VGA & Onboard TPM Header
Connectivity	2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	4x 1GbE LAN, 1 dedicated management port, 2 USB3.0	4x 1GbE LAN, 1x dedicated IPMI LAN, 2x USB 2.0	N/A
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC	1 VGA; 1 Aspeded AST2500 BMC
Management	IPMI 2.0	IPMI 2.0	IPMI 2.0	1x Dedicated IPMI 1x VGA & Onboard TPM Header
Drive Bays	1x 3.5" or 4x 2.5"	1x 3.5" or 4 x 2.5" HDD	1x 3.5" or 4x 2.5" HDD	Up to 2x 3.5" or 4x 2.5" SATA3 device 2.5"
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC	200W compact power supply
Cooling System	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	2x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM), Optional 1x 40x28mm 4-PIN PWM Fan	Active CPU fan, 40mm chassis fan
Form Factor	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Atom™ Processor Denverton C3958,  
SoC, 16 Cores, 31W  
Front I/O, Short-Depth Server

Intel® Denverton C3758  
support QAT

Intel® Gen 8th Coffee Lake-S  
Compact 1U Embedded System



MODEL	SYS-5019A-FN5T	SYS-5019A-FTN10P	SYS-5018A-LTN4
Processor Support	Intel® Atom™ Processor Denverton C3958, SoC, 16 Cores, 31W	Intel® Atom™ Processor Denverton C3758, SoC, 8 Cores	Intel® Atom® Processor C2358. Single Socket FCBGA1283 supported, CPU TDP support up to 7W TDP
Key Applications	<ul style="list-style-type: none"> <li>Network Security Appliance</li> <li>Edge Computing Server</li> <li>Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>Edge Computing Server</li> <li>Virtualization Server</li> <li>Network Security Appliance</li> </ul>	<ul style="list-style-type: none"> <li>Network Security Appliance</li> <li>FireWall Applications</li> <li>Virtual Router</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Intel® Quick Assist Technology</li> <li>256GB DDR4 ECC RDIMM/64GB ECC UDIMM</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Quick Assist Technology ( QAT)</li> <li>Intel® Single-Root I/O Virtualization (SR-IOV)</li> </ul>	<ul style="list-style-type: none"> <li>Embedded long-life to 2020</li> <li>DDR3 up to 1333MHz up to 16 GB ECC SODIMM</li> <li>Compact form factor less than 10" depth</li> <li>Low Power</li> </ul>
Serverboard	SUPER● A2SDV-16C-TLN5F	SUPER● A2SDV-8C-LN10PF	SUPER● A1SRI-2358F
Chipset	System on Chip	System on Chip chipset	System on Chip
System Memory (Max.)	Up to 256GB Registered ECC DDR4-2400MHz or 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 16GB Unbuffered ECC SO-DIMM, DDR3-1333MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8, 1 x M.2 (M key for SSD, 2242/80, PCI-E3.0 x2 or SATA3), 1 B-Key (3042/2280 PCI-E 3.0 x2/SATA/USB)	1 PCI-E 3.0 x4	1 PCI-E 2.0 x8
Onboard Storage Controller	SoC controller for 2 SATA3 (6 Gbps) ports	SoC controller for 5 SATA3 (6 Gbps) ports; RAID	SoC controller for 2 SATA2 (3 Gbps) ports; RAID 2SATA3 (6 Gbps)
Connectivity	4x 10GbE LAN, 1x 1GbE LAN port (IPMI shared LAN), 4 USB 3.0	8x RJ45 GbE LAN, 2x SFP GbE LAN, 1 dedicated IPMI RJ45 GbE LAN, 2x USB 3.0, 1 VGA	4x 1GbE LAN, 1 dedicated IPMI LAN, 2x USB 3.0, 1x VGA
VGA/Audio	VGA via BMC	Aspeed AST2400 BMC	Aspeed AST2400 BMC
Management	IPMI 2.0	IPMI2.0, NMI, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SuperDoctor® 5, Watchdog
Drive Bays	1x 3.5" or 2x 2.5" HDD	1x 3.5" or 4x 2.5" internal drive bays	1x 3.5" or 4x 2.5" internal drive bays
Peripheral Bays	N/A	N/A	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC	1U 200W Multi-output power supply Gold level w/20pin	1U 200W Multi-output power supply Gold level w/20pin
Cooling System	3x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM)	3x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM)	2x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM)
Form Factor	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Intel® Xeon® D Compact Front Access  
1U 2-Slot System

Intel® Xeon® D-2146NT  
SoC 8 Core, 1U System



MODEL	SYS-1019D-FHN13TP SYS-1019D-4C-FHN13TP SYS-1019D-14CN-FHN13TP SYS-1019D-16C-FHN13TP	SYS-1019D-FRN8TP
Processor Support	Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W -4C: Intel® D-2123IT, 4 Cores, 8 Threads, 2.2 GHz, 60W -14CN: Intel® D-2177NT, 14 Cores, 28 Threads, 1.9 GHz, 105W -16C: Intel® D-2183IT, 16 Cores, 32 Threads, 2.2 GHz, 100W	Intel® 2nd Gen Xeon® D-2146NT, 8 Core/16 Thread with built in QAT
Key Applications	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Software Defined WAN (SD-WAN)</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI)</li> </ul>	<ul style="list-style-type: none"> <li>Network Security Appliance</li> <li>FireWall Applications</li> <li>Virtualization</li> <li>SD-WAN and vCPE/uCPE</li> <li>vCPE</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Dual PCI-E 3.0 x16 FHFL</li> <li>2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</li> <li>1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key</li> </ul>	<ul style="list-style-type: none"> <li>400W Redundant Platinum PSU</li> <li>Built in Intel® QAT upto 40 Gbps Crypto/Compression</li> <li>8 LAN w/ 2x10G SPF + 2x10Gbase-T and 4x1GbE LAN</li> <li>4x 2.5" HDD</li> <li>256GB DDR4-2133MHz Registered ECC RDIMM or 512GB LRDIMM LRDIMM</li> </ul>
Serverboard	SUPER● X11SDW-8C-TP13F -4C: SUPER● X11SDW-16C-TP13F -14CN: SUPER● X11SDW-14CNT-TP13F -16C: SUPER● X11SDW-16C-TP13F	SUPER● X11SDV-8C-TP8F
Chipset	System on Chip (SoC)	SoC chipset
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM LRDIMM, in 4 DIMM slots	DDR4-2666 512 LRDIMM or 256 Registered ECC RDIMM in 4 DIMM slots
Expansion Slots	Dual PCI-E 3.0 x 16 full height full length expansion slot	1 PCI-E 3.0 x16, 1 M.2 M-Key for storage with 2242/2280, 1 M.2 B-Key for SSD & WAN with 2242, 1 Mini PCI-E x1
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports	SoC with 12 SATA3 for RAID 0,1,5,10
Connectivity	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0	4x 1GbE, 2x 10 GBase-T, 2x 10G SFP+, 1 dedicate IPMI LAN, 2x USB3.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	IPMI 2.0	IPMI 2.0 (RJ45) with dedicated LAN port and KVM via BMC VGA
Drive Bays	2x External Hot-swap 2.5" Drive Bays, 2x Internal 2.5" Drive Bays	4x 2.5" Internal Fixed HDD bracket
Peripheral Bays	N/A	N/A
Power Supply	1019D-FHN13TP / -4C: 350W Multi-output <b>Platinum Level</b> power supply; -14CN / -16C: 500W Multi-output <b>Platinum Level</b> power supply	Redundant 400W 80Plus Platinum Level power supplies;
Cooling System	4 or 6 40x28mm PWM fans (up to 6)	4x 40x56mm cooling fan
Form Factor	437 x 43 x 381mm (17.2" x 1.7" x 15")	437 x 43 x 429mm (17.2" x 1.7" x 16.9")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Xeon® Processor D  
Compact Front Access 1U 2-Slot,  
Redundant AC PSUs, and Hot Swappable Fans

Intel® Xeon® Processor D  
Compact Front Access 1U 2-Slot,  
Redundant DC PSUs, and Hot Swappable Fans



MODEL	SYS-1019D-4C-RAN13TP+ SYS-1019D-14CN-RAN13TP+ SYS-1019D-16C-RAN13TP+	1019D-4C-RDN13TP+ 1019D-14CN-RDN13TP+ 1019D-16C-RDN13TP+
Processor Support	-4C: Intel® Xeon® Processor D-2123IT Single Socket FCBGA-2518 supported, CPU TDP support up to 60W TDP -14CN: Intel® Xeon® Processor D-2177NT. Single Socket FCBGA-2518 supported, CPU TDP support up to 105W TDP -16C: Intel® Xeon® Processor D-2183IT. Single Socket FCBGA-2518 supported, CPU TDP support up to 100W TDP	-4C: Intel® Xeon® Processor D-2123IT Single Socket FCBGA-2518 supported, CPU TDP support up to 60W TDP -14CN: Intel® Xeon® Processor D-2177NT. Single Socket FCBGA-2518 supported, CPU TDP support up to 105W TDP -16C: Intel® Xeon® Processor D-2183IT. Single Socket FCBGA-2518 supported, CPU TDP support up to 100W TDP
Key Applications	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Software Defined WAN (SD-WAN)</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Software Defined WAN (SD-WAN)</li> <li>Network Function Virtualization (NFV)</li> <li>Artificial Intelligence (AI)</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Intel® Xeon® Processor D-2123IT, 4 Cores, 8 Threads, 2.2 GHz, 60W</li> <li>2x PCI-E 3.0 x16 FHFL</li> <li>4x 10GbE SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45, 1x VGA Port</li> <li>1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230</li> <li>2x 2.5" Internal Drive Bay</li> <li>800W AC Redundant PSU, 5x Hot-Swappable Fans</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Xeon® Processor D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W</li> <li>2x PCI-E3.0 x16 FHFL</li> <li>4x 10GbE SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45, 1x VGA Port</li> <li>1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230</li> <li>2x 2.5" Internal Drive Bay</li> <li>600W DC Redundant PSU, 5x Hot-Swappable Fans</li> </ul>
Serverboard	-4C: SUPER X11SDW-4C-TP13F+ -14CN: SUPER X11SDW-14CN-TP13F+ -16C: SUPER X11SDW-16C-TP13F+	-4C: SUPER X11SDW-4C-TP13F+ -14CN: SUPER X11SDW-14CN-TP13F+ -16C: SUPER X11SDW-16C-TP13F+
Chipset	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	2x PCI-E 3.0 x16 FHFL	2x PCI-E 3.0 x16 FHFL
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	4 SFP+, 9 GbE (one for Ethernet management), 1 dedicated IPMI LAN, 1 COM via RJ45, 2 USB 3.0, 1x VGA	4 SFP+, 9 GbE (one for Ethernet management), 1 dedicated IPMI LAN, 1 COM via RJ45, 2 USB 3.0, 1x VGA
VGA/Audio	VGA via Aspeed AST2500 BMC	VGA via Aspeed AST2500 BMC
Management	IPMI 2.0	IPMI 2.0
Drive Bays	2x 2.5" Internal Drive Bays	2x 2.5" Internal Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	800W Redundant Power Supply 80 PLUS Platinum	600W DC-48V input Redundant Power Supply
Cooling System	5x 40x56mm Hot Swappable Counter-Rotation PWM Fans	5x 40x56mm Hot Swappable Counter-Rotation PWM Fans
Form Factor	437 x 43 x 399mm (17.2" x 1.7" x 15.7")	437 x 43 x 399mm (17.2" x 1.7" x 15.7")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Xeon® D2100 Series  
12/14/16-Core, Compact 1U  
Front Access Modular I/O Edge Platform

Intel® Xeon® D2100 Series  
8-Core, Compact 1U  
Front Access Modular I/O Edge Platform

Intel® Atom® C3858  
SoC, 12 Cores



MODEL	SYS-1019D-16C-FRN5TP SYS-1019D-14C-FRN5TP SYS-1019D-12C-FRN5TP	SYS-1019D-FRN5TP	SYS-E300-9A
Processor Support	-16C: Intel® D-21831T, 16C/32T, 2.2GHz, 100W -14C: Intel® D-21731T, 14C/28T, 1.7GHz, 70W -12C: Intel® D-21631T, 12C/24T, 2.1GHz, 75W	Intel® D-2146NT, 8C/16T, 2.3GHz, 80W	Intel® Atom™ C3858, SoC 12 Cores, 25W, 2.0 GHz
Key Applications	<ul style="list-style-type: none"> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Software Defined Wide Area Network (SD-WAN)</li> <li>Network Function Virtualization (NFV)</li> </ul>	<ul style="list-style-type: none"> <li>Centralized/Cloud Radio Access Network (C-RAN)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Software Defined WAN (SD-WAN)</li> <li>Network Function Virtualization (NFV)</li> <li>Intel® Xeon® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W</li> </ul>	<ul style="list-style-type: none"> <li>Embedded Networking Applications</li> <li>Network Security Appliance</li> <li>FireWall Applications</li> <li>Virtualization Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4x PCI-E 3.0 x8 slots for AIOM</li> <li>2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB</li> <li>2x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key</li> <li>2x EDSFF</li> </ul>	<ul style="list-style-type: none"> <li>4x PCI-E3.0 x8 slots for AIOM</li> <li>2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB</li> <li>2x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key</li> <li>2x EDSFF</li> </ul>	<ul style="list-style-type: none"> <li>Dual SFP+, Dual 10GbE-T and Quad GbE</li> <li>Short depth (less than 10 depth)</li> <li>Best Performance per Watt</li> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> </ul>
Serverboard	-12C: SUPER● X11SDS-12C -14C: SUPER● X11SDS-14C -16C: SUPER● X11SDS-16C	SUPER● X11SDS-8C	SUPER● A2SDi-TP8F
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip
System Memory (Max.)	Up to 256GB Registered ECC RDIMM or 512GB LRDIMM, DDR4-2400MHz in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM, in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots 1 PCI Express 3.0 x4 AOC slot (LP), 1 M.2(M Key for SSD 2242/80, PCI-E/SATA3.0), 1 Mini-PCI-E /w mSATA Half Size
Expansion Slots	4 PCI-E3.0 x8 slots for AIOM** ** AIOM sold separately	4 PCI-E3.0 x8 slots for AIOM** ** AIOM sold separately	
Onboard Storage Controller	SoC controller for 2 SATA3 (6 Gbps) ports	SoC controller for 2 SATA3 (6 Gbps) ports	SoC controller for 4x SATA3.0
Connectivity	2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB, 2x USB 3.0	2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB, 2x USB 3.0	2x 10GbE SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" Drive Bays(one drive space shares with M.2), 2x E1.5(35°C ambient temperature only)	2x 2.5" Drive Bays(one drive space shares with M.2), 2x E1.5(35°C ambient temperature only)	2x 2.5" fixed drive bay: one with bracket, one on base mount.  (1x 2.5" fixed drive bay when AOC area is occupied.)
Peripheral Bays	N/A	N/A	N/A
Power Supply	400W Redundant Power Supply, 80 PLUS Platinum	400W Redundant Power Supply, 80 PLUS Platinum	Lockable 12V DC 84W power adapter
Cooling System	5x 40x40x56 mm 13K-11K RPM Counter-rotating Fans	5x 40x40x56 mm 13K-11K RPM Counter-rotating Fans	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM) 1U Compact Box; Enclosure: 254 x 43 x 226mm (10" x 1.7" x 8.9") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 6.1lbs (2.77kg) Net Weight: 3.45lbs (1.56kg)
Form Factor	437 x 43 x 381mm (17.2" x 1.7" x 15")	437 x 43 x 381mm (17.2" x 1.7" x 15")	

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Atom™ C3558  
SoC, 4 Cores

Intel® Xeon® D Wall-mount System  
with 3 PCI-E slots

Intel® Xeon® D Wall-mount System  
with 3 PCI-E slots



MODEL	SYS-E200-9A	SYS-E403-9D-4C-FN13TP SYS-E403-9D-12C-FN13TP SYS-E403-9D-14C-FN13TP SYS-E403-9D-16C-FN13TP	SYS-E403-9D-8CN-FN13TP SYS-E403-9D-14CN-FN13TP
Processor Support	Intel® Atom™ C3558, SoC 4 Cores, 16W, 2.2 GHz	-4C: Intel® D-2123IT, 4 Cores, 8 Threads, 2.2 GHz, 60W -12C: Intel® D-2163IT, 12 Cores, 24 Threads, 2.1 GHz, 75W -14C: Intel® D-2173IT, 14 Cores, 28 Threads, 1.7 GHz, 70W -16C: Intel® D-2183IT, 16 Cores, 32 Threads, 2.2 GHz, 100W	-8CN: Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W -14CN: Intel® D-2177NT, 14 Cores, 28 Threads, 1.9 GHz, 105W
Key Applications	<ul style="list-style-type: none"> <li>Virtualization Server</li> <li>Virtual-CPE White Box</li> <li>Entry-level Network Appliance</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Intel® TXT, improved AES-NI, QuickAssist Technology</li> <li>Intel® VT-x and VT-d for virtualization</li> <li>NEW flexible I/O model for peripheral connectivity</li> <li>TDP lowered and increased from Rangeley</li> <li>8 or more SATA III ports – Potentially with port multiplier support*</li> <li>Significantly improved IPC compared to the Avonton/ Rangeley cores. We expect a 70% or so raw performance improvement per core</li> </ul>	<ul style="list-style-type: none"> <li>Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FHFL, 300mm)</li> <li>2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</li> <li>2x USB 3.0, 2x USB 2.0</li> <li>1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2230</li> </ul>	<ul style="list-style-type: none"> <li>Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FHFL, 300mm)</li> <li>2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</li> <li>2x USB 3.0, 2x USB 2.0</li> <li>1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2230</li> </ul>
Serverboard	SUPER● A2SDi-4C-HLN4F	-4C: SUPER● X11SDW-4C-TP13F -12C: SUPER● X11SDW-12C-TP13F -14C: SUPER● X11SDW-14C-TP13F -16C: SUPER● X11SDW-16C-TP13F	-8CN: SUPER● X11SDW-8C-TP13F -14CN: SUPER● X11SDW-14CNT-TP13F
Chipset	System on Chip	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)	256GB Registered ECC, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400/2133 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2667 MHz; in 4 DIMM slots
Expansion Slots	1 M.2 (M key, 2242/2280, PCI-E3.0 x2 or SATA3)	Dual x16 or Dual x8, One x16 PCI-E3.0 (FHFL, 300mm)	Dual x16 or Dual x8, One x16 PCI-E3.0 (FHFL, 300mm)
Onboard Storage Controller	SoC controller for 4x SATA 3.0	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 2.0, 1 USB 3.0 type A	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0, 2x USB 2.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0, 2x USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	1x 2.5" SSD fixed drive bay	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	600W Multi-output power supply, 80Plus Gold	600W Multi-output power supply, 80Plus Gold
Cooling System	2x 40x28mm 4-PIN PWM FAN(FAN-0065L4, 13K RPM)	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans
Form Factor	1U Compact Box; Enclosure: 195 x 43 x 226mm (7.68" x 1.7" x 8.9") Package: 381 x 142 x 276mm (15" x 5.59" x 10.87") Gross Weight: 6.5lbs (2.95kg) Net Weight: 3lbs (1.36kg)	Enclosure: 267 x 109 x 406mm (10.5" x 4.3" x 16") Package: 406 x 248 x 546mm (16" x 9.75" x 21.5") Gross Weight: 23lbs (10.43kg) Net Weight: 17lbs (7.71kg)	Enclosure: 267 x 109 x 406mm (10.5" x 4.3" x 16") Package: 406 x 248 x 546mm (16" x 9.75" x 21.5") Gross Weight: 23lbs (10.43kg) Net Weight: 17lbs (7.71kg)

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Intel® Xeon® D System  
with 3 PCIe slots

Intel® Xeon® D System  
with 3 PCIe slots



MODEL	<b>SYS-E403-9D-4C-FRN13+</b> <b>SYS-E403-9D-14CN-FRN13+</b> <b>SYS-E403-9D-16C-FRN13+</b>	<b>SYS-E403-9D-4C-FRDN13+</b> <b>SYS-E403-9D-14CN-FRDN13+</b> <b>SYS-E403-9D-16C-FRDN13+</b>
Processor Support	<b>-4C:</b> Intel® Xeon® D-2123IT Processor, 4 Cores, 8 Threads, 2.2 GHz, 60W <b>-16C:</b> Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	<b>-14CN:</b> Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W
Key Applications	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Access Edge Computing (MEC)</li> <li>Universal Customer Premise Equipment (uCPE)</li> <li>Network Function Virtualization (NFV)</li> <li>Edge Computing, Vehicle to Everything Application (C-V2X / V2X)</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Dual PCIe3.0 x16 or Dual x8, One x16 PCIe3.0 (FH3/4L)</li> <li>2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</li> <li>Operating Temperature 0°C ~ 50°C (32°F ~ 122°F)</li> </ul>	<ul style="list-style-type: none"> <li>Dual PCIe3.0 x16 or Dual x8, One x16 PCIe3.0 (FH3/4L)</li> <li>2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</li> <li>Operating Temperature 0°C ~ 50°C (32°F ~ 122°F)</li> <li>Intel® Quick Assist Technology</li> </ul>
Serverboard	<b>-4C:</b> SUPER● X11SDW-4C-TP13F+ <b>-16C:</b> SUPER● X11SDW-16C-TP13F+	<b>-14CN:</b> SUPER● X11SDW-14CN-TP13F+
Chipset	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots
Expansion Slots	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	<b>-FRDN13+ :</b> 600W DC-48V input Redundant Power Supply <b>-FRN13+ :</b> 800W Redundant Power Supply, 80 PLUS Platinum	<b>-FRDN13+ :</b> 600W DC-48V input Redundant Power Supply <b>-FRN13+ :</b> 800W Redundant Power Supply, 80 PLUS Platinum
Cooling System	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans
Form Factor	267 x 117 x 406mm (10.5" x 4.62" x 16")	267 x 117 x 406mm (10.5" x 4.62" x 16")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

AMD EPYC™ 3000 Series 8C IoT  
Compact Box Edge Platform

Intel® Xeon® D-2146NT  
SoC, 8 Core, 16 Thread, Compact

Fanless Deverton  
Edge Computing System

Intel® Xeon® D-2123IT  
Fanless, SoC, 4 Cores



We Power the Cloud



MODEL	AS -E301-9D-8CN4	SYS-E301-9D-8CN8TP	SYS-E302-9A	SYS-E302-9D
Processor Support	AMD EPYC™ 3251 SoC Processor, 8 Core/16 Thread, 2.5GHz / 50w	Intel® Xeon® D-2146NT, 8 Core, 80W	Intel® Atom® Processor C3558. Single Socket FCBGA-1310 supported, CPU TDP support up to 16W TDP	Intel® Xeon® D-2123IT, 4-Core, 60W
Key Applications	<ul style="list-style-type: none"> <li>Embedded IoT Computing</li> <li>SD-WAN and vCPE/uCPE</li> <li>Hyper-Converged Appliance</li> <li>Entry-level Network Appliance</li> </ul>	<ul style="list-style-type: none"> <li>SDN-WAN, vCPE controller box</li> <li>NFV Edge Computing Server</li> <li>Virtualization Server</li> <li>FireWall Applications</li> <li>IoT Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>IoT Edge Computing</li> <li>Retail, Smart Medical Expert Systems</li> <li>Networking Appliance</li> <li>Industrial Automation &amp; Control</li> <li>Embedded IoT Gateway</li> </ul>	<ul style="list-style-type: none"> <li>IoT Edge Computing</li> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Artificial Intelligence (AI) on Edge, Machine Learning (ML)</li> <li>FireWall Applications</li> <li>Networking Appliance</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>AMD Embedded EPYC™ 3251 SoC Processor, 8 Core/16 Thread</li> <li>1 M.2 M-key for NVMe, 2242/80</li> <li>1 PCIe3.0 x16 expansion for AOC</li> <li>IPMI 2.0 management with dedicated LAN</li> <li>7 year life cycle</li> <li>Best Performance per Watt</li> </ul>	<ul style="list-style-type: none"> <li>Built in Intel® QAT up to 40Gbps Crypto/ Compression</li> <li>8 LAN ports support (2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> </ul>	<ul style="list-style-type: none"> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> <li>Fanless compact design</li> </ul>	<ul style="list-style-type: none"> <li>8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> <li>Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini PCI-E with mSATA Support</li> </ul>
Serverboard	SUPER● M11SDV-8C-LN4F	SSUPER● X11SDV-8C-TP8F	SUPER● A2SDi-4C-HLN4F	SUPER● X11SDV-4C-TP8F-01
Chipset	System on Chip	System On Chip	System on Chip chipset	System on Chip chipset
System Memory (Max.)	DDR4 512GB up to 2666MHz ECC/ Non-ECC RDIMM, UDIMM, LRDIMM in 4 DIMM slots	DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz  Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots
Expansion Slots	1 PCI Express 3.0 x16 AOC slot (LP), 1 M.2(M Key for NVMe, 2242/80)	1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots	1x M.2 M Key 2242/2280(PCI-E 3.0 x2)	1 PCI-E 3.0 x8
Onboard Storage Controller	SoC controller for 4x SATA3.0	SoC controller for 4x SATA3 (6 Gbps) ports, (or 2x NVMe U.2 / 8x SATA3 through two Port Eight Intel® PCH SATA 3.0 Ports or Two MINI-SAS HD ports)	SoC controller for 2x SATA 3.0	SoC controller for 2 SATA3 ports; RAID 0,1
Connectivity	4x 1GbE LAN, 1x Dedicated IPMI LAN, 2 USB 3.0	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	4x 1GbE, 1x dedicated IPMI LAN, 2x USB 2.0	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC	Aspeed AST2400 BMC	Aspeed AST2500 BMC
Management	IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, Watchdog	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, Watchdog
Drive Bays	2x 2.5" fixed drive bay bracket, supporting 15mm 2.5" Enterprise drive	Support up to 4x 7mm SSD	2x 2.5" 7mm fixed drive bay	2x 2.5" fixed drive bay with bracket
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 150W power adapter	DC power adapter	Lockable 12V DC 60W power adapter	150W 12V Lockable DC Power Adapter; Optional 180W 12V Lockable DC Power Adapter)
Cooling System	3x 40x28mm 4-PIN PWM Fan(FAN-0100L4, 8.5K RPM)	Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)	Fanless	Fanless
Form Factor	254 x 66 x 226mm (10" x 2.6" x 8.9")	254 x 66 x 226mm (10" x 2.6" x 8.9")	295 x 76 x 206mm (11.6" x 3" x 8.1")	295 x 76 x 206mm (11.6" x 3" x 8.1")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Atom™ C3558/C3758,  
SoC, 4/8 Cores

Intel® Atom™ C3558/C3758,  
SoC, 4/8 Cores

Intel® Atom™ C3558/C3758,  
SoC, 4/8 Cores



MODEL	SYS-E300-9A-4CN10P SYS-E300-9A-8CN10P	SYS-E300-9A-4CN8 SYS-E300-9A-8CN8	SYS-E300-9A-4C SYS-E300-9A-8C
Processor Support	-4CN10P: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8CN10P: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz	-4CN8: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8CN8: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz	-4C: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8C: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz
Key Applications	<ul style="list-style-type: none"> <li>Virtual-CPE White Box Solution</li> <li>Network Security Appliance</li> <li>Embedded IoT Gateway</li> <li>Networking Edge Device</li> </ul>	<ul style="list-style-type: none"> <li>Virtual-CPE White Box Solution</li> <li>Network Security Appliance</li> <li>Embedded IoT Gateway</li> <li>Networking Edge Device</li> </ul>	<ul style="list-style-type: none"> <li>Network Security Appliance</li> <li>Embedded IoT Gateway</li> <li>Networking Edge Device</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>8x 1GbE RJ45 and 2x 1G SFP ports onboard</li> <li>LED indicator for each LAN port</li> <li>Best Performance per Watt</li> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> </ul>	<ul style="list-style-type: none"> <li>8x 1G LAN port onboard</li> <li>LED indicator for each LAN port</li> <li>Best Performance per Watt</li> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> </ul>	<ul style="list-style-type: none"> <li>Best Performance per Watt</li> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> </ul>
Serverboard	-4CN10P: SUPER● A2SDV-4C-LN10PF -8CN10P: SUPER● A2SDV-8C-LN10PF	-4CN8: SUPER● A2SDV-4C-LN8F -8CN8: SUPER● A2SDV-8C-LN8F	-4C: SUPER● A2SDi-4C-HLN4F -8C: SUPER● A2SDi-8C-HLN4F
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 256GB Registered ECC DDR4-2133MHz, up to 64GB Unbuffered ECC/Non-ECC DDR4-2133MHz; in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz, up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz, up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots
Expansion Slots	-4CN10P: 1x PCI Express 3.0 x2 AOC slot (LP) when SSD isn't populated, 1 M.2 B Key 3042/2280(PCI-E 3.0 x2) -8CN10P: 1x PCI Express 3.0 x4 AOC slot (LP) when SSD isn't populated, 1x M.2 M Key 2242/2280 (PCI-E 3.0 x2 or SATA3.0), 1x M.2 B Key 3042/2280(PCI-E 3.0 x2)	-4CN8: 1x PCI Express 3.0 x2 AOC slot (LP) when only 1 SSD populated, 1 M.2 B Key 3042/2280(PCI-E 3.0 x2) -8CN8: 1x PCI Express 3.0 x4 AOC slot (LP) when only 1 SSD populated, 1x M.2 M Key 2242/2280 (PCI-E 3.0 x2 or SATA3.0), 1x M.2 B Key 3042/2280(PCI-E 3.0 x2)	1x PCI Express 3.0 x4 AOC slot (LP), 1x M.2 M Key 2242/2280(PCI-E 3.0 x2)
Onboard Storage Controller	SoC controller for 3x SATA3.0	SoC controller for 4x SATA3.0	SoC controller for 4x SATA3.0
Connectivity	8x 1GbE RJ45 and 2x 1G SFP, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request	8x 1GbE, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request	4x 1GbE, 1 dedicated IPMI LAN, 2 USB 2.0, Optional Console port by request
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor™ 5, Watchdog	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor™ 5, Watchdog	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor™ 5, Watchdog
Drive Bays	1x 2.5" fixed drive bay when AOC area is not occupied.	1x 2.5" fixed drive bay when AOC area is not occupied.	1x 2.5" fixed drive bay (2x 2.5" fixed drive bay when AOC area is not occupied.)
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 84W power adapter	Lockable 12V DC 84W power adapter	Lockable 12V DC 84W power adapter
Cooling System	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM), Optional 1x Fan by request	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM), Optional 1x Fan by request	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM), Optional 1x Fan by request
Form Factor	254 x 43 x 226mm (10" x 1.7" x 8.9")	1U Compact Box; Enclosure: 254 x 43 x 226mm (10" x 1.7" x 8.9") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 6.4lbs (2.9kg) Net Weight: 3.8lbs (1.72kg)	1U Compact Box; Enclosure: 254 x 43 x 226mm (10" x 1.7" x 8.9") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 6.3lbs (2.86kg) Net Weight: 3.6lbs (1.63kg)

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

8th Generation Intel® Core™ i7/i5/i3 Processor  
Edge Computing

Intel® Xeon® D-2146NT SoC, 8 Core, 16 Thread

Intel® Xeon® D-2123IT, 4 Cores, 8 Threads

Intel® Atom™ C3958 SoC, 16 Cores



MODEL	SYS-E300-9C	SYS-E300-9D-8CN8TP	SYS-E300-9D-4CN8TP	SYS-E300-9A-16CN8TP
Processor Support	8th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor	Intel® Skylake Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W	Intel® Xeon® D-2123IT, 4 Cores, 60W	Intel® Atom™ Processor Denverton C3958, SoC 16 Cores, 31W, 2.0 GHz
Key Applications	<ul style="list-style-type: none"> <li>IoT Edge Computing</li> <li>DVR/NVR</li> <li>Machine Automation</li> <li>Digital Signage</li> <li>Medical Applications</li> <li>IoT Gateway</li> </ul>	<ul style="list-style-type: none"> <li>SDN-WAN, vCPE controller box</li> <li>NFV Edge Computing Server</li> <li>Virtualization Server</li> <li>FireWall Applications</li> <li>IoT Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>SDN-WAN, vCPE controller box</li> <li>NFV Edge Computing Server</li> <li>Virtualization Server</li> <li>FireWall Applications</li> <li>IoT Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>Embedded Networking Applications</li> <li>Network Security Appliance</li> <li>FireWall Applications</li> <li>Virtualization Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Coffee Lake 8th Gen Core i3/i5/i7</li> <li>Embedded long-life</li> <li>1 U Box Edge Devices</li> <li>TPM onboard</li> </ul>	<ul style="list-style-type: none"> <li>Built in Intel® QAT up to 40Gbps Crypto/Compression</li> <li>Supports up to 8C high Density SKL-D SoC processor for edge network computing</li> <li>High Memory Bandwidth-Supports 4 DDR4 channel DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed. Max memory capacity up to 512GB on LRDIMM</li> <li>8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> <li>Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support</li> <li>2 x USB 3.0, 4 x SATA 3.0 ports(SATA/SAS HDD/SSD)</li> </ul>	<ul style="list-style-type: none"> <li>8 LAN ports support (2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)</li> <li>1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support</li> </ul>	<ul style="list-style-type: none"> <li>Dual SFP+, Dual 10GBase-T and Quad GbE</li> <li>Short depth (less than 10 depth)</li> <li>Best Performance per Watt</li> <li>7 year life cycle</li> <li>IPMI 2.0 management with dedicated LAN</li> </ul>
Serverboard Chipset	SUPER● X11SCV-Q Intel® Q370 chipset	SUPER● X11SDV-8C-TP8F System On Chip	SUPER● X11SDV-4C-TP8F System On Chip	SUPER● A25Di-16C-TP8F System on Chip
System Memory (Max.)	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots	DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots	DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1x PCI Express 3.0 x16 AOC slot (LP) and M.2 M key: SATA/PCI-E 3.0 x4, support 2242/2280 length; M.2 E KEY: PCI-E 3.0 x1, support 2230 length	1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,	1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,	1 PCI Express 3.0 x4 AOC slot (LP), 1 M.2(M Key for SSD 2242/80, PCI-E/ SATA3.0), 1 Mini-PCI-E /w mSATA Half Size
Onboard Storage Controller	Q370 controller for 2 SATA3 ports; RAID 0,1	SoC controller for 4x SATA3 (6 Gbps) ports	SoC controller for 4x SATA3 (6 Gbps) ports	SoC controller for 2x SATA3.0
Connectivity	2 X 1GbE LAN with AMT, 4 x USB 3.1 (2 type A & 2 type C in rear), HD Audio(Mic In/Line Out)	2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	2x 10GbE SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 3.0
VGA/Audio	1 DVI-D, 1HDMI, 1DP(DisplayPort), 3 Independent displays; 1 eDP(Embedded DisplayPort)	VGA via BMC	VGA via BMC	VGA via BMC
Management	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	IPMI 2.0, KVM with dedicated LAN, Watchdog	IPMI 2.0, KVM with dedicated LAN, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" fixed drive bay	1x 2.5" fixed drive bay with bracket. (No 2.5" fixed drive bay when AOC area is occupied.)	1x 2.5" fixed drive bay with bracket. (No 2.5" fixed drive bay when AOC area is occupied.)	2x 2.5" fixed drive bay: one with bracket, one on base mount. (1x 2.5" fixed drive bay when AOC area is occupied.)
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 150W power adapter	DC power adapter	DC power adapter	Lockable 12V DC 84W power adapter
Cooling System	2x 4cm high performance PWM fan; optional for 1x fan to add-on card area cooling	Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)	Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
Form Factor	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Intel® Xeon® D2123IT  
SoC, 4-Cores, 8 Thread

Intel® Xeon® D-1518  
SoC, 4 Core

Intel® Xeon® D-1528  
SoC, 6-Cores



MODEL	SYS-E300-9D	SYS-E300-8D	SYS-E200-8D
Processor Support	Intel® Skylake Xeon® D-2123IT SoC, 2.2GHz, 4 Core, 8 Thread, TDP 60W	Intel® Xeon® Processor D-1518, SoC 4 Core, 35W, 2.2 GHz	Intel® Xeon® Processor D-1528, SoC 6 Core, 35W, 1.9 GHz
Key Applications	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• SDN-WAN, vCPE controller box</li> <li>• NFV Edge Computing Server</li> <li>• Virtualization Server</li> <li>• IoT Edge Computing</li> <li>• IoT Gateway</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded Networking Applications</li> <li>• Network Security Appliance</li> <li>• FireWall Applications</li> <li>• Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded Networking Applications</li> <li>• Network Security Appliance</li> <li>• FireWall Applications</li> <li>• Virtualization Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Supports up to 4C high Density SKL-D SoC processor for edge network computing</li> <li>• High Memory Bandwidth-Supports 4 DDR4 channel DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2400 MHz memory speed, Max memory capacity up to 512GB on LRDIMM</li> <li>• 1x Low Profile PCI-E 3.0 x 8 slot, 1 on board Oculink port(or 1x PCI-Ex4 NVMe for NVMe SSD)</li> <li>• 2 x 10GBase-T ethernet ports RMDA support</li> <li>• 2 x USB 3.0, 1 x SATA 3.0 ports(SATA/SAS HDD/SSD)</li> <li>• 1 x TPM 2.0 header</li> </ul>	<ul style="list-style-type: none"> <li>• Dual SFP+ and 6 GbE</li> <li>• Short depth (less than 10 depth)</li> <li>• Low Power Xeon® D SoC 4 Core</li> <li>• Best Performance per Watt</li> <li>• 7 year life cycle</li> <li>• IPMI 2.0 management with dedicated LAN</li> </ul>	<ul style="list-style-type: none"> <li>• Smallest Xeon® Server BOX</li> <li>• Low Power Xeon® D SoC 6 Core</li> <li>• Best Performance per Watt</li> <li>• 7 year life cycle</li> <li>• IPMI 2.0 management with dedicated LAN</li> </ul>
Serverboard	SUPER® X11SDV-4C-TLN2F	SUPER® X10SDV-TP8F	SUPER® X10SDV-6C-TLN4F
Chipset	System On Chip	System on Chip	System on Chip
System Memory (Max.)	4 x DDR4 DIMM 512 GB up to 2400MHz LRDIMM or 256GB RDIMM, ECC/non-ECC	Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets	128GB Registered ECC, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0x8(L/P)	1 PCI-E 3.0 x8 AOC slot (LP), 1 M.2(M Key for SSD 2242/80/110, PCI-E/SATA3.0, 1 Mini-PCI-E/w mSATA)	1 M.2(M Key for SSD 2242/80, PCI-E/SATA3.0)
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; support RAID 0,1,5,10, 4 SATA ports via OCuLink (or PCIe3.0 x4 for NVMe)	SoC controller for 4x SATA3.0	SoC controller for 6x SATA3.0
Connectivity	2x 10GBase-T LAN, 1 dedicated IPMI LAN, 2 USB 3.0	6x GbE and 2 SFP+, 1 dedicated management port, 2x USB 3.0	2x GbE and 2x 10G LAN ports, 1 dedicated management port, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	IPMI 2.0	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	1x 2.5" internal drive bay	1x 2.5" fixed drive bay with bracket. (No 2.5" fixed drive bay when AOC area is occupied.)	1x 2.5" fixed drive bay with bracket. (Design for 9.5mm thickness HDD with Low Profile Memory)
Peripheral Bays	N/A	N/A	N/A
Power Supply	MCP-250-10128-0N (150W)	DC power adapter	DC power adapter
Cooling System	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM), none	Passive CPU heat sink and 2x 40mm chassis fans	Passive CPU heat sink and 2x 40mm chassis fans
Form Factor	254 x 43 x 226mm (10" x 1.7" x 8.9")	1U Compact Box; Enclosure: 254 x 43 x 226mm (10" x 1.7" x 8.9") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 6.1lbs (2.77kg) Net Weight: 3.45lbs (1.56kg)	1U compact BOX; Enclosure: 193 x 43 x 226mm (7.6" x 1.7" x 8.9") Package: 381 x 276 x 127mm (15" x 10.87" x 5.59") Gross Weight: 6.5lbs (2.95kg) Net Weight: 3.0lbs (1.36kg)

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# X13 IoT/Embedded

Alder Lake  
Compact Fanless Server

Alder Lake  
Compact Fanless Server

Alder Lake  
Compact Fanless Server

Alder Lake  
Compact Fanless Server



MODEL	SYS-E100-13AD-C	SYS-E100-13AD-L	SYS-E100-13AD-E	SYS-E100-13AD-H
Processor Support	11th Generation Intel® Celeron® Processor 7305E Processor; up to TDP 15W	11th Generation Intel® Core™ i3-1215UE Processor; up to TDP 15W	11th Generation Intel® Core™ i5-1245UE Processor; up to TDP 15W	11th Generation Intel® Core™ i7-1265UE Processor; up to TDP 15W
Key Applications	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>IoT Gateway for Smart Factory, Smart Building</li> <li>Security and Surveillance</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>IoT Gateway for Smart Factory, Smart Building</li> <li>Security and Surveillance</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>IoT Gateway for Smart Factory, Smart Building</li> <li>Security and Surveillance</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>IoT Gateway for Smart Factory, Smart Building</li> <li>Security and Surveillance</li> <li>Digital Signage</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>4 USB 3.1 Gen 2</li> <li>Dual 2.5GbE LAN</li> <li>0°C to 50°C Operating Temperature</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>4 USB 3.1 Gen 2</li> <li>Dual 2.5GbE LAN</li> <li>0°C to 50°C Operating Temperature</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>4 USB 3.1 Gen 2</li> <li>Dual 2.5GbE LAN</li> <li>0°C to 50°C Operating Temperature</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI 2.0b (4K60Hz), 1 HDMI 1.4b, 2 DP 1.4 (type-C)</li> <li>4 USB 3.1 Gen 2</li> <li>Dual 2.5GbE LAN</li> <li>0°C to 50°C Operating Temperature</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> </ul>
Serverboard	SUPER● X13SAN-C-WOHS	SUPER● X13SAN-L-WOHS	SUPER● X13SAN	SUPER● X13SAN
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots
Expansion Slots	1x 2242/3042/2280 B-Key (USB3.0/2.0,SATA Gen3/PCI-E Gen3 x1) with nano SIM holder 1x M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) 1x M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	1x 2242/3042/2280 B-Key (USB3.0/2.0,SATA Gen3/PCI-E Gen3 x1) with nano SIM holder 1x M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) 1x M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	1x 2242/3042/2280 B-Key (USB3.0/2.0,SATA Gen3/PCI-E Gen3 x1) with nano SIM holder 1x M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) 1x M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	1x 2242/3042/2280 B-Key (USB3.0/2.0,SATA Gen3/PCI-E Gen3 x1) with nano SIM holder 1x M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) 1x M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support
Onboard Storage Controller	N/A	N/A	N/A	N/A
Connectivity	Dual 2.5GbE LAN (I225-IT x2), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	Dual 2.5GbE LAN (I225-IT x2), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	Dual 2.5GbE LAN (I225-IT x2), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	Dual 2.5GbE LAN (I225-IT x2), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)
VGA/Audio	Intel® UHD Graphics	Intel® UHD Graphics	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog
Drive Bays	N/A	N/A	N/A	N/A
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W or 84W power adapter	Lockable 12V DC 60W or 84W power adapter	Lockable 12V DC 60W or 84W power adapter	Lockable 12V DC 60W or 84W power adapter
Cooling System	Fanless	Fanless	Fanless	Fanless
Form Factor	195 x 44mm x 159mm (7.68" x 1.73" x 6.25")	195 x 44mm x 159mm (7.68" x 1.73" x 6.25")	195 x 44mm x 159mm (7.68" x 1.73" x 6.25")	195 x 44mm x 159mm (7.68" x 1.73" x 6.25")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Fanless IoT Gateway/Server

Fanless IoT Gateway/Server

Fanless IoT Gateway/Server



MODEL	SYS-E100-9S	SYS-E100-9S-E	SYS-E100-9S-L
Processor Support	7th Generation Intel® Core™ i7-7600U Processor; up to TDP 15W	7th Generation Intel® Core™ i5-7300U Processor; up to TDP 15W	7th Generation Intel® Core™ i3-7100U Processor; up to TDP 15W
Key Applications	<ul style="list-style-type: none"> <li>• IoT Edge Computing</li> <li>• Kiosk, Interactive information system</li> <li>• Environmental Monitor</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Edge Computing</li> <li>• Kiosk, Interactive information system</li> <li>• Environmental Monitor</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Edge Computing</li> <li>• Kiosk, Interactive information system</li> <li>• Environmental Monitor</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Core i Fanless Compact Ruggedized Box PC</li> <li>• 1 HDMI and 1 Display Port</li> <li>• 1 USB3.1, 2 USB 3.0, 4 USB 2.0</li> <li>• 4 COM (RS-232/422/485)</li> <li>• 1 8-bit configurable GPIO via DB9</li> <li>• 2 Gigabit Ethernet Ports</li> <li>• TPM2.0 onboard</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI and 1 Display Port</li> <li>• 1 USB3.1, 2 USB 3.0, 4 USB 2.0</li> <li>• 4 COM (RS-232/422/485)</li> <li>• 1 8-bit configurable GPIO via DB9</li> <li>• 2 Gigabit Ethernet Ports</li> <li>• TPM2.0 onboard</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI and 1 Display Port</li> <li>• 1 USB3.1, 2 USB 3.0, 4 USB 2.0</li> <li>• 4 COM (RS-232/422/485)</li> <li>• 1 8-bit configurable GPIO via DB9</li> <li>• 2 Gigabit Ethernet Ports</li> </ul>
Serverboard	SUPER● X11SSN-H-WOHS	SUPER● X11SSN-E-WOHS	SUPER● X11SSN-L-WOHS
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Expansion Slots	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key
Onboard Storage Controller	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD
Connectivity	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 8-bit GPIO via DB9, TPM2.0 onboard	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 8-bit GPIO via DB9, TPM2.0 onboard	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 8-bit GPIO via DB9, TPM2.0 onboard
VGA/Audio	1 DisplayPort, 1 HDMI	1 DisplayPort, 1 HDMI	1 DisplayPort, 1 HDMI
Management	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	N/A	N/A	N/A
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Fanless	Fanless	Fanless
Form Factor	195 x 44 x 151mm (7.68" x 1.73" x 5.94")	195 x 44 x 151mm (7.68" x 1.73" x 5.94")	195 x 44 x 151mm (7.68" x 1.73" x 5.94")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

IP51 Fanless IoT Gateway/Server

Fanless IoT Gateway/Server,  
Cost Effective

Fanless IoT Gateway/Server



MODEL	SYS-E50-9AP	SYS-E50-9AP-L	SYS-E50-9AP-N5
Processor Support	Intel® Atom™ Processor x5-E3940; up to TDP 9.5W	Intel® Atom™ Processor x5-E3940; up to TDP 9.5W	Intel® Atom™ Processor x5-E3940; up to TDP 9.5W
Key Applications	<ul style="list-style-type: none"> <li>• IoT Gateway</li> <li>• Commercial Appliance</li> <li>• Support Cloud-based Management Software</li> </ul>	<ul style="list-style-type: none"> <li>• Cost Optimized IoT Gateway</li> <li>• Commercial Appliance</li> </ul>	<ul style="list-style-type: none"> <li>• 5 LAN Fanless Embedded System</li> <li>• Entry Networking Appliance</li> <li>• IoT Gateway</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• IP51 with plastic chassis design for water/dust proof</li> <li>• Palm-size for space-limited environment</li> <li>• Built-in Antenna</li> </ul>	<ul style="list-style-type: none"> <li>• Palm-size for space-limited environment</li> <li>• Cost optimized</li> </ul>	<ul style="list-style-type: none"> <li>• 5 LAN Fanless Embedded System</li> <li>• TPM 2.0 onboard</li> <li>• Built-in Antenna</li> </ul>
Serverboard	SUPER● A2SAP-H	SUPER● A2SAP-H	SUPER● A2SAP-H
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket
Expansion Slots	1 Full size Mini-PCI-E; 1 Half size Mini-PCI-E; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230	1 Half size Mini-PCI-E; 1 M.2 B-Key 2242	1 Half size Mini-PCI-E; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230
Onboard Storage Controller	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2242 for SATA SSD	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD
Connectivity	Dual LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM2.0 onboard	Dual LAN with Intel® I210-IT, 2 USB3.0	5 LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 1 COM, TPM2.0 onboard
VGA/Audio	2 HDMI	1 HDMI	2 HDMI
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	1 SATA 3.0 for 7mm 2.5" SATA SSD	N/A	1 SATA 3.0 for 7mm 2.5" SATA SSD
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter
Cooling System	Fanless	Fanless	Fanless
Form Factor	148 x 44 x 118mm (5.82" x 1.72" x 4.64")	148 x 44 x 118mm (5.82" x 1.72" x 4.64")	148 x 44 x 118mm (5.82" x 1.72" x 4.64")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Supports Wireless communication

Compact Embedded System  
Ultra low power

Compact Embedded system  
with 4GbE LAN ports

Compact Embedded system  
with 4GbE LAN ports



MODEL	SYS-E50-9AP-Wifi**	SYS-E102-9AP-L	SYS-E102-9AP-LN4-E	SYS-E102-9AP-LN4-C
Processor Support	Intel® Atom® X5-E3940; up to TDP 9.5W	Intel® Atom® X5-E3930; up to TDP 6.5W	Intel® Atom® X5-E3940, 4 Cores, TDP 9.5W	Intel® Celeron® J3455 , 4 Cores, TDP 10W
Key Applications	<ul style="list-style-type: none"> <li>• IoT Gateway</li> <li>• Commercial Appliance</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded Applications</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Gateway</li> <li>• Network Security Appliance</li> <li>• SD WAN</li> <li>• Embedded Networking Applications</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Gateway</li> <li>• Network Security Appliance</li> <li>• SD WAN</li> <li>• Embedded Networking Applications</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Built-in Antenna and Dual band Wireless/Bluetooth combo module</li> <li>• IP51 with plastic chassis design for water/dust proof</li> <li>• Cable-less design for easy maintenance</li> <li>• Fanless design with palm-size dimension</li> <li>• Support Cloud-based Management Software</li> </ul>	<ul style="list-style-type: none"> <li>• Building Block Solution for Embedded Applications</li> <li>• Easy integration</li> <li>• Compact size</li> <li>• Ultra low power 6.5W</li> </ul>	<ul style="list-style-type: none"> <li>• Compact size with 1x 2.5" 7mm Storage Drive</li> <li>• 4x Gigabit LAN Ports</li> <li>• Support WIFI/BT, 3 LTE, and GPS by 4 M.2 slots</li> <li>• SIM slot at rear I/O side for easily accessible by user</li> </ul>	<ul style="list-style-type: none"> <li>• Compact size with 1x 2.5" 7mm Storage Drive</li> <li>• 4x Gigabit LAN Ports</li> <li>• Support WIFI/BT, 3 LTE, and GPS by 4 M.2 slots</li> <li>• SIM slot at rear I/O side for easily accessible by user</li> </ul>
Serverboard	SUPER● A2SAP-H	SUPER● A2SAN-L	SUPER● A2SAN-LN4-E	SUPER● A2SAN-LN4-C
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM slot
Expansion Slots	1 Full size Mini-PCI-E; 1 Half size Mini-PCI-E; 1 M.2 B-Key 2242	1 Full Size Mini-PCI-E; 1 M.2 2280 B-Key	3 2242/3042 M.2 B-key w/ 3 x Nano-SIM slots for WWAN/LTE/GNSS card (1 with SATA3 support) 1 3042 M.2 E-Key for WiFi/BT card	3 2242/3042 M.2 B-key w/ 3 x Nano-SIM slots for WWAN/LTE/GNSS card (1 with SATA3 support) 1 3042 M.2 E-Key for WiFi/BT card
Onboard Storage Controller	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2280 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2242 for M.2 SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2242 for M.2 SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD
Connectivity	Dual LAN with Intel® I120-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM 2.0 onboard, Dual Band Wireless and Bluetooth 4.2	Dual LAN with Intel® I210-IT, 2 USB3.0, TPM2.0 onboard	4 GbE LAN, 2 USB 3.2 Ports Gen1 type-A , 1 COM Port DB9	4 GbE LAN, 2 USB 3.2 Ports Gen1 type-A , 1 COM Port DB9
VGA/Audio	2 HDMI	1 VGA 1 HDMI	1 HDMI	1 HDMI
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5; Watchdog	SuperDoctor® 5; Watchdog	SuperDoctor® 5; Watchdog
Drive Bays	1 SATA 3.0 for 7mm 2.5" SATA SSD	1 SATA 3.0 for 7mm 2.5" SATA SSD	1 SATA 3.0 for 7mm 2.5" SATA SSD	1 SATA 3.0 for 7mm 2.5" SATA SSD
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	60W Lockable Power Adapter	60W Lockable Power Adapter
Cooling System	Fanless	Passive CPU heat sink and 1x 40mm chassis fans	Passive CPU heat sink and 1 40mm chassis fans	Passive CPU heat sink and 1 40mm chassis fans
Form Factor	148 x 44 x 118mm (5.82" x 1.72" x 4.64")	1U Box; Enclosure: 190 x 44 x 120mm (7.48" x 1.72" x 4.72") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8")	1U Box; Enclosure: 190 x 44 x 120mm (7.48" x 1.72" x 4.72") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8")	1U Box; Enclosure: 190 x 44 x 120mm (7.48" x 1.72" x 4.72") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

\*\* Only available for NA and EU region. For other regions, please contact your sale representatives

# IoT/Embedded

Extended Temperature  
Fanless IoT Gateway/Server

Fanless IoT Gateway/Server

Industrial Ruggedized Fanless PC



MODEL	SYS-E100-9AP	SYS-E100-9APP	SYS-E100-9AP-IA
Processor Support	Intel® Atom® X5-E3940; up to TDP 9.5W	Intel® Pentium™ N4200; up to TDP 6W	Intel® Atom® X5-E3940; up to TDP 9.5W
Key Applications	<ul style="list-style-type: none"> <li>• IoT Gateway for Smart Factory, Smart Building, Smart Home</li> <li>• Kiosk, Interactive information system</li> <li>• Environmental Monitor</li> <li>• Industrial Application</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Gateway for Smart Factory, Smart Building, Smart Home</li> <li>• Kiosk, Interactive information system</li> <li>• Environmental Monitor</li> </ul>	<ul style="list-style-type: none"> <li>• IoT Gateway for Smart Factory, Smart Building</li> <li>• Machine Automation</li> <li>• Industrial Application</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Low power Apollo Lake Atom™ E3940, 4C</li> <li>• Fanless Compact Ruggedized Box PC</li> <li>• Supports wide-temp: -20~60°C</li> <li>• TPM2.0 onboard</li> <li>• Operational vibration: 5Grms, IEC 60068-2-64</li> <li>• Operational Shock: 30G, IEC 60068-2-27</li> </ul>	<ul style="list-style-type: none"> <li>• Supports temp: 0-60C</li> <li>• TPM2.0 onboard</li> <li>• Operational vibration: 5Grms, IEC 60068-2-64</li> <li>• Operational Shock: 30G, IEC 60068-2-27</li> </ul>	<ul style="list-style-type: none"> <li>• Low power Apollo Lake Atom™ E3940, 4C</li> <li>• Din-rail Fanless Box PC</li> <li>• Din-rail Fanless Ruggedized Box PC</li> <li>• 1 Flexible I/O Slot (via MiniPCI-E)</li> <li>• 9-36VDC wide range power input</li> <li>• Supports wide-temp: -20-60C</li> <li>• Operational vibration: 5Grms, IEC 60068-2-64</li> <li>• Operational Shock: 30G, IEC 60068-2-27</li> </ul>
Serverboard	SUPER● A2SAN-E-WOHS	SUPER● X11SAN-WOHS	SUPER● A2SAN-E-WOHS
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket
Expansion Slots	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key	1 Full size Mini-PCI-E; 1 M.2 2280 B-Key
Onboard Storage Controller	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD, 1 SATA3 2.5" SSD
Connectivity	Dual LAN with Intel® I210-IT, 2 USB3.0, 4 USB2.0, 4 COM (2 RS-232/422/485, 2 RS-232), 1 8-bit configurable GPIO via DB9, TPM2.0 onboard	Dual LAN with Intel® I210-IT, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (2 RS-232/422/485, 2 RS-232), 1 8-bit configurable GPIO via DB9, TPM2.0 onboard	Dual LAN with Intel® I210-IT, 2 USB3.0, 4 USB2.0, 4 COM (2 RS-232/422/485, 2 RS-232), 1 8-bit configurable GPIO via DB9, TPM2.0 onboard
VGA/Audio	1 VGA 1 HDMI	1 VGA 1 HDMI	1 VGA 1 HDMI
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	N/A	N/A	1 SATA 3.0 for 2.5" SATA SSD
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	12V DC 60W power adapter, Terminal Block
Cooling System	Fanless	Fanless	Fanless
Form Factor	195 x 44 x 151mm (7.68" x 1.73" x 5.94")	195 x 44 x 151mm (7.68" x 1.73" x 5.94")	194 x 80 x 126mm (7.64" x 3.15" x 4.96")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Fanless IoT Gateway/Server

Fanless IoT Gateway/Server

Fanless IoT Gateway/Server

Fanless IoT Gateway/Server



MODEL	SYS-E100-9W-H	SYS-E100-9W-E	SYS-E100-9W-L	SYS-E100-9W-C
Processor Support	8th Generation Intel® Core™ i7-8665UE Processor; up to TDP 15W	8th Generation Intel® Core™ i5-8365UE Processor; up to TDP 15W	8th Generation Intel® Core™ i3-8145UE Processor; up to TDP 15W	Intel® Celeron® Processor 4305UE Processor; up to TDP 15W
Key Applications	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>HDMI 1.4, DP++</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>Operational vibration: 5Grms, IEC 60068-2-64</li> <li>Operational Shock: 30G, IEC 60068-2-27</li> </ul>	<ul style="list-style-type: none"> <li>HDMI 1.4, DP++</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>Operational vibration: 5Grms, IEC 60068-2-64</li> <li>Operational Shock: 30G, IEC 60068-2-27</li> </ul>	<ul style="list-style-type: none"> <li>HDMI 1.4, DP++</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>Operational vibration: 5Grms, IEC 60068-2-64</li> <li>Operational Shock: 30G, IEC 60068-2-27</li> </ul>	<ul style="list-style-type: none"> <li>HDMI 1.4, DP++</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>TPM2.0 onboard</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>Operational vibration: 5Grms, IEC 60068-2-64</li> <li>Operational Shock: 30G, IEC 60068-2-27</li> </ul>
Serverboard	SUPER● X11SWN-H-WOHS	SUPER● X11SWN-E-WOHS	SUPER● X11SWN-L-WOHS	SUPER● X11SWN-C-WOHS
Chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support
Onboard Storage Controller	N/A	N/A	N/A	N/A
Connectivity	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)
VGA/Audio	Intel® UHD Graphics 620, ALC 888S HD Audio	Intel® UHD Graphics 620, ALC 888S HD Audio	Intel® UHD Graphics 620, ALC 888S HD Audio	Intel® UHD Graphics 620, ALC 888S HD Audio
Management	SuperDoctor® 5, Watchdog, AMT, vPro	SuperDoctor® 5, Watchdog, AMT, vPro	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	N/A	N/A	N/A	N/A
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Fanless	Fanless	Fanless	Fanless
Form Factor	195 x 44 x 159mm (7.68" x 1.73" x 6.25")	195 x 44 x 159mm (7.68" x 1.73" x 6.25")	195 x 44 x 159mm (7.68" x 1.73" x 6.25")	195 x 44 x 159mm (7.68" x 1.73" x 6.25")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Industrial Fanless SuperServer

Industrial Fanless SuperServer

Industrial Fanless SuperServer

Industrial Fanless SuperServer



MODEL	SYS-E100-9W-IA-H	SYS-E100-9W-IA-E	SYS-E100-9W-IA-L	SYS-E100-9W-IA-C
Processor Support	8th Generation Intel® Core™ i7-8665UE Processor; up to 15W TDP	8th Generation Intel® Core™ i5-8365UE Processor; up to 15W TDP	8th Generation Intel® Core™ i3-8145UE Processor; up to 15W TDP	8th Generation Intel® Celeron® 4305UE Processor; up to 15W TDP
Key Applications	<ul style="list-style-type: none"> <li>Industrial Automation &amp; Control</li> <li>Machine Automation</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation &amp; Control</li> <li>Machine Automation</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation &amp; Control</li> <li>Machine Automation</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation &amp; Control</li> <li>Machine Automation</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Din-rail Fanless Box PC</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Din-rail Fanless Box PC</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Din-rail Fanless Box PC</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Din-rail Fanless Box PC</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>
Serverboard	SUPER● X11SWN-H-WOHS	SUPER● X11SWN-E-WOHS	SUPER● X11SWN-L-WOHS	SUPER● X11SWN-C-WOHS
Chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Expansion Slots	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support
Onboard Storage Controller	System on Chip	System on Chip	System on Chip	System on Chip
Connectivity	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)	2 GbE LAN (I210IT+I219LM), 4 USB 3.2 Gen 2, 4 USB2.0, 1 8-bit GPIO via DB9, 4 COM (2 RS-232/422/485, 2 RS-232)
VGA/Audio	Intel® UHD Graphics 620 ALC 8885 HD Audio	Intel® UHD Graphics 620 ALC 8885 HD Audio	Intel® UHD Graphics 620 ALC 8885 HD Audio	Intel® UHD Graphics 610 ALC 8885 HD Audio
Management	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	1 SATA SSD	1 SATA SSD	1 SATA SSD	1 SATA SSD
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	12V DC 60W power adapter with Terminal Block	12V DC 60W power adapter with Terminal Block	12V DC 60W power adapter with Terminal Block	12V DC 60W power adapter with Terminal Block
Cooling System	Fanless	Fanless	Fanless	Fanless
Form Factor	194 x 115 x 126mm (7.64" x 4.52" x 4.96")	194 x 115 x 126mm (7.64" x 4.52" x 4.96")	194 x 115 x 126mm (7.64" x 4.52" x 4.96")	194 x 115 x 126mm (7.64" x 4.52" x 4.96")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Building Block SBC

Building Block SBC

Building Block SBC

Building Block SBC



MODEL	SYS-E102-9W-H	SYS-E102-9W-E	SYS-E102-9W-L	SYS-E102-9W-C
Processor Support	8th Generation Intel® Core™ i7-8665UE Processor, TDP 15W	8th Generation Intel® Core™ i5-8365UE Processor, TDP 15W	8th Generation Intel® Core™ i3-8145UE Processor, TDP 15W	Intel® Celeron® Processor 4305UE, TDP 15W
Key Applications	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> <li>Retail, Smart Medical Expert Systems</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> <li>Retail, Smart Medical Expert Systems</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> <li>Retail, Smart Medical Expert Systems</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation, Retail, Smart Medical Expert Systems</li> <li>Kiosk, Interactive information system</li> <li>Digital Signage</li> <li>Retail, Smart Medical Expert Systems</li> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>	<ul style="list-style-type: none"> <li>1 HDMI and 1 Display Port</li> <li>4 USB 3.2 Gen2</li> <li>1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key</li> <li>+12-24VDC wide range power input</li> <li>0°C to 50°C Operating Temperature</li> <li>TPM2.0 on board</li> </ul>
Serverboard	SUPER● X11SWN-H	SUPER● X11SWN-E	SUPER● X11SWN-L	SUPER● X11SWN-C
Chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support
Onboard Storage Controller	N/A	N/A	N/A	N/A
Connectivity	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller
VGA/Audio	Intel® UHD Graphics 620	Intel® UHD Graphics 620	Intel® UHD Graphics 610	Intel® UHD Graphics 610
Management	SuperDoctor® 5, Watchdog, AMT, vPro	SuperDoctor® 5, Watchdog, AMT, vPro	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	1 SATA 3.0 for 2.5" 7mm SATA HDD	1 SATA 3.0 for 2.5" 7mm SATA HDD	1 SATA 3.0 for 2.5" 7mm SATA HDD	1 SATA 3.0 for 2.5" 7mm SATA HDD
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Passive CPU Heat Sink and 1x 40mm Chassis Fan	Passive CPU Heat Sink and 1x 40mm Chassis Fan	Passive CPU Heat Sink and 1x 40mm Chassis Fan	Passive CPU Heat Sink and 1x 40mm Chassis Fan
Form Factor	190 x 44 x 120mm (7.48" x 1.72" x 4.72")	190 x 44 x 120mm (7.48" x 1.72" x 4.72")	190 x 44 x 120mm (7.48" x 1.72" x 4.72")	190 x 44 x 120mm (7.48" x 1.72" x 4.72")

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# IoT/Embedded

Intel® Coffee Lake-S,  
8th Gen. Core™

Atom™ C3338  
SoC, 2 Cores

Atom™ E3940  
SoC, 4 Cores

Intel® Core™ i3,i5,i7 series,  
Pentium®, Celeron®



MODEL	SYS-5029C-TN2	SYS-5029A-2TN4	SYS-5029AP-TN2	SYS-5029S-TN2
Processor Support	Intel® 8th/9th Generation Core™ i9/Core™ i7/Core™ i5/Core™ i3/ Pentium®/Celeron® series Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support up to 65W TDP	Intel® Atom® C3338 Denverton Processor, SoC 2 Core, 9W, 1.5 GHz	Intel® Atom™ E3940 Apollo Lake Processor, SoC 4 Cores, 9.5W, 1.6 GHz	Intel® 6th/7th Generation Core™ i3, i5, i7 series Intel®, Pentium®, Celeron®; CPU TDP support up to 65W TDP
Key Applications	<ul style="list-style-type: none"> <li>Surveillance Security Server</li> <li>Compact Storage Appliance</li> <li>Video processing and streaming</li> <li>Small Medium Business Edge Server</li> </ul>	<ul style="list-style-type: none"> <li>7 Years Life Cycle</li> <li>Compact Cloud Server</li> <li>Edge Computing Device</li> </ul>	<ul style="list-style-type: none"> <li>Database Processing &amp; Storage</li> <li>High Performance NAS Servers</li> <li>Medical Applications</li> <li>Security Appliance and Video Surveillance</li> <li>Web Server for Small and Medium Business</li> <li>Indoor Kiosk</li> </ul>	<ul style="list-style-type: none"> <li>Database Processing &amp; Storage</li> <li>Web Server for Small and Medium Business</li> <li>Medical Applications</li> <li>Security Appliance and Video Surveillance</li> <li>Indoor Kiosk</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Up to 32GB Non ECC SO-DIMM DDR4 2666 MHz</li> <li>TPM chip onboard with jumper disable</li> <li>Up to 4 Hot-Swap 3.5" SATA3 HDD and 2 internal 2.5" fixed HDD</li> <li>4 x USB 3.1 (2 type A &amp; 2 type C in rear)</li> <li>M.2 Key: M-Key, E-Key for WiFi (or CNVi) card</li> </ul>	<ul style="list-style-type: none"> <li>Quad Gigabit Ethernet LAN</li> <li>Up to 4x hot-swap 3.5" SATA3 drives</li> <li>IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN</li> <li>7 year life cycle</li> </ul>	<ul style="list-style-type: none"> <li>Up to 4 Hot-Swap 3.5" SATA3 HDD, 1 internal 2.5" fixed HDD and 1 M.2 (M key 2242/80 PCI-E 2.0x2)</li> <li>Embedded long-life</li> <li>2x Gigabit LAN ports</li> <li>Quiet Operation</li> </ul>	<ul style="list-style-type: none"> <li>DP, HDMI and DVI-I: 3 independent displays</li> <li>Remote management via vPro technology</li> <li>2x Gigabit LAN ports</li> <li>Quiet Operation</li> </ul>
Serverboard	SUPER● X11SCV-Q	SUPER● A2SDI-2C-HLN4F	SUPER● A2SAV	SUPER● X11SSV-Q
Chipset	System on Chip	System on Chip	System on Chip	Intel® Q170
System Memory (Max.)	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots	Up to 128GB RDIMM or 32GB ECC/ NON ECC UDIMM, DDR4-1866MHz in 2 DIMM slots	8GB Unbuffered non-ECC DDR3-1866MHz SO-DIMM in 1 DIMM slot	32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 (Low Profile); 1 M.2 PCI-E 3.0x4 M Key 2242/2280	1x PCI-E 3.0 x2 (in x4 open ended slot)	1 PCI-E 2.0 x2 in x8 slot, 1 M.2 (M key 2242/80 PCI-E 2.0x2), 1 Mini-PCI-E with mSATA support	1 x PCI-E 3.0 x16 slot 1 x M.2 (M key 2242/80 PCI-E 3.0x4) 1 x Mini-PCI-E with mSATA support
Onboard Storage Controller		SoC controller for 6 SATA3 (6 Gbps) ports	Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SoC controller for 2 SATA3 (6 Gbps) ports	Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
Connectivity	4 x USB 3.1 (2 type A & 2 type C in rear)	4 x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB2.0	2x 1GbE LAN, 2 USB3.0, 3 USB2.0(2 front, 1 Type A), 1 Serial Port (RJ45) ALC 8885 HD Audio	2x 1GbE, 4 USB3.0, 3 USB2.0 (2 front, 1 Type A), 2 RS232 ALC 8885 HD Audio
VGA/Audio		VGA via BMC	1 HDMI, 1 DP, 1 VGA or 1 eDP, Intel® HD Graphic 3 independent displays	1 HDMI, 1 DP (Display Port), 1 DVI - D, 1 Intel® HD Graphics 3 Independent Displays
Management			vPro and AMT	vPro and AMT
Drive Bays	4x 3.5" SATA Hot Swap drive bay and 2 x2.5" internal drive bay	4x 3.5" hot-swap drive bay, 2x 2.5" fixed drive bay	4x 3.5" hot-swap SAS/SATA 2x 2.5" fixed drive bay	4x 3.5" hot-swap SAS/SATA 1x 2.5" fixed drive bay
Peripheral Bays	N/A	1x slim DVD-ROM drive bay (shared with 1 x 2.5" fixed drive bay)	1x slim DVD-ROM drive bay (shared with 1 x 2.5" fixed drive bay)	1x slim DVD-ROM drive bay (shared with 1 x 2.5" fixed drive bay)
Power Supply		PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply	PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply	PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply
Cooling System	1x Active CPU cooler		1x 12cm rear exhaust fan;	1x 12cm rear exhaust fan; SNK-P0046A4 - optional
Form Factor	210 x 240 x 279mm (8.27" x 9.45" x 11")	210 x 240 x 279mm (8.27" x 9.45" x 11")	210 x 240 x 279mm (8.27" x 9.45" x 11")	210 x 240 x 279mm (8.27" x 9.45" x 11")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Atom™ E3940,  
Apollo Lake SoC, 4-Cores



Intel® Pentium® N3700  
SoC, 4-Cores



Intel® Celeron™ J1900  
SoC, 4-Cores



MODEL	SYS-E200-9AP	SYS-E200-9B	SYS-E200-8B
Processor Support	Intel® Atom™ E3940 Apollo Lake Processor, SoC 4 Cores, 9.5W, 1.6 GHz	Intel® Pentium® N3700 Processor SoC, 4 Cores, 6W, 1.6GHz	Intel® Celeron™ J1900 Processor, SoC 4-Core, 10W 2.0GHz
Key Applications	<ul style="list-style-type: none"> <li>Digital Signage</li> <li>Security Appliance and Video Surveillance</li> <li>Indoor Kiosk</li> </ul>	<ul style="list-style-type: none"> <li>Embedded Applications</li> <li>Thin Client</li> <li>Digital Signage</li> <li>Indoor Kiosk</li> <li>Networking Appliance</li> </ul>	<ul style="list-style-type: none"> <li>Embedded Applications</li> <li>Thin Client</li> <li>Digital Signage</li> <li>Indoor Kiosk</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>M.2 2242, 2280, 22110 with M-key (full size) mSATA support</li> <li>Dual display for HDMI, Display Port, VGA</li> <li>2x Gbe LAN</li> </ul>	<ul style="list-style-type: none"> <li>Cost Effective Embedded Mini ITX System</li> <li>Low Power Consumption</li> <li>1U Compact Mini ITX BOX System</li> <li>Low power SoC Intel® Pentium® N3700 (10W, 4C)</li> <li>Dual display for HDMI, Display Port, VGA</li> <li>Intel® i210AT Quad GbE LAN</li> <li>2 x USB 3.0 ports, 2 x USB 2.0 (Rear I/O)</li> <li>COM port (Rear I/O)</li> </ul>	<ul style="list-style-type: none"> <li>Cost Effective Embedded Mini ITX System</li> <li>1U Compact Mini ITX BOX System</li> <li>Low power SoC Intel® Celeron™ J1900 (10W, 4C)</li> <li>Dual display for HDMI, Display Port, VGA</li> <li>Intel® i210AT dual port GbE LAN</li> </ul>
Serverboard	SUPER● A2SAV-L	SUPER● X11SBA-LN4F	SUPER● X10SBA
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	8GB Unbuffered non-ECC DDR3L-1866MHz SODIMM	Up to 8GB 1600MHz DDR3 Non-ECC SO-DIMM in 2 sockets	Up to 8GB 1333MHz DDR3L Non-ECC SO-DIMM in 2 socket
Expansion Slots	1 M.2 PCI-E 2.0 x2, M Key 2242/2280	1 mini-PCI-E slot with mSATA support	1 mini-PCI-E slot with mSATA support
Onboard Storage Controller	N/A	SoC controller for 2 SATA3 (6 Gbps) ports	SATA 2.0 (3Gbps) from Intel® SoC, SATA 3.0 (6Gbps) from Marvell 88SE9230
Connectivity	2x 1GbE LAN, 2 USB3.0, 2 USB2.0, 2 Serial Port (RJ45 and DB9)	4x 1GbE, 1 dedicate IPMI LAN, 2 USB3.0, 2 USB2.0Realtek ALC888S HD Audio	2x 1GbE LAN, 1 USB3.0, 1 USB2.0Realtek ALC888S-VD2 HD Audio
VGA/Audio	1 HDMI, 1 DP, 1 VGA or 1 eDP, Intel® HD Graphic 3 independent displays	1 Display Port, 1 HDMI, 1 VGA (Two Independent Displays)	1 Display Port, 1 HDMI, 1 VGA (two Independent Displays)
Management	SuperDoctor® 5; Watchdog;	IPMI 2.0 with KVM support	SuperDoctor® 5, Watch Dog
Drive Bays	N/A	1x 2.5" internal HDD support	1x 2.5" internal HDD support
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	1x 4cm fan	1 x 4cm high performance PWM fan, support up to 2 chassis fans	1 x 4cm high performance PWM fan, support up to 2 chassis fans
Form Factor	1U Compact Box; Enclosure: 195 x 44 x 195mm (7.68" x 1.75" x 7.68") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 5.5lbs (2.49kg) Net Weight: 2.45lbs (1.11kg)	195 x 44 x 195mm (7.68" x 1.75" x 7.68")	1U Compact Box; Enclosure: 195 x 44 x 195mm (7.68" x 1.75" x 7.68") Package: 381 x 276 x 142mm (15" x 10.87" x 5.59") Gross Weight: 5.5lbs (2.49kg) Net Weight: 2.45lbs (1.11kg)

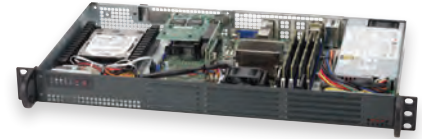
\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Intel® Atom™ C2758, 8-Cores,  
7 LAN with 3-pair LAN bypass

Intel® Xeon® D-1537  
SoC, 8 Core

Intel® Pentium® D1508  
SoC, Dual Core



MODEL	SYS-5018A-TN7B	SYS-5018D-MHR7N4P	SYS-5018D-LN4T
Processor Support	Intel® Atom™ C2758 Processor, SoC 8-Core, 20W, 2.4GHz	Intel® Xeon® Processor D-1537, SoC 8 Core, 35W, 1.7-2.3GHz	Intel® Pentium® Processor D1508, FCBGA1667 supported, CPU TDP support 25W
Key Applications	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• FireWall Applications</li> <li>• Virtualization Server</li> <li>• Embedded Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Hyper-Converged Appliance</li> <li>• Enterprise Server</li> <li>• Edge Computing Server</li> <li>• Private Cloud Server</li> <li>• Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>• Compact Network Appliance</li> <li>• FireWall Applications</li> <li>• Software Defined WAN</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• 7xGbE LAN with 3-pair bypass</li> <li>• Embedded long-life</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Hot Swap SATA3/SAS2 Drive Bays</li> <li>• Dual SFP+ and Dual GbE</li> <li>• Low Power Xeon® D SoC 8 Core with Dual 10GbE and Dual GbE</li> <li>• Remote management via dedicated IPMI BMC</li> <li>• 400W high-efficiency redundant power supply</li> <li>• 7 year life cycle</li> </ul>	<ul style="list-style-type: none"> <li>• Dual 10GbE SFP+ and Dual GbE</li> <li>• Short depth (less than 10 depth)</li> <li>• Intel® Xeon® processor D-1508, Dual-Core, 25W</li> <li>• Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets</li> <li>• 4 x 2.5" SATA3 HDD, and 1 M.2 (M key 2242/80/110 PCI-E 3.0x4)</li> </ul>
Serverboard	SUPER● A1SRM-LN7F-2758	SUPER● X10SDV-7TP4F	SUPER● X10SDV-2C-TP4F
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	64GB Unbuffered ECC/non-ECC, DDR3-1600MHz in 4 DIMM slots	Up to 128GB Registered ECC RDIMM, DDR4-2133MHz Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 128GB Registered ECC RDIMM, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 2.0 x4 (in x8) slot	PCI-E 3.0 x8 full height expansion slot; M.2 PCI-E 3.0x4, M Key 2242/2280/22110, Mini-PCI-E with mSATA support	1 PCI-E 3.0 x8; M.2 PCI-E 3.0x4, M Key 2242/2280/22110, Mini-PCI-E with mSATA support
Onboard Storage Controller	SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 ports(6 Gbps)	4 SATA3 support RAID 0,1,5,10(RSTe) or 4 SAS2 (No RAID support and require one optional cable, CBL-SAST-0811 )	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 RSTe;
Connectivity	7x 1GbE (3-pair bypass), 1 dedicated IPMI LAN (share with one LAN), 4x USB2.0, 1 Serial Port (RJ45)	2x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0, 1 USB2.0 Type A	2x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	IPMI2.0; NMI; SUM; SuperDoctor® 5; Watchdog;	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	1x 3.5" fixed drive bay or 4x2.5" drive bay with optional bracket	4x 3.5" hot-swap SATA3/SAS2(require one optional cable, CBL-SAST-0811)	1x 3.5" fixed drive bay or up to 4x 2.5" fixed drive bay
Peripheral Bays	N/A	1 slim DVD-ROM drive bay	N/A
Power Supply	200W Multi-output 80Plus Gold PWS	Redundant 400W Platinum Level power supplies, PWS-407P-1R	200W Low-Noise AC-DC power supply with PFC
Cooling System	2x 4cm counter-rotating PWM fan, support up to three system fans	3x 40x28mm PWM fan for CPU and Memories; 1x 40x28mm PWM fan for AOC cooling	1x 40x28mm 13K RPM 4-PIN PWM FAN
Form Factor	Short Depth 1U Rack Mount; Enclosure: 437 x 43 x 287mm (17.2" x 1.7" x 11.3") Package: 645 x 155 x 503mm (25.4" x 6.1" x 19.8") Gross Weight: 12.55lbs (5.69kg) Net Weight: 8.45lbs (3.83kg)	1U Rackmount; Enclosure: 437 x 43 x 503mm (17.2" x 1.7" x 19.8") Package: 610 x 216 x 749mm (24" x 8.5" x 29.5") Gross Weight: 33lbs (14.97kg) Net Weight: 20lbs (9.07kg)	1U Short Depth Rackmount; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8") Package: 655 x 155 x 465mm (25.8" x 6.1" x 18.3") Gross Weight: 12lbs (5.44kg) Net Weight: 8lbs (3.63kg)

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Intel® Xeon® D-1537  
SoC, 4-Core

Intel® Xeon® D-1587  
SoC 16 Core

Best Performance per Watt,  
Less than 10" Depth



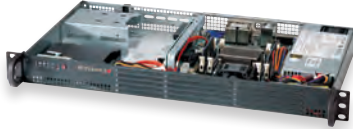
MODEL	SYS-5018D-FN8T	SYS-1018D-FRN8T	SYS-5018D-FN4T
Processor Support	Intel® Xeon® Processor D-1518, SoC 4 Core, 35W, 2.2 GHz	Intel® Xeon® Processor D-1587 SoC 16 Core, 65W 1.7-2.3GHz	Intel® Xeon® Processor D-1541.  Socket FCBGA1667 supported, CPU TDP support 45W
Key Applications	<ul style="list-style-type: none"> <li>• Networking Appliance</li> <li>• Network Security Appliance</li> <li>• FireWall Applications</li> <li>• Embedded Applications</li> <li>• Virtualization Server</li> </ul>	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• FireWall Applications</li> <li>• Virtualization</li> <li>• SD-WAN</li> <li>• vCPE</li> </ul>	<ul style="list-style-type: none"> <li>• Networking Appliance</li> <li>• Edge Computing Device</li> <li>• Security Gateway</li> <li>• Compact Cloud Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Dual SFP+ and 6x GbE</li> <li>• Short depth (less than 10 inch)</li> <li>• Low Power Xeon® D SoC 4 Core</li> <li>• Best Performance per Watt</li> <li>• 7 year life cycle</li> <li>• IPMI 2.0 management with dedicated LAN</li> </ul>	<ul style="list-style-type: none"> <li>• 400W Redundant Platinum PSU</li> <li>• 1x Low Profile PCI-E 3.0 x 8 and 1x M.2 PCI-E 3.0 x4, MiniPCI-E with mSata</li> <li>• 2x 2.5" HDD</li> <li>• 8 LAN w/ 2x10G SFP+ and 6x1GbE LAN</li> <li>• 128G DDR4 RAM</li> </ul>	<ul style="list-style-type: none"> <li>• 2x Gigabit + 2x 10G LAN ports</li> <li>• Less than 10" depth</li> <li>• Up to 2x 3.5" or 4x 2.5" SATA3 device</li> <li>• 1x PCI-E x16 Gen 3 add-on card slot</li> <li>• Dedicated management port</li> </ul>
Serverboard	SUPER● X10SDV-TP8F	SUPER● X10SDV-7TP8F	SUPER● X10SDV-8C-TLN4F
Chipset	System on Chip	System on Chip	Intel® Xeon® D-1540, SoC
System Memory (Max.)	Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets	128 GB of DDR4 ECC RDIMM 2133MHz or 64 GB of DDR4 ECC UDIMM 2133MHz	Up to 128GB Registered ECC RDIMM, DDR4-2133MHz Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8; M.2 PCI-E 3.0x4, M Key 2242/2280/22110, Mini-PCI-E with mSATA support	1 PCI-E 3.0 x8; M.2 PCI-E 3.0x4, M Key 2242/2280/22110, Mini-PCI-E with mSATA support	1x PCI Express 3.0 x16 add-on card slot
Onboard Storage Controller	SoC controller for 4x SATA3.0	SoC controller for 2 SATA3 (6 Gbps) ports; RAID 0,1,5,10RSTe; 2116 SW controller for 16 SATA3/ SAS2 (6 Gbps) ports	Intel® SoC-based 2x 3.5" or 4x 2.5" SATA3 bays, SATA DOM support
Connectivity	6x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0	6x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0	2x GbE + 2x 10G LAN ports 1x dedicated management port 2x USB 3.0 (rear) 2x USB 3.0, 4x USB 2.0 ports (via header), 1x M.2 slot (M key for SSD, 2242/2280, PCI-E3.0 x4)
VGA/Audio	VGA via BMC	VGA via BMC	Aspeed AST2400 BMC
Management	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	IPMI 2.0 (RJ45) with dedicated LAN port and KVM via BMC VGA	Integrated remote management with dedicated port
Drive Bays	1x 3.5" fix drive bay or 4x 2.5" fixed drive bay with bracket	4x 2.5" HDD	Intel® SoC-based 2x 3.5" or 4x 2.5" SATA3 bays
Peripheral Bays	N/A	N/A	N/A
Power Supply	200W Multi-output power supply Gold level w/20pin	Redundant 400W Platinum Level power supplies	PWS-203-1H
Cooling System	Passive CPU heat sink and 3x 40mm chassis fans	4x 40x56mm cooling fan	Active CPU fan, 40mm chassis fan
Form Factor	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	1U Rackmount; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8") Package: 686 x 203 x 610mm (27" x 8" x 24")	1U rackmount form factor, less than 10" depth; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8") Package: 655 x 155 x 465mm (25.8" x 6.1" x 18.3") Gross Weight: 12lbs (5.44kg) Net Weight: 8lbs (3.63kg)

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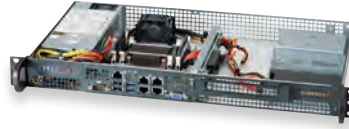
# IoT/Embedded



Low-Power



Front I/O Network Appliance for Security Atom™ Appliance



Intel® Atom™ C2758, 8-Core Rangeley



MODEL	SYS-5018A-TN4	SYS-5018A-FTN4	SYS-5018A-MHN4
Processor Support	Intel® Atom™ C2750	Intel® Atom™ 2758 SoC, 8C, 22nm (Rangeley, 20W)	Intel® Atom™ Processor C2758, SoC 8-Core, 20W, 2.4GHz
Key Applications	<ul style="list-style-type: none"> <li>• Application and data serving, Automation, Cloud and Virtualization needs</li> <li>• Corporate- WINS, DNS, Print, Login, e-Business, Embedded Applications, Hosting &amp; Application delivery, Industrial Automation &amp; Control, NAS Servers, Security</li> <li>• SOHO Entry-Level Server, Web Server, Web Server for Small and Medium Business</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud and Virtualization needs</li> <li>• Cloud Computing</li> <li>• Embedded Applications</li> <li>• Gateway, provisioning servers</li> <li>• Industrial Automation &amp; Control</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud and Virtualization needs</li> <li>• Cloud Computing</li> <li>• Data Center</li> <li>• Data Warehouse</li> <li>• Database Applications</li> <li>• e-Business</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• 1 PCI-E x8 slot</li> <li>• 200W Low-Noise power supply</li> <li>• 4x 2.5" SATA drives</li> <li>• Compact size chassis, cost-effective UP platform</li> <li>• IPMI 2.0 + KVM with dedicated LAN</li> <li>• Optimized for small business</li> </ul>	<ul style="list-style-type: none"> <li>• 1 PCI-E x8 slot</li> <li>• 4x 2.5" SATA drives</li> </ul>	<ul style="list-style-type: none"> <li>• IPMI 2.0 + KVM with dedicated LAN</li> <li>• Optimized for Power Saving and Improved Cooling</li> <li>• 4 hot-swap 3.5" SATA/SAS Drive Bays</li> </ul>
Serverboard	SUPER● A1SAI-2750F	SUPER● A1SRI-2758F	SUPER● A1SRM-2758F
Chipset	System on Chip	System on Chip chipset	System on Chip
System Memory (Max.)	Up to 32GB ECC DDR3 1600/1333MHz SODIMM in 4 DIMM slots	Up to 32GB DDR3-1600 Un-buffered ECC-SODIMM	Up to 64GB ECC/non-ECC UDIMM, DDR3-1600MHz in 4 sockets
Expansion Slots	1x PCI-E 2.0 x8 slot via riser card	1 PCI Express 2.0 x8 on riser	1 PCI-E 2.0 x8(FH,HL)
Onboard Storage Controller	SoC controller for 4 SATA2 (3Gbps) ports; 2 SATA3 (6Gbps)	N/A	SoC controller for 4 SATA2 (3 Gbps); 2 SATA3 (6 Gbps)
Price Connectivity	4x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port 4x USB 3.0 ports (2 rear, 1 Type A, 1 via header) 2x USB 2.0 ports (2 rear) 2x Fast UART 16550 Serial Port (1 rear, 1 via header)	4x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port 4x USB 3.0 ports (2 rear, 1 Type A, 1 via header) 2x USB 2.0 ports (2 rear) 2x Fast UART 16550 Serial Port (1 rear, 1 via header) 1x SATA DOM (Disk on Module) power connector	4x 1GbE LAN, 1 dedicate IPMI LAN, 4 USB2.0, 1 serial port(DB9)
VGA/Audio	AST2400 VGA 4x USB3.0, 2 x USB2.0	BMC integrated Aspeed AST2400, 1x VGA port	VGA via BMC
Management	IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog	IPMI 2.0 on dedicated LAN port	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog
Drive Bays	2x 3.5" fixed HDD (no expansion slot), or 1x 3.5" fixed HDD (low profile slot only), or 4x 2.5" fixed HDD (no expansion slot), or 2x 2.5: fixed HDD (full height and half length)	2x 3.5" fixed SATA3 (opt 4x 2.5")	1x 3.5" fixed drive bay or up to 4x 2.5" fixed drive bay
Peripheral Bays	N/A	N/A	1 slim DVD-ROM drive bay
Power Supply	200W Low-Noise AC-DC power supply with PFC	200W	200W Low Noise AC-DC power supply with PFC
Cooling System	Built-in CPU heatsink; optional 40x28mm fan; 1x high-efficiency power supply with thermal control fan	1x High-efficiency power supply with thermal control fan; up to 3x 40mm fan (optional, require mounting bracket)	2x 4cm high performance PWM fan
Form Factor	Mini-1U Rackmount 437 x 43 x 249mm (17.2" x 1.7" x 9.8")	1U compact, less than 10"	1U Rackmount; Enclosure: 437 x 43 x 504mm (17.2" x 1.7" x 19.85") Package: 594 x 216 x 754mm (23.4" x 8.5" x 29.7")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Compact Mini Tower  
3 Independent Displays

Intel® Atom® C2758  
8-Core, Rangeley

Intel® Xeon® D-1541, 8-Core,  
Dual 10GbE LAN and Dual GbE



MODEL	SYS-5028L-TN2	SYS-5028A-TN4	SYS-5028D-TN4T
Processor Support	Intel® Xeon® E3-1200 v3 and 4 Gen. Core i3/i5/i7, Celeron®, Pentium®	Intel® Atom™ C2758 Processor, SoC 8-Core, 20W, 2.4GHz	Intel® Xeon® Processor D-1541 SoC 8 Core 16 Thread, TDP 45W
Key Applications	<ul style="list-style-type: none"> <li>• Compact Cloud Server</li> <li>• Database Processing &amp; Storage</li> <li>• High Performance NAS Servers</li> <li>• Business Intelligence</li> <li>• Security Appliance and Video Surveillance</li> <li>• Web Server for Small and Medium Business</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded Applications</li> <li>• Cloud and Virtualization needs</li> <li>• NAS Servers</li> <li>• SOHO Entry-Level Server</li> <li>• Corporate- WINS, DNS, Print, Login</li> <li>• e-Business</li> </ul>	<ul style="list-style-type: none"> <li>• Network Security Appliance</li> <li>• Compact Cloud Server</li> <li>• High Performance NAS Servers</li> <li>• Virtualization Server</li> <li>• Business Critical Applications</li> <li>• Web Server for Small and Medium Business</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Up to 4 Hot-Swap 3.5" SATA3 HDD and 2 internal 2.5" fixed HDD</li> <li>• DP, HDMI and DVI-I: 3 independent displays</li> <li>• 2x Gigabit LAN ports</li> <li>• TPM 1.2 Headers</li> <li>• Up to 16GB DDR3 non-ECC 1600MHz SODIMM</li> <li>• 1x PCI-E 3.0 x16 slot</li> </ul>	<ul style="list-style-type: none"> <li>• 4x 3.5" SATA Hot Swap Tray and 2 x2.5" internal HDD bay</li> <li>• Support up to 64G ECC SODIMM</li> <li>• One low profile expansion slot for PCI-E2.0x8</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets</li> <li>• 2x Gigabit + 2x 10G LAN ports</li> <li>• Up to 4 Hot-Swap 3.5" SATA3 HDD and 2 internal 2.5" fixed HDD</li> <li>• IPMI 2.0 + KVM with dedicated LAN</li> <li>• 1x Low Profile PCI-E 3.0 x16 and 1x M.2 PCI-E 3.0 x4, M Key 2242/2280</li> </ul>
Serverboard	SUPER● X10SLV-Q	SUPER● A1SRi-2758F	SUPER● X10SDV-TLN4F
Chipset	Intel® Q87 chipset	System on Chip	System on Chip
System Memory (Max.)	16 GB, DDR3-1600MHz non-ECC SODIMM in 2 sockets	Up to 64GB DDR3 1600MHz ECC SODIMM in 4 DIMM sockets	128GB Registered ECC, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots
Expansion Slots	1x PCI-E 3.0 x16 slot 1x Mini-PCI-E w/ mSATA support	PCI-E 2.0 x8	1 PCI-E 3.0 x16(Low Profile); 1 M.2 PCI-E 3.0x4 M Key 2242/2280
Onboard Storage Controller	SoC controller for 4x SATA 3.0 ports (6Gbps) with RAID 0.1.5.10	SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 (6 Gbps)	SoC controller for 6 SATA3 (6 Gbps) ports
Connectivity	2x 1GbE LAN, 2 USB3.0, 2 USB2.0	4x 1GbE LAN, 1 dedicate IPMI LAN, 2 USB3.0, 2 USB2.0, 1 serial port(DB9)	2x 1GbE LAN, 2x 10GBase-T LAN, 1 dedicate IPMI LAN, 2 USB3.0(rear), 2 USB2.0(front)
VGA/Audio	Intel® HD 4600 Graphics, 1 DisplayPort, 1 HDMI, 1 DVI-I, 3 Independent Displays	VGA via BMC	VGA via BMC
Management	SuperDoctor® III Watch Dog NMI	IPMI2.0; NMI; SuperDoctor V; Watch Dog;	
Drive Bays	4x 3.5" hot-swap SAS/SATA drive bay	4x 3.5" SATA Hot Swap drive bay and 2 x2.5" internal drive bay	4x 3.5" SATA Hot Swap drive bay and 2 x2.5" internal drive bay
Peripheral Bays	1 slim DVD-ROM drive bay (share with one 3.5" drive bay)	1 slim DVD-ROM drive bay (share with one 2.5" drive bay)	1 slim DVD-ROM drive bay (shared with 1x 2.5" fixed drive bay)
Power Supply	No Redundant 1 Qty. PWS-251-1H	250W Flex ATX Multi-output Bronze Power Supply	
Cooling System	1x 12cm rear exhaust fan, SNK-P0046A4 (optional)	1x 12cm rear exhaust fan	1x Active CPU cooler
Form Factor	210 x 240 x 279mm (8.27" x 9.45" x 11")	210 x 240 x 279mm (8.27" x 9.45" x 11")	210 x 240 x 279mm (8.27" x 9.45" x 11")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details

# IoT/Embedded

Security and Surveillance  
Appliance UP Server

vPro,  
3 Independent Displays

Skylake-H,  
SoC, 4 Cores

Video Transcoding and Streaming,  
Compact Box



MODEL	SYS-5019S-M2	SYS-1019S-M2	SYS-5019S-TN4	SYS-1019S-MP
Processor Support	Intel® 6th/7th Generation Core™ i3, i5, i7 series Intel®, Pentium®, Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v5 series, Intel® Xeon® processor E3-1200 v6. Socket H4 (LGA 1151) supported, CPU TDP support up to 80W	Intel® 6th/7th Generation Core™ i3, i5, i7 series Intel®, Pentium®, Celeron®	Intel® Xeon® Processor Skylake-H E3-1585v5 SoC, 4 Cores, 65W	Intel® Xeon® Processor E3-1515M v5 (Skylake-H), Single socket FCBGA 1440, 4-Core, 8 Threads, 45W
Key Applications	<ul style="list-style-type: none"> <li>Security and Surveillance</li> <li>Appliance Server</li> <li>Secure Storage</li> <li>Rack Workstation</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Automation &amp; Control</li> <li>Military Compact Server</li> <li>VOIP and Network Appliances</li> <li>Medical Applications</li> <li>7 Years Life Cycle</li> </ul>	<ul style="list-style-type: none"> <li>Virtual Hosted Desktop(VHD)</li> <li>Digital Recording System</li> <li>Media/Content Streaming Server</li> <li>Support Intel® Quick Sync Video</li> </ul>	<ul style="list-style-type: none"> <li>Digital Signage</li> <li>Kiosk, Interactive information system</li> <li>Media Streaming server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4x 3.5" SATA3 hot-swap drive bays</li> <li>Intel® vPro™ and AMT</li> <li>2x Gigabit LAN with AMT</li> <li>7 year life cycle</li> </ul>	<ul style="list-style-type: none"> <li>6th/7th Generation Intel® Core i7, i5, i3, Pentium and Celeron Processor</li> <li>Remote management via IPMI or vPro</li> <li>2x Gigabit LAN ports, HDMI/DP/DVI-I, 3 independent displays</li> <li>Full Height and Full Length add on card support</li> <li>Power redundancy or BBP support</li> </ul>	<ul style="list-style-type: none"> <li>Faster Transcoding for Web Streaming</li> <li>4x SATA3(6Gbps) via C236; RAID 0, 1, 5, 10</li> <li>Intel® Iris Pro Graphics with 128M B of on-Package cache (eDRAM) for high performance graphics</li> <li>VHD, Media CODEC (HEVC, JPEG, VP8) and IPMI 2.0 (Shared LAN)</li> <li>Up to 18 AVC streams or 8 HEVC streams at 1080p 30FPS, or 2 HEVC streams at 4K 30FPS</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Iris Pro Graphics P580 with 128MB of on-Package cache (eDRAM) for high performance graphics</li> <li>HDMI, Display Port, DVI-I, 3 independent displays</li> </ul>
Serverboard	SUPER● X11SSZ-F	SUPER● X11SSZ-QF	SUPER● X11SSV-M4F	SUPER● X11SSV-M4
Chipset	Intel® C236 chipset	Intel® Q170 Express chipset	System On Chip	Intel® CM236 chipset
System Memory (Max.)	Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 64GB Unbuffered non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 32GB ECC Unbuffered SO-DIMM DDR4 2133MHz; 2 DIMM slots	Up to 32GB ECC/Non-ECC Unbuffered SO-DIMM DDR4 2133MHz; 2 DIMM slots
Expansion Slots	1 PCI Express 3.0 x16 FH, HL slot	1 PCI-E 3.0 x16	1x PCI-E 3.0 x16 1x M.2 (M key, 2242/80/110, PCI-E3.0 x4 or SATA3) 1x Mini PCI-E w/ mSATA	1 Mini-PCI-E (mSATA support), 1 M.2 PCI-E 3.0 x4 (SATA support), M Key 2242/80
Onboard Storage Controller	Intel® C236 chipset	Intel® Q170 Express controller for 2 SATA3 (6 Gbps) ports; RAID 0,1	Intel® C236 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RSTe	Intel® CM236 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Intel® RSTe
Connectivity	4 USB 3.0 (2x rear), 9 USB 2.0 (2x rear) 1 USB 2.0 Type A 2x Serial header 1x SuperDOM (shared)	2x 1GbE, 1 dedicated IPMI LAN, 2 USB3.0, 2 USB2.0	4x 1GbE LAN, 1 dedicated IPMI LAN, 4 USB 3.0	4x 1GbE LAN, 4 USB 3.0
VGA/Audio	Intel® HD Graphics, Aspeed AST2400 BMC ALC 8885 HD Audio	2 DP (DisplayPort), 1 DVI-I, 1 VGA, Intel® HD Graphics, Aspeed AST2400 BMC	DVI-A via BMC	1 HDMI2.0, 1 DP1.2, 1 DVI-I, Intel® Iris Pro Graphics P580, 3 independent displays ALC 8885 HD Audio
Management	AMT, IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, vPro, Watchdog	IPMI2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watchdog;	vPro AMT
Drive Bays	4x 3.5" hot-swap SAS/SATA	2x 2.5" fixed with bracket	1x 3.5" or 4x 2.5" HDD	1 internal 2.5" Hard Drive
Peripheral Bays	1x Slim DVD-ROM Drive(option)	N/A	N/A	N/A
Power Supply	1U 350W Multi-output power supply Platinum level	1x PWS-407P-1R, Platinum Level and support 2nd redundant PSU PWS-407P-1R or battery backup unit PWS-206B-1R	200W Low Noise AC-DC power supply with PFC	84W DC power adapter
Cooling System	4x 40x28mm PWM fan; 2x 40x28mm PWM fan(option)	4x 40x56mm PWM fan; 2x fans for AOC cooling 1U rackmount; Enclosure: 437 x 43 x 429mm (17.2" x 1.7" x 16.9")	3x 40x28mm 4-PIN PWM FAN(FAN-0154L4, 22K RPM) with air shroud 1U Short Depth Rackmount; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")	2x 6cm cooling fan
Form Factor	437 x 43 x 503mm (17.2" x 1.7" x 19.85")	Package: 686 x 203 x 610mm (27" x 8" x 24")	Package: 655 x 155 x 465mm (25.8" x 6.1" x 18.3")	195 x 68 x 195mm (7.68" x 2.68" x 7.68")

\* Please check with your Supermicro sales representative and website for compatibility and configuration details



# IoT/Embedded

Short-Depth  
10GbE, SAS3, Redundant Power

Data Center Optimized

4-Core Intel® Atom® Processor

Low-Power



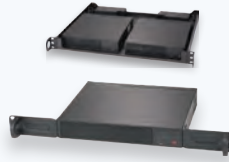
MODEL	SYS-1028R-MCT SYS-1028R-MCTR (shown)	SYS-1028R-TDW	SYS-5018A-MLHN4	SYS-5018A-MLTN4
Processor Support	Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s	Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s	Intel® Atom® C2550	Intel® Atom® C2550
Key Applications	<ul style="list-style-type: none"> <li>Data Center</li> <li>Web Server</li> <li>Enterprise Server</li> <li>Managed Hosting</li> </ul>	<ul style="list-style-type: none"> <li>Data Center</li> <li>Cloud and Virtualization needs</li> <li>Hosting &amp; Application delivery</li> <li>Database Processing &amp; Storage</li> <li>Simulation &amp; Automation</li> </ul>	<ul style="list-style-type: none"> <li>Cloud and Virtualization needs, Cloud Computing, Corporate- WINS, DNS, Print, Login, Data Center, Database Applications, DataCenter Applications</li> <li>e-Business, Enterprise Server</li> <li>FireWall Applications, Gateway, provisioning servers, High End Enterprise Server, Server Appliance</li> <li>Virtualization Server</li> <li>Web Server, Web Server for Small and Medium Business</li> </ul>	<ul style="list-style-type: none"> <li>Cloud and Virtualization needs, Cloud Computing, Corporate- WINS, DNS, Print, Login, Data Center, Database Applications, DataCenter Applications</li> <li>e-Business, Enterprise Server</li> <li>FireWall Applications, Gateway, provisioning servers, High End Enterprise Server, Server Appliance</li> <li>Virtualization Server</li> <li>Web Server, Web Server for Small and Medium Business</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>IPMI 2.0 + KVM with dedicated LAN</li> <li>Redundant 600W Platinum Level high-efficiency power supplies</li> <li>Short-Depth</li> <li>2x 10GBase-T Ports</li> <li>3108 controller for 8 SAS3 (12Gbps) hot-swappable drives</li> </ul>	<ul style="list-style-type: none"> <li>600W Platinum Level high-efficiency power supply</li> <li>IPMI 2.0 + KVM with Dedicated LAN</li> <li>16 DIMM DDR4-2133MHz</li> <li>Up to 3 add-on cards</li> </ul>	<ul style="list-style-type: none"> <li>1 PCI-E x8 slot</li> <li>200W low-power supply</li> <li>4 hot-swap 3.5" SATA/SAS Drive Bays</li> <li>IPMI 2.0 + KVM with dedicated LAN</li> <li>Optimized for Power Saving and Improved Cooling</li> <li>SATA 3.0 (6Gbps) support</li> </ul>	<ul style="list-style-type: none"> <li>1 PCI-E x8 slot</li> <li>2 Internal 3.5" SATA drive bays</li> <li>200W low-power supply</li> <li>Compact size chassis</li> <li>Cost effective UP platform</li> <li>IPMI 2.0 + KVM with dedicated LAN</li> <li>SATA 3.0 (6Gbps) support</li> <li>Short-depth, space saving design</li> </ul>
Serverboard	SUPER● X10DRL-CT	SUPER● X10DDW-i	SUPER● A1SAM-2550F	SUPER● A1SAM-2550F
Chipset	Intel® C612 Chipset	Intel® C612 Chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)	Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots	Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots	Up to 64GB ECC/non-ECC UDIMM, DDR3-1600MHz in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC, DDR3-1600MHz in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8	2 PCI-E 3.0 x16 (Full-Height, Half-Length) 1 PCI-E 3.0 (LP) 1 slot for SAS controller mezzanine card	1 PCI-E 2.0 x8 (FH/HL)	1 PCI-E 2.0 x8 (FH/HL)
Onboard Storage Controller	3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60; Intel® C612 controller for 6 SATA3 (6Gbps) ports; RAID 0,1,5,10	Intel® C612 controller for 8 SATA3 (6Gbps) Ports; RAID 0,1,5,10	SoC controller for 4 SATA2 (3Gbps) ports; RAID 2 SATA3 (6Gbps)	SoC controller for 4 SATA2 (3Gbps) ports; RAID 2 SATA3 (6Gbps);
Connectivity	Dual LAN with Intel® Ethernet Controller I210; Dual LAN with Intel® X540 10GBase-T Ethernet Controller	Dual LAN with Intel® i350 Gigabit Ethernet controller	Quad LAN with SoC	Quad LAN with SoC
VGA/Audio	AST2400 VGA	AST2400 VGA	AST2400 VGA	AST2400 VGA
Management	IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog	IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog	IPMI2.0; NMI; SuperDoctor V; Watchdog	IPMI2.0; NMI; SuperDoctor V; Watchdog
Drive Bays	8x 2.5" hot-swap SATA/SAS drive bays	8x 2.5" hot-swap SATA HDD drive bays	4x 3.5" hot-swap SAS/SATA	2x 3.5" internal drive bays 4x 2.5" fixed SATA3 (optional)
Peripheral Bays	1 slim DVD-ROM drive (optional)	1 slim DVD-ROM drive (optional)	N/A	N/A
Power Supply	-MCT: 600W Platinum Level high-efficiency power supply -MCTR: Redundant 600W Platinum Level high-efficiency power supplies	600W Platinum Level high-efficiency power supply	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC
Cooling System	4x 4cm high performance PWM fans with optimal fan speed control	5x 4cm heavy duty counter-rotating fans with optimal fan speed control	2x 4cm high performance PWM fan	1x 10cm 3,800 RPM PWM blower fan
Form Factor	1U Rackmount 437 x 43 x 503mm (17.2" x 1.7" x 19.8")	1U Rackmount 437 x 43 x 597mm (17.2" x 1.7" x 23.5")	1U rackmount 437 x 43 x 503mm (17.2" x 1.7" x 19.85")	1U rackmount 426x 43 x 356mm(16.8" x 1.7" x 14")

# Embedded Chassis Selection Guide



## Fanless/IoT Gateway

Fanless & robust design  
Low power consumption  
Wide-range working temperature & voltage



## Compact Dual Node System Trays

Rackmount kit available for Xeon® D and Denverton Systems  
Mounting kits for Single Node



## Compact Mini Tower

Support up to 80W TDP processor  
Hot-swap 3.5" HDD for RAID  
Low profile expansion slot for diversified application



## Compact Box System

Building block design  
Commercial off-the-shelf with extended product life cycle  
Easy deployment



## IPC

Rackmount with expansion capabilities  
Flexible Front I/O  
Up to 11 PCI-E Expansion slots



## 1U Rack System

1U Rackmount with advanced cooling design  
Flexible I/O at front and rear  
Remote Management & FW upgrade via IPMI 2.0

## Front Bezel/LCD



Model	MCP-220-00095-0B	MCP-220-00095-0B	MCP-210-00007-01	SCPTFB-813LB	MCP-210-82502-0B	MCP-210-84201-0B
Feature	LCD display kits	Full-color OLED kit	Front bezel with LCD display	Front bezel with lock	Front bezel with lock	Front bezel with lock
Form Factor/ Chassis	5.25" bay	3.5"HDD bay	SC813/813M series	SC813/813M series	SC825M series	SC842 series

## Chassis



Model	SCE102	SCE301	SCE403iF	SCE300-LED	SCE300	SC101F	SC101S	SC101i	SC101iF	SC721TQ-250B
Form Factor	3.5" SBC/Pico-ITX	Compact Box	Wall-Mount	Compact Box	Compact Box	Compact Box	Compact Box	Compact Box	Compact Box	Compact Mini Tower
Compatible Motherboard	3.5" SBC, PICO-ITX	Flex-ATX 9.0" x 7.25"	Flex-ATX 9.0" x 7.25"	Flex-ATX 9.0" x 7.25", Mini-ITX	Flex-ATX 9.0" x 7.25", Mini-ITX	Mini-ITX	Mini ITX	Mini-ITX	Mini-ITX	Mini ITX
CPU Support	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor
Drive Bays	1x 2.5" fixed drive bay	8x 2.5" fixed drive bay	4x 2.5" fixed drive bay	1x fixed 2.5" SATA	1x 2.5" fixed drive bay	1x 2.5" fixed drive bay	1x Fixed 2.5" SATA	1x Fixed 2.5" SATA	1x Fixed 2.5" SATA	4 x 3.5" Hot-Swap SATA HDD 2x internal 2.5" SATA HDD
Expansion Slots	Onboard Mini PCI-E or M.2	-	3x low profile AOC	1x low profile, half length	1x low profile, half length	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	1x low profile, half-length
Power Supply	40W Power Adapter	60W/84W DC Power Adapter	60W/84W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W Power Adapter	60W / 80W Power Adapter	60W / 84W Power Adapter	250W Flex ATX Multi-output Bronze Power Supply
Dimensions (WxDxH)	7.48" x 1.72" x 4.72" 190 x 44 x 120mm	10.43" x 2.57" x 8.9" 265 x 65.4 x 226mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	7.6" x 8.9" x 1.7" 381 x 226 x 43mm	7.68" x 7.68" x 1.7" 195 x 195 x 43mm	7.68" x 7.68" x 2.68" 195 x 195 x 68mm	7.68" x 7.68" x 2.68" 195 x 195 x 68mm	11" x 8.27" x 9.45" 280 x 210 x 240mm



Model	SC504-203B	SC505-203B	SC510T-203B	SC510-203B	SC512L-260B-LCD
Form Factor	1U Rackmount	1U Rackmount Front I/O	1U Rackmount	1U Rackmount	1U Rackmount
Compatible Motherboard	Flex ATX, Mini-ITX	Flex ATX, Mini-ITX	MicroATX	MicroATX	ATX, MicroATX
CPU Support	Single processor	Single processor	Single processor	Single processor	Single processor
Drive Bays	2 x Fixed 3.5" or 4 x Fixed 2.5" SATA	2 x Fixed 3.5" or 4 x Fixed 2.5" SATA	2x hot-swap 2.5"SATA	Up to 4x Fixed 2.5" SATA*	1x Fixed 2.5" or 3.5" SATA
Expansion Slots	1x full-height, half-length	1x full-height, half-length	1x low profile, half-length	1x full-height, half-length**	1x full-height, half-length
Power Supply	200W High-Efficiency	200W High-efficiency	200W High-efficiency	200W Power Supply	260W Power Supply
Dimensions (WxDxH)	17.2"x9.8"x1.7" 437 x 249 x 43 mm	17.2"x9.8"x1.7" 437 x 249 x 43 mm	17.2"x11.3"x1.7" 437 x 287 x 43 mm	17.2"x9.8"x1.7" 437 x 249 x 43 mm	16.8"x14"x1.7" 437 x 356 x 43 mm

\* When AOC area not occupied  
\*\* When HDD area not occupied



Model	SC513BTQC-350B	SC512F-350B	SC513BTQC-505WB	SC514-R400W SC514-R400C	SC514-505	SC515-R407
Form Factor	15" Mini 1U	1U Rackmount	15" Mini 1U	1U Rackmount	1U Rackmount	1U Rackmount
Compatible Motherboard	12" x 13" E-ATX	ATX, MicroATX	12" x 13" E-ATX	WIO E-ATX 12.3"x13"	E-ATX, ATX, MicroATX/WIO	ATX, Micro ATX/WIO
CPU Support	Dual and single processors	Single processors	Dual and single processors	Dual and single processors	Dual and single processors	Single processors
Drive Bays	2x 2.5" hot-swap drive bay, Optional 4x 2.5" fixed with bracket	2x Fixed 2.5" or 3.5" SATA	2x 2.5" hot-swap drive bay Optional 4x 2.5" fixed with bracket	2 x Fixed 2.5" HDD	Up to 2x 2.5" fixed with bracket • SAS or enterprise SATA HDD	2x Fixed 2.5" HDD***
Expansion Slots	1 full-height, Half-length (Riser Card Required)	1 full-height, 1 half-length	2 full-height 1 half-length	2 full-height, 1 low profile 1 full height	2 full-height	2 full-height
Power Supply	1U 350W Multi-output Platinum Level power supply	350W High-efficiency Gold Level power supply	1U 500W Multi-output Platinum Level power supply	400W (1+1) Redundant SuperCompact Gold-Level power supply with PMBus and I <sup>2</sup> C	500W High-efficiency Power Supply 80 PLUS <sup>®</sup> Platinum Certified	400W (1+1) Redundant SuperCompact Platinum-level power supply with PMBus and I <sup>2</sup> C
Dimensions (WxDxH)	17.2"x15"x1.7" 437 x 381 x 43 mm	17.2"x14.5"x1.7" 437 x 369 x 43 mm	17.2"x15"x1.7" 437 x 381 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm

\*\*\* Extra 2x 2.5" Fixed HDD with ATX MB or Extra 1x 3.5" or 2x2.5 Fixed HDD with WIO and Half Length Add on Card.



Model	SC213XAC-R1K05LP	SC825MBTQC-R802LPB	SC825XTQC-R1K05	SC835TQC-R802B	SC842XTQC-R804B
Form Factor	2U Rackmount	2U 17.7" Short-Depth Compact	2U Rackmount	3U Rackmount	4U Rackmount
Compatible Motherboard	E-ATX, ATX, MicroATX ; Max. size 15.2" x 13.2	EE-ATX 13.68" x 13", E-ATX 12" x 13", ATX 12" x 10"	E-ATX 12"x13", ATX 12"x10"	E-ATX, ATX	E-ATX, ATX, MicroATX ; Max. size 15.2" x 13.2
CPU Support	Dual and single processors	Dual and single processors	Dual and single processors	Dual and single processors	Dual and single processors
Drive Bays	16x 2.5" hot-swap SAS3/SATA	3x 3.5" hot-swap SAS/SATA with SGPIO; Optional 2x 2.5" hot-swap SAS/SATA	8x 3.5" hot-swap SAS/SATA with SGPIO, and 2x 3.5" fixed drive bay	8x 3.5" Hot-swap SAS/SATA	5x 3.5" Hot-swap SAS/SATA
Expansion Slots	11x low-profile	7x low-profile	7x low-profile	7x full-height, full-length	7x full-height, full-length and 4x full-height, half-length
Power Supply	2x 1U 800/1000W Redundant Power Supplies 38mm Width	800W Redundant Titanium Level Power Supplies	2x 1U 740W Redundant Platinum Power Supply w/ PMbus	800W Redundant Titanium Level Power Supplies	800W Redundant Platinum Level Power Supplies
Dimensions (WxDxH)	17.2" x 25.6" x 3.5" 437 x 650 x 89mm	17.2"x17.7" x 3.5" 437x 450 x 89 mm	17.2" x 25.5" x 3.5" 437 x 647 x 89mm	17.2" x 25.5" x 5.2" 437 x 647 x 132mm	17.2" x 20.5" x 7" 437 x 521 x 178mm

# NEW! X12 UP Serverboards

3rd Gen Intel® Xeon® Scalable processors Supported



1U Optimized



1U Optimized



## MODEL

## X12SPO-F

## X12SPO-NTF

Processor	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports, up to 270W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports, up to 270W TDP
Chipset	Intel® C621A	Intel® C621A
Form Factor	ATX, 12" x 10" (30.48cm x 25.4cm)	ATX, 12" x 10" (30.48cm x 25.4cm)
Optimized Chassis	813MF2TQC-505CB 813MF2TQC4-R407CB 116AC10-R860CB-N10	813MF2TQC-505CB 813MF2TQC4-R407CB 116AC10-R860CB-N10
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots
Expansion Slots	1 PCI-E 4.0 x16, 2 PCI-E 4.0 NVMe x8 Internal Port(s) <b>M.2 Interface:</b> 2 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	1 PCI-E 4.0 x16, 5 PCI-E 4.0 NVMe x8 Internal Port(s) <b>M.2 Interface:</b> 2 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® i350 Gigabit Ethernet Controller	Dual LAN with Intel® X550 10GBase-T Ethernet Controller
Onboard VGA	1 VGA port, ASPEED AST2600 BMC	1 VGA port, ASPEED AST2600 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT
Other Features	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, RoT, UID, WOL	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, RoT, UID, WOL
BIOS	AMI UEFI	AMI UEFI



# NEW! X12 UP Serverboards

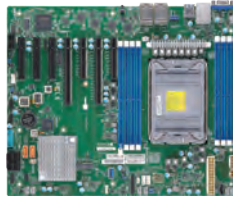
3rd Gen Intel® Xeon® Scalable processors Supported



Cost-optimized I/O Intensive, Dual 1 GbE



Cost-optimized I/O Intensive, Quad 1 GbE



WIO, 3 AOC in 1U, Dual 1 GbE



WIO, 3 AOC in 1U, Dual 10 GbE



MODEL	X12SPL-F	X12SPL-LN4F	X12SPW-F	X12SPW-TF
Processor	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports, up to 270W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports, up to 270W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports, up to 270W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports up to 270W TDP
Chipset	Intel® C621A	Intel® C621A	Intel® C621A	Intel® C621A
Form Factor	ATX, 12.1" x 10" (30.73cm x 25.4cm)	ATX, 12.1" x 10" (30.73cm x 25.4cm)	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)
Optimized Chassis	813MF2TQC-505CB 514-505 113MFAC2-605CB 113MFAC2-R804CB 813MF2TQC4-R407CB 515-505 SCLA26E1C4-R609LP	213LT-600LPB 825MBTQC-R802LPB 825TQC-R802LPB SCLA25TQC- R609LP 835TQC- R802B 842TQC-668B	813MF2TQC-505CB 514-505 113MFAC2-605CB 113MFAC2-R804CB 813MF2TQC4-R407CB 515-505 SCLA26E1C4-R609LP	213LT-600LPB 825MBTQC-R802LPB 825TQC-R802LPB SCLA25TQC- R609LP 835TQC- R802B 842TQC-668B
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots
Expansion Slots	2 PCI-E 4.0 x8, 1 PCI-E 4.0 x16, 1 PCI-E 4.0 x8 (in x16 slot) 3 PCI-E 3.0 x8 <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	2 PCI-E 4.0 x8, 1 PCI-E 4.0 x16, 1 PCI-E 4.0 x8 (in x16 slot) 3 PCI-E 3.0 x8 <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	1 PCI-E 4.0 x16 Right Riser Slot, 1 PCI-E 4.0 x32 Left Riser Slot, 4 PCI-E 4.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key	1 PCI-E 4.0 x16 Right Riser Slot, 1 PCI-E 4.0 x32 Left Riser Slot, 4 PCI-E 4.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® i210 Gigabit Ethernet Controller	Quad LAN with Intel® i210 Gigabit Ethernet Controller	Dual LAN with 1GbE with Intel® i210	Dual LAN with 10GBase-T with Intel® X550
Onboard VGA	1 VGA port, ASPEED AST2600 BMC	1 VGA port, ASPEED AST2600 BMC	1 VGA port, ASPEED AST2600 BMC	1 VGA port, ASPEED AST2600 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT
Other Features	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, RoT, UID, WOL	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, RoT, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

# NEW! X12 UP Serverboards



WIO



mATX



mATX



Mini-ITX



## MODEL

**X12STW-TF**  
**X12STW-F**

**X12STH-F**  
**X12STH-LN4F**  
**X12STH-SYS**

**X12STL-F**

**X12STL-IF**

Processor	10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Rocket Lake Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports, up to 95W TDP	10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Rocket Lake Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports, up to 95W TDP	10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Rocket Lake Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports, up to 95W TDP	Intel® Xeon® E-2300 Rocket Lake Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports, up to 95W TDP
Chipset	Intel® C256	Intel® C256	Intel® C252	Intel® C252
Form Factor	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Memory Capacity & Slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz, in 4 DIMM slots	Up to 128GB DDR4 ECC UDIMM, DDR4-3200MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz, in 4 DIMM slots	Up to 64GB Unbuffered ECC UDIMM, DDR4-3200MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 4.0 x16 Left Riser Slot 1 PCI-E 3.0 x4 (in x8, Right Riser slot) <b>M.2 Interface:</b> 1 PCI-E 4.0 x4 and 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 4.0 x16, 1 PCI-E 4.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key <b>-SYS:</b> 1 PCI-E 4.0 x16, 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key	1 PCI-E 4.0 x8, 1 PCI-E 4.0 x8 (in x16 slot), 1 PCI-E 4.0 x4 (in x8 slot) 1 PCI-E 3.0 x2 (in x4 slot) <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	1 PCI-E 4.0 x16 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C252 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C252 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	<b>-TF:</b> Dual LAN with Intel® X550 10GBase-T Ethernet Controller <b>-F:</b> Dual LAN with Intel® Ethernet Controller I210-AT	<b>-F/-SYS:</b> Dual LAN with Intel® Ethernet Controller I210 <b>-LN4F:</b> Quad LAN with Intel® Ethernet Controller I210	Dual LAN with 1GbE with Intel® I210	Dual LAN with Intel® i210 Gigabit Ethernet Controller
Onboard VGA	1 VGA port, ASPEED AST2600 BMC	1 VGA port, ASPEED AST2600 BMC	1 VGA D-Sub Connector port, ASPEED AST2600 BMC	1 VGA D-Sub Connector port, ASPEED AST2600 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 4 USB 3.2 Gen1 ports (2 rear + 2 via headers) 1 USB 3.2 Gen2 ports (1 Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 4 USB 3.2 Gen1 ports (2 rear + 2 via headers)
Other Onboard I/O Devices	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	TPM Header 1 COM Port (1 rear)
Manageability	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 4 -fan status, Chipset Voltage, Memory Voltages, Monitors CPU voltages, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 4 -fan status, Chipset Voltage, Memory Voltages, Monitors CPU voltages, VBAT
Other Features	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ATX Power connector, Chassis intrusion header, Dual Cooling Zones, UID	ATX Power connector, Chassis intrusion header, Dual Cooling Zones, UID
BIOS	UEFI 256Mb	UEFI 256Mb	AMI UEFI	AMI UEFI

# NEW! X12 UP Serverboards

3rd Gen Intel® Xeon® Scalable processors Supported



Embedded Ready  
Quad 1GbE



Embedded Ready  
Dual 10GbE + Quad 1GbE



Embedded Ready  
Dual 10GbE



High Performance



## MODEL

## X12SPM-LN4F

## X12SPM-LN6TF

## X12SPM-TF

## X12SPi-TF

Processor	3rd Gen Intel® Xeon® Scalable Processors; Single Socket LGA-4189 (Socket P+) supported, CPU TDP support up to 270W TDP		3rd Gen Intel® Xeon® Scalable Processors; Single Socket LGA-4189 (Socket P+) supported, CPU TDP support up to 270W TDP		3rd Gen Intel® Xeon® Scalable Processors; Single Socket LGA-4189 (Socket P+) supported, CPU TDP support up to 270W TDP		3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports up to 270W TDP	
Chipset	Intel® C621A		Intel® C621A		Intel® C621A		Intel® C621A	
Form Factor	microATX 9.6" x 9.6" (24.38cm x 24.38cm)		microATX, 9.6" x 9.6" (24.38cm x 24.38cm)		microATX, 9.6" x 9.6" (24.38cm x 24.38cm)		ATX, 12.1" x 10" (30.73cm x 25.4cm)	
Optimized Chassis	813MF2TQC-505CB 514-505 113MFAC2-605CB 113MFAC2-R804CB 813MF2TQC4-R407CB 515-505 SCLA26E1C4-R609LP	213LT-600LPB 825MBTQC-R802LPB 825TQC-R802LPB SCLA25TQC-R609LP 835TQC-R802B 842TQC-668B	813MF2TQC-505CB 514-505 113MFAC2-605CB 113MFAC2-R804CB 813MF2TQC4-R407CB 515-505 SCLA26E1C4-R609LP	213LT-600LPB 825MBTQC-R802LPB 825TQC-R802LPB SCLA25TQC-R609LP 835TQC-R802B 842TQC-668B	813MF2TQC-505CB 514-505 113MFAC2-605CB 113MFAC2-R804CB 813MF2TQC4-R407CB 515-505 SCLA26E1C4-R609LP	213LT-600LPB 825MBTQC-R802LPB 825TQC-R802LPB SCLA25TQC-R609LP 835TQC-R802B 842TQC-668B	SCLA26E1C4-R609LP SCLA25TQC-R609LP SC826BAC12-R802LPB	
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots		Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots		Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots		Up to 2TB RDIMM, DDR4-3200MHz; up to 2TB LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots	
Expansion Slots	1 PCI-E 4.0 x8, 2 PCI-E 4.0 x16, 4 PCI-E 4.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key		1 PCI-E 4.0 x8, 2 PCI-E 4.0 x16, 4 PCI-E 4.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key		1 PCI-E 4.0 x8, 2 PCI-E 4.0 x16, 4 PCI-E 4.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key		2 PCI-E 4.0 x16, 2 PCI-E 4.0 x8, 1 PCI-E 4.0 x8 (in x16 slot), 1 PCI-E 4.0 NVMe x8 Internal Port(s) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	
Onboard RAID Controller	Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10		Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10		Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10		Intel® C621A controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	
Onboard LAN	Quad LAN with 1GbE with Intel® I350-AM4		Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with 10GBase-T with Intel® X550		Dual LAN with 10GBase-T with Intel® X550		Dual LAN with 10GBase-T with Intel® X550	
Onboard VGA	1 VGA port ASPEED AST2600 BMC		1 VGA port, ASPEED AST2600 BMC		1 VGA port, ASPEED AST2600 BMC		1 VGA D-Sub Connector port, ASPEED AST2600 BMC	
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)		6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)		6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)		4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 1 COM Port (1 header)		2 ports SuperDOM TPM Header 1 COM Port (1 header)		2 ports SuperDOM TPM Header 1 COM Port (1 header)		TPM Header 1 COM Port (1 header)	
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog		Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog		Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog		Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 5-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT		+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 5-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT		+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 5-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT		+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	
Other Features	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL		ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL		ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL		ACPI power management, ATX Power connector, Chassis intrusion detection, Dual Cooling Zones, NCSI header, RoHS, RoT, UID	
BIOS	AMI UEFI		AMI UEFI		AMI UEFI		AMI UEFI	

# NEW! X13 UP Embedded



MODEL	X13SAN-C X13SAN-C-WOHS	X13SAN-L X13SAN-L-WOHS	X13SAN-E X13SAN-E-WOHS	X13SAN-H X13SAN-H-WOHS
Processor	Intel® Celeron® Processor 7305E; up to 15W TDP	12th Generation Intel® Core™ 3-1215UE Processor; up to 15W TDP	12th Generation Intel® Core™ i7-1185GRE Processor; up to 12/15/28W TDP	11th Generation Intel® Core™ i3-1115GRE Processor; up to 12/15/28W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Memory Capacity & Slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR5-4800MHz, in 2 DIMM slots
Expansion Slots	3 M.2 slots: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0, SATA Gen3/PCI-E Gen3 x1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	3 M.2 slots: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0, SATA Gen3/PCI-E Gen3 x1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	3 M.2 slots: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0, SATA Gen3/PCI-E Gen3 x1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support	3 M.2 slots: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0, SATA Gen3/PCI-E Gen3 x1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 4.0 x4), NVMe support
Onboard RAID Controller	N/A	N/A	N/A	N/A
Onboard LAN	Dual LAN with Intel® Ethernet Controller I225-IT 2.5G, TSN, industrial grade 2 HDMI ports, 2 DP (Type-C Alt mode) ports, HDMI 2.0b (max. resolution up to 4096x2160@60Hz), HDMI 1.4b (max. resolution up to 4096x2160@30Hz), DP1.4 (Alt mode, max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C) 1 USB3.0 port (1 via box header) ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/ Headphone-out (Audio only support at 0~60°C) 1 speaker out header with 3W amplifier 1 8-bit GPIO header 1 SMBus header 1 System Fan 1 SlimSAS and 1 SATA port SuperDoctor® 5, Watchdog	Dual LAN with Intel® Ethernet Controller I225-IT 2.5G, TSN, industrial grade. 2 HDMI ports, 2 DP (Type-C Alt mode) ports, HDMI 2.0b (max. resolution up to 4096x2160@60Hz), HDMI 1.4b (max. resolution up to 4096x2160@30Hz), DP1.4 (Alt mode, max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C) 1 USB3.0 port (1 via box header) ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/ Headphone-out (Audio only support at 0~60°C) 1 speaker out header with 3W amplifier 1 8-bit GPIO header 1 SMBus header 1 System Fan 1 SlimSAS and 1 SATA port SuperDoctor® 5, Watchdog	Dual LAN with Intel® Ethernet Controller I225-IT 2.5G, TSN, industrial grade 2 HDMI ports, 2 DP (Type-C Alt mode) ports, HDMI 2.0b (max. resolution up to 4096x2160@60Hz), HDMI 1.4b (max. resolution up to 4096x2160@30Hz), DP1.4 (Alt mode, max. resolution up to 4096x2304@60Hz), Intel® Iris® Xe Graphics 4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C) 1 USB3.0 port (1 via box header) ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/ Headphone-out (Audio only support at 0~60°C) 1 speaker out header with 3W amplifier 1 8-bit GPIO header 1 SMBus header 1 System Fan 1 SlimSAS and 1 SATA port AMT, SuperDoctor® 5, vPro, Watchdog	Dual LAN with Intel® Ethernet Controller I225-IT 2.5G, TSN, industrial grade 2 HDMI ports, 2 DP (Type-C Alt mode) ports, HDMI 2.0b (max. resolution up to 4096x2160@60Hz), HDMI 1.4b (max. resolution up to 4096x2160@30Hz), DP1.4 (Alt mode, max. resolution up to 4096x2304@60Hz), Intel® Iris® Xe Graphics 4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (2 Rear Type A + 2 Rear Type C) 1 USB3.0 port (1 via box header) ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/ Headphone-out (Audio only support at 0~60°C) 1 speaker out header with 3W amplifier 1 8-bit GPIO header 1 SMBus header 1 System Fan 1 SlimSAS and 1 SATA port SuperDoctor® 5, Watchdog, AMT, vPro
Onboard VGA				
USB Ports				
Other Onboard I/O Devices				
Manageability				
PC Health Monitoring				
Other Features				
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI



# NEW! X12 UP Embedded

3rd Gen Intel® Xeon® Scalable processors Supported



High Performance vPro AMT



High Performance Supports up to 10 cores



High Performance Supports up to 10 cores



Embedded, High Performance Quad 1GbE LAN



Embedded, High Performance Quad 1GbE LAN Dual 25G SFP28



MODEL	X12SCQ	X12SCV-LVDS	X12SCV-W	X12SPZ-LN4F	X12SPZ-SPLN6F
Processor	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3 Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 65W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3 Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 65W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports up to 270W TDP	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU TDP supports up to 270W TDP
Chipset	Intel® Q470E	Intel® W480E	Intel® W480E	Intel® C621A	Intel® C621A
Form Factor	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm) 515M-R804 113MFAC2-605CB	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm) 515M-R804 113MFAC2-605CB
Optimized Chassis					
Memory Capacity & Slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 64GB DDR4 ECC/non-ECC SO-DIMM, DDR4-2933MHz, in 2 DIMM slots	Up to 64GB DDR4 ECC/non-ECC SO-DIMM, DDR4-2933MHz, in 2 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory 200 Series, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-3200MHz; up to 2TB 3DS ECC LRDIMM, DDR4-3200MHz Up to 2TB Intel® Optane™ Persistent Memory, in 8 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 SLOT7 1 PCI-E 3.0 x8 SLOTS *SLOT7/SLOT5: x16/NA or x8/x8 2 PCI-E 3.0 x4 1 M.2 M-Key PCI-E 3.0 x4 2280/2210 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4, RAID 0 & 1 <b>M.2 Form Factor:</b> 2242/2280 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x16 slots (16/NA or 8/8) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2242/2280 1 M.2 E-Key CNVI/PCI-E 3.0 x1, 3042	1 PCI-E 3.0 x16 slots (16/NA or 8/8) 1 M.2 M-Key PCI-E 3.0 x4, 2280	2 PCI-E 4.0 x16, 1 PCI-E 4.0 NVMe x8 SlimSAS Internal Port(s), 1 PCI-E 4.0 NVMe x4 Internal Port(s), 1 PCI-E 3.0 NVMe x4 Internal Port(s) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2242/2280	2 PCI-E 4.0 x16, 1 PCI-E 4.0 NVMe x8 SlimSAS Internal Port(s), 1 PCI-E 4.0 NVMe x4 Internal Port(s), 1 PCI-E 3.0 NVMe x4 Internal Port(s) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2242/2280
Onboard RAID Controller	Intel® Q470E controller for 6 RAID 0,1,5,10	Intel® W480E controller for 2 SATA3 (6 Gbps) ports; RAID 0,1	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621A controller for 6 SATA3 (6 Gbps) ports; 4 SATA ports via OcuLink; RAID 0,1,5,10	Intel® C621A controller for 6 SATA3 (6 Gbps) ports; 4 SATA ports via OcuLink; RAID 0,1,5,10
Onboard LAN	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT 2 HDMI ports, 1 DP (DisplayPort) port, 1 LVDS port, 3 Independent Displays thru HDMI 2.0a/HDMI 1.4/DP/LVDS, Intel® HD Graphics	Single LAN with Intel® Ethernet i225LM Single LAN with Intel® Ethernet i225V	Quad LAN with 1GbE with Intel® I350-AM4	Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with Broadcom BCM57414 25G SFP28
Onboard VGA	1 VGA port, 1 HDMI port, 1 DP (DisplayPort) port, 1 DVI - D port, Intel® HD Graphics	1 LVDS port, 3 Independent Displays thru HDMI 2.0a/HDMI 1.4/DP/LVDS, Intel® HD Graphics	1 HDMI port, 1 DP (DisplayPort) port, Intel® HD Graphics	1 VGA port,	1 VGA port,
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 6 USB 3.1 Gen2 ports (2 Rears Type A + 2 Rears Type C, 2 via headers) 1 Port SuperDOM	4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (4 Rear Type A)	4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (4 Rear Type A)	4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen1 ports (2 rear + 2 via headers)	4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen1 ports (2 rear + 2 via headers)
Other Onboard I/O Devices	1 Port SuperDOM TPM 2.0 Header & Chip both 4 COM Ports (4 headers)	ALC 8885 HD Audio TPM Header & Chip both; 2 COM ports via 1 header	ALC 8885 HD Audio TPM Header & Chip both 1 COM Port (1 header)	TPM Header & Chip both 1 COM Port (1 header)	TPM Header & Chip both 1 COM Port (1 header)
Manageability	AMT, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.35V, +1.5V, +1.8V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 4 -fan status, 4 fans with tachometer monitoring, VBAT	+1.8V, +3.3V, 3 -fan status, Chipset Voltage, CPU temperature, HT, Monitors CPU voltages, PCH temperature, System level control, System temperature, VBAT	+1.8V, +3.3V, 3 -fan status, Chipset Voltage, CPU temperature, HT, Monitors CPU voltages, PCH temperature, System level control, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT
Other Features	ACPI power management, ATX Power connector, Chassis intrusion detection, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS	12V DC or ATX Power Source, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	256Mb SPI Flash with AMI BIOS	256Mb SPI Flash with AMI BIOS

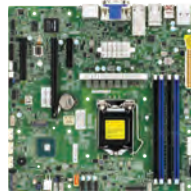


# NEW! X12 UP Embedded

3rd Gen Intel® Xeon® Scalable processors Supported



High Performance Embedded, Dual 10GbE vPro AMT, IPMI



High Performance Embedded, vPro AMT, IPMI



High Performance Embedded, vPro AMT, IPMI



MODEL	X12SCZ-TLN4F	X12SCZ-QF	X12SCZ-F
Processor	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3 Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3 Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports up to 125W TDP
Chipset	Intel® W480E	Intel® Q470E	Intel® W480E
Form Factor	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Optimized Chassis	510FT-203B	510FT-203B	510FT-203B
Memory Capacity & Slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230
Onboard RAID Controller	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® Q470E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® X550 10GBase-T Ethernet Controller Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA D-Sub Connector port, 2 DP++(Dual-Mode DisplayPort) ports, 1 DVI - D port, ASPEED AST2500 BMC, Intel® HD Graphics	1 VGA D-Sub Connector port, 2 DP++(Dual-Mode DisplayPort) ports, 1 DVI - D port, ASPEED AST2500 BMC, Intel® HD Graphics	1 VGA D-Sub Connector port, 2 DP++(Dual-Mode DisplayPort) ports, 1 DVI - D port, ASPEED AST2500 BMC, Intel® HD Graphics
USB Ports	6 USB 2.0 ports (6 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)	6 USB 2.0 ports (6 via headers) 6 USB 3.1 Gen2 ports (4 Rears Type A, 2 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)	6 USB 2.0 ports (6 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)
Other Onboard I/O Devices	ALC 888S HD Audio TPM Header & Chip both 1 COM Port (1 header)	ALC 888S HD Audio TPM Header & Chip both 1 COM Port (1 header)	ALC 888S HD Audio TPM Header & Chip both 1 COM Port (1 header)
Manageability	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory temperature, PCH temperature, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory, PCH temperature, VBAT
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI

# X11 UP Serverboard

Most Popular  
Entry-Class

Cost-optimized  
Micro Serverboard

1U-Optimized  
Quad LAN

WIO  
1U 3AOC, Dual M.2,



MODEL	X11SCL-F		X11SCL-IF	X11SCL-LN4F		X11SCW-F
Processor	8th/9th Generation Intel® Core™i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP		8th/9th Generation Intel® Core™i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP		8th/9th Generation Intel® Core™i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP
Chipset	Intel® C242		Intel® C242	Intel® C242		Intel® C246
Form Factor	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)		Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)		Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)
Optimized Chassis	813MFTQC-R407CB 514-R407C 515-R407 113MTQ-R400CB	SCLA25TQC-R609LP 731i-403B 731i-404B	504-203B 505-203B 1U Heatsink:SNK-P0049A4 1U Heatsink:SNK-P0049P 721TQ-350B2	813MFTQC-350CB2 813MFTQC-R407CB 512F-350B1 515-350 515-R407	514-R407C 113MTQ-R400CB 825TQC-R740LPB 825TQC-R802LPB	815TQC-R504WB2 LA15TQC-563W
Memory Capacity & Slots*	Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots		Up to 64GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 2 DIMM slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots		Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8 (in x16 slot), 2 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector		1 PCI-E 3.0 x16 (in x16 slot) 505-203B <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector		1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 and 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2260/2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector
Onboard RAID Controller	Intel® C242 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10		Intel® C242 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C242 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10		Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with 1GbE with Intel® I210		Dual LAN with 1GbE with Intel® I210	Quad LAN with Intel® Ethernet Controller I210-AT		Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, ASPEED AST2500 BMC		1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC		1 VGA port, ASPEED AST2500 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.1 Gen1 ports (2 Rears Type A, 2 via headers, 1 Type A)		4 USB 2.0 ports (2 rear + 2 via headers) 7 USB 3.2 Gen2 ports (2 rears (2 Rear Type A + 2 via headers + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen2 ports (2 rears + 2 via headers + 1 Type A)		6 USB 2.0 ports (2 rear + 4 via headers) 1 USB 3.1 Gen1 ports, 1 Type A) 4 USB 3.1 Gen2 ports (2 rears, 2 via headers)
Other Onboard I/O Devices	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)		TPM 2.0 Header 1 COM Port (1 rear)	TPM 2.0 Header 1 COM Port (1 header)		TPM 2.0 Header 2 COM Ports (1 rear, 1 header)
Manageability	IPMI2.0, KVM with dedicated LAN, SSM, SUM, SuperDoctor® 5		IPMI2.0, KVM with dedicated LAN, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog		Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 5 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT		+12V, +3.3V, +5V, +5V standby, 4 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT		+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control						
Other Features	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, UID, WOL		ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, UID, WOL		ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, UID, WOL
BIOS	UEFI 256Mb		UEFI 256Mb	UEFI 256Mb		UEFI 256Mb

\*For detailed memory configurations please refer to Supermicro website.

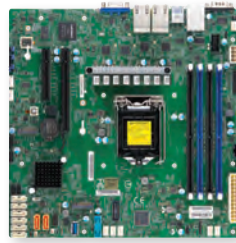
\*\* For integration into SuperServer® systems only, not available for sale as subsystems.

# X11 UP Serverboards

Dual LAN  
Dual M.2



Quad LAN  
Dual M.2



1U-Optimized  
Dual LAN



1U-Optimized  
8x LAN



MODEL	X11SCH-F	X11SCH-LN4F	X11SCM-F	X11SCM-LN8F
Processor	8th/9th Generation Intel® Core™i3/ Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™i3/ Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™i3/ Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™i3/ Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP
Chipset	Intel® C246	Intel® C246	Intel® C246	Intel® C246
Form Factor	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Optimized Chassis	SC813MFTQC-R407CB SC514-R407C SC515-R407 1U Heatsink:SNK-P0046P	SC813MFTQC-R407CB SC514-R407C SC515-R407 1U Heatsink:SNK-P0046P	● SC813MFTQC-350CB2 ● SC813MFTQC-R407CB SC51ppppp1 SC515-350 SC515-R407 SC514-R407C 1U Heatsink:SNK-P0046P SC825TQC-R740LPB 2U Heatsink:SNK-P0046A4	● SC813MFTQC-350CB2 ● SC813MFTQC-R407CB SC512F-350B1 SC515-350 SC515-R407 SC514-R407C 1U Heatsink:SNK-P0046P SC825TQC-R740LPB 2U Heatsink:SNK-P0046A4
Memory Capacity & Slots*	Up to 128GB DDR4 ECC UDIMM, DDR4- 2666MHz, in 4 DIMM slots	Up to 128GB DDR4 ECC UDIMM, DDR4- 2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8 <b>M.2 Interface:</b> PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8 <b>M.2 Interface:</b> PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 and 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 and 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector
Onboard RAID Controller	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210	Quad LAN with Intel® Ethernet Controller I210	Dual LAN with Intel® Ethernet Controller I210-AT	8 LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC
USB Ports	6x USB 2.0 ports (2 rear, 4 via headers); 2x USB 3.1 Gen2 ports (rear); 3x USB 3.1 Gen1 ports (1 Type-A, 2 via header)	6x USB 2.0 ports (2 rear, 4 via headers); 2x USB 3.1 Gen2 ports (rear); 3x USB 3.1 Gen1 ports (1 Type-A, 2 via header)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.1 Gen1 ports(2 rears, 2 via headers, 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.1 Gen1 ports(2 rears, 2 via headers, 1 Type A)
Other Onboard I/O Devices	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header 1 COM Port (1 header)	TPM 2.0 Header 1 COM Port (1 header)
Manageability	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control				
Other Features	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL
BIOS	UEFI 256Mb	UEFI 256Mb	UEFI 256Mb	UEFI 256Mb

\*For detailed memory configurations please refer to Supermicro website.

\*\* For integration into SuperServer® systems only, not available for sale as subsystems.

# X11 UP Serverboards



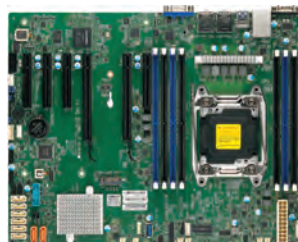
MODEL	X11SCA	X11SCA-F	X11SCA-W
Processor	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP
Chipset	Intel® C246	Intel® C246	Intel® C246
Form Factor	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC732D4-500B</li> <li>● SC732D4-903B</li> <li>● SC732D3-1200B</li> <li>● SCG55A-753K</li> <li>● SCG55A-753B</li> </ul>	<ul style="list-style-type: none"> <li>● SC732D4-500B</li> <li>● SC732D4-903B</li> <li>● SC732D3-1200B</li> <li>● SCG55A-753K</li> <li>● SCG55A-753B</li> </ul>	<ul style="list-style-type: none"> <li>● SC732D4-500B</li> <li>● SC732D4-903B</li> <li>● SC732D3-1200B</li> <li>● SCG55A-753K</li> <li>● SCG55A-753B</li> </ul>
Memory Capacity & Slots*	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots 1 PCI-E 3.0 x4, 1 PCI-E 3.0 x1, 2 PCI-Ex16 slots are running at NA/16, or 8/8	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots 1 PCI-E 3.0 x4, 1 PCI-E 3.0 x1, 2 PCI-Ex16 slots are running at NA/16, or 8/8	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots 1 PCI-E 3.0 x4, 1 PCI-E 3.0 x1, 2 PCI-Ex16 slots are running at NA/16, or 8/8
Expansion Slots	1 - 5V PCI 32bit <b>M.2 Interface:</b> 2 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2242/2260/2280/22110 <b>M.2 Key:</b> M-Key M.2#1 are shared with PCI-Ex4 slot, M.2#2 is shared with U.2 <b>U.2 Interface:</b> 1 PCI-E 3.0 x4	1 - 5V PCI 32bit <b>M.2 Interface:</b> 2 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2242/2260/2280/22110 <b>M.2 Key:</b> M-Key M.2#1 is shared with PCI-Ex4 slot, M.2#2 is shared with U.2 <b>U.2 Interface:</b> 1 PCI-E 3.0 x4	1 - 5V PCI 32bit <b>M.2 Interface:</b> 2 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2242/2260/2280/22110 <b>M.2 Key:</b> M-Key M.2#1 are shared with PCI-Ex4 slot, M.2#2 is shared with U.2 <b>U.2 Interface:</b> 1 PCI-E 3.0 x4
Onboard RAID Controller	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller Support vPro	Single LAN with Intel® Ethernet Controller I210-AT Shared with IPMI Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller Support vPro Single LAN with Gigabit LAN WiFi + Bluetooth 5.0
Onboard VGA	1 HDMI port, 1 DVI - D port, 1 DP (DisplayPort) port, Intel® UHD P630 graphic(For CPU Xeon® E-21XXG/E-22XXG series only),	1 HDMI port, 1 DVI - D port, 1 DP (DisplayPort) port, 1 VGA port, Intel® UHD P630 graphic(For Xeon® E-21xxG/E-22xxG series only), ASPEED AST2500 BMC	1 HDMI port, 1 DVI - D port, 1 DP (DisplayPort) port, Intel® UHD P630 graphic(For CPU Xeon® E-21XXG/E-22XXG series only),
USB Ports	2 USB 2.0 ports (2 via headers) 4 USB 3.1 Gen1 ports (2 Rears Type A, 2 via headers) 4 USB 3.1 Gen2 ports (1 Rear Type A + 1 Rear Type C, 1 via header, 1 Type A)	2 USB 2.0 ports (2 via headers) 4 USB 3.1 Gen1 ports (2 Rears Type A, 2 via headers) 4 USB 3.1 Gen2 ports (1 Rear Type A + 1 Rear Type C, 1 via header, 1 Type A)	2 USB 2.0 ports (2 via headers) 4 USB 3.1 Gen1 ports (2 Rears Type A, 2 via headers) 4 USB 3.1 Gen2 ports (1 Rear Type A + 1 Rear Type C, 1 via header, 1 Type A)
Other Onboard I/O Devices	ALC 888S HD Audio TPM 2.0 Header 1 COM Port (1 header)	ALC 888S HD Audio TPM 2.0 Header 1 COM Port (1 header)	ALC 888S HD Audio TPM 2.0 Header 1 COM Port (1 header)
Manageability	AMT, SuperDoctor® 5, vPro, Watchdog	IPMI2.0, SSM, SUM, SuperDoctor® 5, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 5 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 5 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 5 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, VBAT
Thermal Control			
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, RoHS, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, RoHS, WOL	8-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, RoHS, WOL
BIOS	UEFI 128Mb	UEFI 128Mb	UEFI 128Mb

\*For detailed memory configurations please refer to Supermicro website.

\*\* For integration into SuperServer® systems only, not available for sale as subsystems.



# X11 UP Serverboards



MODEL	X11SRM-F	X11SRM-VF	X11SRL-F	X11SRi-IF
Processor†	Intel® Xeon® W-2100 Processors, Intel® Xeon® W-2200 Processors Single Socket LGA-2066 (Socket R4) supported, CPU TDP supports up to 165W TDP	Intel® Xeon® W-2100 Processors, Intel® Xeon® W-2200 Processors Single Socket LGA-2066 (Socket R4) supported, CPU TDP supports up to 165W TDP	Intel® Xeon® W-2100 Processors, Intel® Xeon® W-2200 Processors Single Socket LGA-2066 (Socket R4) supported, CPU TDP supports up to 165W TDP	Intel® Xeon® W-2100 Processors, Intel® Xeon® W-2200 Processors Single Socket LGA-2066 (Socket R4) supported, CPU TDP supports up to 165W TDP
Chipset	Intel® C422	Intel® C422	Intel® C422	Intel® C422
Form Factor	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC813MFTQC-R407CB</li> <li>● SC813MFAC2-R606CB</li> <li>● SC813MFAC2-341CB</li> <li>1U Heatsink: SNK-P0057PS</li> </ul>	<ul style="list-style-type: none"> <li>● SC813MFTQC-R407CB</li> <li>● SC813MFAC2-R606CB</li> <li>● SC813MFAC2-341CB</li> <li>1U Heatsink: SNK-P0057PS</li> </ul>	<ul style="list-style-type: none"> <li>● SC825TQC</li> </ul>	
Memory Capacity & Slots*	Up to 256GB ECC RDIMM, DDR4-2933MHz; up to 512GB ECC LRDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 256GB ECC RDIMM, DDR4-2933MHz; up to 512GB ECC LRDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 512GB ECC RDIMM, DDR4-2933MHz; up to 1TB Registered ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to 256GB ECC RDIMM, DDR4-2933MHz; up to 512GB ECC LRDIMM, DDR4-2933MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x8 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x8, 4 PCI-E 3.0 NVMe x4 Internal Port(s) <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector	3 PCI-E 3.0 x8, 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x16, 2 PCI-E 3.0 NVMe x4 Internal Port(s)
Onboard RAID Controller	Intel® C422 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C422 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C422 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C422 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® i210 Gigabit Ethernet Controller	Dual LAN with Intel® i210 Gigabit Ethernet Controller	Dual LAN with Intel® i210 Gigabit Ethernet Controller	Dual LAN with Intel® i210 Gigabit Ethernet Controller
Onboard VGA	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	2 USB 3.2 Gen1 ports (2 rear)
Other Onboard I/O Devices	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 1 COM Port (1 header)
Manageability	IPMI2.0, KVM with dedicated LAN, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 6-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 6-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3-fan status, 3.3V standby, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT
Thermal Control				
Other Features	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, UID	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, UID	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, UID	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.



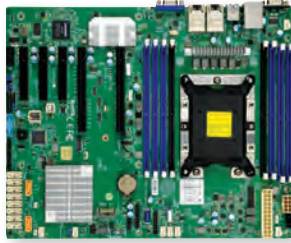


**High-Performance  
VROC Support**  
Up to 2TB 3DS ECC DDR4-2933 MHz  
Rich I/O Expansion and 10GbE

# X11 UP Serverboards

**Embedded Ready  
VROC Support**  
Up to 1.5TB 3DS ECC DDR4-2933MHz  
2x 1GbE(-F), 2x 10GbE (-TF), 2x 10G SFP+ (-TPF)

**Telecom/Storage**  
Up to 1.5TB 3DS ECC DDR4-2933MHz  
1U/3 AOC, 10GbE



MODEL	X11SPi-TF	X11SPM-F X11SPM-TF X11SPM-TPF	X11SPW-TF X11SPW-CTF	
Processor	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R).	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 165W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R).	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R).	
Chipset	Intel® C622	-F: Intel® C621 -TF/-TPF: Intel® C622	Intel® C622	
Form Factor	ATX, 12" x 9.6" (30.48cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)	
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC813MFTQC-R407CB</li> <li>● SC813MFTQC-350CB</li> <li>● SC113MFAC2-R606CB</li> <li>● SC113MFAC2-341CB</li> <li>● SC512F-350B</li> </ul> 1U Heatsink: SNK-P0067PS	<ul style="list-style-type: none"> <li>● SC825TQC-R740LPB</li> <li>● SC213LT-600LPB</li> <li>● SC823TQ-653B</li> <li>● SC113MFAC2-R606CB</li> <li>● SC113MFAC2-341CB</li> <li>● SC512F-350B</li> </ul> 2U Heatsink: SNK-P0068AP54	<ul style="list-style-type: none"> <li>● SC825TQC-R740LPB</li> <li>● SC213LT-600LPB</li> <li>● SC823TQ-653B</li> <li>● SC833TQ-653B</li> </ul> 2U Heatsink: SNK-P0068AP54	<ul style="list-style-type: none"> <li>● SC815TQ-R500WB/600WB</li> <li>● SC113TQ-600WB</li> <li>● SNK-P0067PS</li> <li>● SC825TQ-R500WB</li> <li>● SNK-P0068PS</li> </ul> 2U Heatsink: SNK-P0068PS
Memory Capacity & Slots*	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots; Up to 1TB Intel® Optane DC Persistent Memory in memory mode (Cascade Lake Only)**	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	
Expansion Slots	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 22110 M.2 Key: M-Key Double Height Connector	2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2242, 2280 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x32 Left Riser Slot <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector	
Onboard RAID Controller	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	-F: Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -TF/-TPF: Intel® C622 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10	-TF: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -CTF: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 4 SAS3 (12Gbps) ports; RAID 0,1,10	
Onboard LAN	Dual LAN with 10GbBase-T with Intel® X722 + X557	-F: Dual LAN with 10GbE with Intel® X722 + Marvell 88E1512 -TF: Dual LAN with 10GbBase-T with Intel® X722 + X557 -TPF: Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227	Dual LAN with 10GbBase-T with Intel® X722 + X557	
Onboard VGA	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	
USB Ports	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	7 USB 2.0 ports (2 rear + 5 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 8-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT	
Thermal Control	7x 4-pin fan headers (up to 7 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control	8x 4-pin fan headers (up to 8 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL	
Other Features	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	

# X11 UP Serverboards

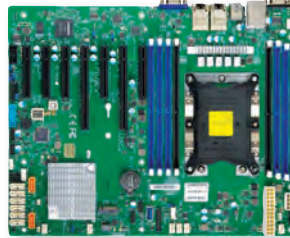


High Performance VROC Support  
Up to 2TB 3DS ECC DDR4-2933 MHz  
NVMe, SAS3 and 10G Base-T

High Performance  
Up to 2TB 3DS ECC DDR4-2933 MHz  
NVMe, SAS3 and 10G SFP+

VROC and I/O Optimized  
Up to 2TB 3DS ECC DDR4-2933 MHz  
7 PCI-E 3.0 slots

GPU Optimized  
Up to 1.5TB 3DS ECC DDR4-2933MHz  
1U/2 GPU or 1/U5 AOC



MODEL	X11SPH-nCTF	X11SPH-nCTPF	X11SPL-F	X11SPG-TF**
Processor	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R). Intel® C622	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R). Intel® C622	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 165W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R). Intel® C621	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R). Intel® C621
Chipset	Intel® C622	Intel® C622	Intel® C621	Intel® C621
Form Factor	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	Proprietary, 7.71" x 16.64" (19.58cm x 42.27cm)
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC826BE1C-R802LPB</li> <li>● SC216BE1C4-R1K23LPB</li> <li>● SC836BE1C-R1K23B</li> <li>2U Heatsink: SNK-P0068APS4</li> <li>● SC846BE1C-R1K23B</li> <li>● SC847BE1C4-R1K23LPB</li> <li>2U Heatsink: SNK-P0068APS4</li> </ul>	<ul style="list-style-type: none"> <li>● SC826BE1C-R802LPB</li> <li>● SC216BE1C4-R1K23LPB</li> <li>● SC836BE1C-R1K23B</li> <li>2U Heatsink: SNK-P0068APS4</li> <li>● SC846BE1C-R1K23B</li> <li>● SC847BE1C4-R1K23LPB</li> <li>2U Heatsink: SNK-P0068APS4</li> </ul>	<ul style="list-style-type: none"> <li>● SC813MFTQC-R407CB</li> <li>● SC813MFTQC-350CB</li> <li>● SC113MFAC2-R606CB</li> <li>● SC113MFAC2-341CB</li> <li>● SC512F-350B</li> <li>1U Heatsink: SNK-P0067PS</li> <li>● SC825TQC-R740LPB</li> <li>● SC213LT-600LPB</li> <li>● SC823TQ-653B</li> <li>● SC833T-653B</li> <li>2U Heatsink: SNK-P0068APS4</li> </ul>	<ul style="list-style-type: none"> <li>● SC118G-1K43B2</li> <li>● SC818G-1K43B2</li> <li>1U Heatsink: SNK-P0067PS</li> </ul>
Memory Capacity & Slots*	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots; Up to 1TB Intel® Optane DC Persistent Memory in memory mode (Cascade Lake Only)**	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot), 2 PCI-E 3.0 NVMe x4 <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10 Dual LAN with 10GBase-T with Intel® X722 + X557 1 VGA port, ASPEED AST2500 BMC	1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot), 2 PCI-E 3.0 NVMe x4 <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10 Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227 1 VGA port, ASPEED AST2500 BMC	2 PCI-E 3.0 x8 (in x16 slot), 4 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	1 PCI-E 3.0 x16 Center Right Hand Slot, 1 PCI-E 3.0 x16 Left Riser Slot, 1 PCI-E 3.0 x16 Right Riser Slot <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector Intel® C621 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard RAID Controller	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10	Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with 10GBase-T with Intel® X722 + X557	Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227	Dual LAN with 1GbE with Intel® I210	Dual LAN with 10GBase-T with Intel® X550
Onboard VGA	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC
USB Ports	8 USB 2.0 ports (2 rear + 6 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A) 2 ports SuperDOM	8 USB 2.0 ports (2 rear + 6 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A) 2 ports SuperDOM	8 USB 2.0 ports (2 rear + 6 headers) 5 USB 3.2 gen. 1 ports (2 rear + 2 headers + 1 Type A) 2 ports SuperDOM	4 USB 2.0 ports (2 rear + 2 headers) 5 USB 3.2 gen. 1 ports (2 rear + 2 headers + 1 Type A) 2 ports SuperDOM
Other Onboard I/O Devices	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 2 COM Ports (1 rear, 1 header)	TPM Header 1 COM Port (1 header)
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 8-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 8-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 8-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT
PC Health Monitoring	8x 4-pin fan headers (up to 8 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control	8x 4-pin fan headers (up to 8 fans), Dual Cooling Zone, Overheat LED indication, PWM fan speed control, System level control	7x 4-pin fan headers (up to 7 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control	8x 4-pin fan headers (up to 8 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control
Thermal Control	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL AMI UEFI	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL AMI UEFI
Other Features	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL AMI UEFI	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL AMI UEFI
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

\* For detailed memory configurations please refer to Supermicro website.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Generation Intel® Xeon® Scalable processors (Cascade Lake-SP Refresh / Cascade Lake-SP) only. Contact your Supermicro sales rep for more info.

# X11 UP Serverboards

Intel® QSV & VHD with GT2



Intel® QSV & VHD with GT2



MODEL	X11SSW-TF	X11SSW-4TF	X11SSW-F
Processor	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP
Chipset	Intel® C236	Intel® C236	Intel® C236
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC815TQC-R504WB</li> <li>● SC815TQ-R500WB</li> <li>● SC815TQC-605WB</li> <li>● SC116AC2-R706WB</li> <li>● SC113TQ-600WB</li> <li>● SC514-R400W</li> <li>● SC514-505</li> </ul> 1 U Heatsink: SNK-P0046P	<ul style="list-style-type: none"> <li>● SC815TQC-R504WB</li> <li>● SC815TQ-R500WB</li> <li>● SC815TQC-605WB</li> <li>● SC116AC2-R706WB</li> <li>● SC113TQ-600WB</li> <li>● SC514-R400W</li> <li>● SC514-505</li> </ul> 1 U Heatsink: SNK-P0046P	<ul style="list-style-type: none"> <li>● SC815TQC-R504WB</li> <li>● SC815TQ-R500WB</li> <li>● SC116AC2-R706WB</li> <li>● SC514-R400W</li> <li>● SC514-505</li> </ul> 1 U Heatsink: SNK-P0046P
Form Factor	Proprietary, 8" x 13" (20.32cm x 33.02cm)	Proprietary, 8" x 13" (20.32cm x 33.02cm)	Proprietary, 8" x 13" (20.32cm x 33.02cm)
Memory Capacity & Slots*	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 Left Riser Slot M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2260, 2280, 22110 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x16 Left Riser Slot M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2260, 2280, 22110 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x16 Left Riser Slot, 1 PCI-E 3.0 x4 (in x16 slot) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2260, 2280, 22110 M.2 Key: M-Key Double Height Connector
Onboard RAID Controller	Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® X540 10GBase-T Ethernet Controller	Quad LAN with Intel® X540 10GBase-T Ethernet Controller	Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor™ 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor™ 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor™ 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control	6x 4-pin fan headers (up to 6 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors
Other Features	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, VHD, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, VHD, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, WOL
BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# X11 UP Serverboards

Entry Server  
Cost Optimized



(Micro-ATX, 9.6"W x 9.6"H)

Entry Server  
Cost Optimized



(Micro-ATX, 9.6"W x 9.6"H)

Storage Optimized  
w/8 SAS3 Ports



(Micro-ATX, 9.6"W x 9.6"H)

Onboard 2x NVMe Ports



(Micro-ATX, 9.6"W x 9.6"H)

MODEL	X11SSL	X11SSL-F	X11SSL-CF	X11SSL-nF
Processor	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP
Chipset	Intel® C232	Intel® C232	Intel® C232	Intel® C232
Form Factor	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots*	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x1	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x1, 2 PCI-E 3.0 NVMe x4 External Ports
Onboard RAID Controller	Intel® C232 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C232 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C232 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C232 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, Aspeed AST1400	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 1 COM Port (1 rear)	2 ports SuperDOM TPM Header 1 COM Port (1 rear)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	NMI, SSM, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors
Other Features	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, WOL
BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.



# X11 UP Serverboards

  
SAS3,  
Dual 10GBase-T



(Micro-ATX, 9.6"W x 9.6"H)

  
Storage Optimized,  
Dual 10GBase-T



(Micro-ATX, 9.6"W x 9.6"H)

  
Datacenter Optimized,  
QSV/VHD



(Micro-ATX, 9.6"W x 9.6"H)

  
Datacenter Optimized,  
Quad GbE



(Micro-ATX, 9.6"W x 9.6"H)

MODEL	X11SSH-CTF	X11SSH-TF	X11SSH-F	X11SSH-LN4F
Processor	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP
Chipset	Intel® C236	Intel® C236	Intel® C236	Intel® C236
Form Factor	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots*	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x2 (in x4 slot) <b>M.2 Interface:</b> SATA and PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2260 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x2 (in x4 slot) <b>M.2 Interface:</b> SATA and PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2260 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x2 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x2 <b>M.2 Form Factor:</b> 2280 <b>M.2 Key:</b> M-Key Double Height Connector
Onboard RAID Controller	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Broadcom® 3008 controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® X550 10GBase-T Ethernet Controller	Dual LAN with Intel® X550 10GBase-T Ethernet Controller	Dual LAN with Intel® Ethernet Controller I210-AT	Quad LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control	6x 4-pin fan headers (up to 6 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors
Other Features	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Node Manager Support, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Node Manager Support, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, VHD, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, VHD, WOL
BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS

\* Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.



# X11 UP Serverboards

Cost/Performance  
Optimized



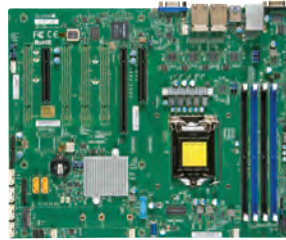
(Micro-ATX, 9.6"W x 9.6"H)

Cost/Performance  
Optimized



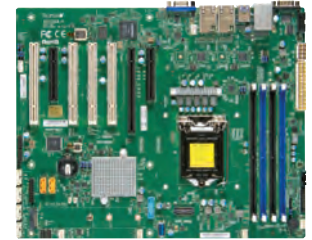
(Micro-ATX, 9.6"W x 9.6"H)

1U Networking  
Appliance



(ATX, 12"W x 9.6"H)

Legacy 4x PCI-32  
Support



(ATX, 12"W x 9.6"H)

MODEL	X11SSM	X11SSM-F	X11SSi-LN4F	X11SSA-F
Processor	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP	Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 80W TDP
Chipset	Intel® C236	Intel® C236	Intel® C236	Intel® C236
Form Factor	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX, 9.6" x 9.6" (24.38cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)
Memory Capacity & Slots*	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2242, 2260, 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x4 (in x8 slot) 4 - 5V PCI 32bit <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2242, 2260, 2280, 22110 <b>M.2 Key:</b> M-Key Double Height Connector
Onboard RAID Controller	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210-AT	Quad LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 VGA port, Aspeed AST1400	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM Header 2 COM Ports (1 rear, 1 header)
Manageability	NMI, SSM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors
Other Features	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Node Manager Support, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, WOL	Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, WOL
BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS	128Mb SPI Flash EEPROM with AMI BIOS

\* Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Low Power

Low Power  
Quad Core

Low Power  
Quad Core

Low Power



MODEL	X11SWN-C X11SWN-C-WOHS	X11SWN-E X11SWN-E-WOHS	X11SWN-H X11SWN-H-WOHS	X11SWN-L X11SWN-L-WOHS
Processor†	Intel® Celeron® Processor 4305UE; up to 15W TDP	8th Generation Intel® Core™ i5-8365UE Processor; up to 15W TDP	8th Generation Intel® Core™ i7-8665UE Processor; up to 15W TDP	8th Generation Intel® Core™ i3-8145UE Processor; up to 15W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Optimized Chassis	Embedded Compact Chassis:	Embedded Compact Chassis:	Embedded Compact Chassis:	Embedded Compact Chassis:
Memory	SuperChassis E102	SuperChassis E102	SuperChassis E102	SuperChassis E102
Capacity & Slots*	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	<b>M.2 Key: B-Key, M-Key, E-Key</b> <b>M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder</b>	<b>M.2 Key: B-Key, M-Key, E-Key</b> <b>M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder</b>	<b>M.2 Key: B-Key, M-Key, E-Key</b> <b>M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder</b>	<b>M.2 Key: B-Key, M-Key, E-Key</b> <b>M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder</b>
	<b>M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2)</b>	<b>M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2)</b>	<b>M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2)</b>	<b>M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2)</b>
Onboard RAID Controller	<b>M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support</b> I-SATA0 (1x SATA 3.0 Port)	<b>M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support</b> I-SATA0 (1x SATA 3.0 Port)	<b>M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support</b> I-SATA0 (1x SATA 3.0 Port)	<b>M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support</b> I-SATA0 (1x SATA 3.0 Port)
Onboard LAN	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller
Onboard VGA	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 610	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620
USB Ports	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip
Other Onboard I/O Devices	6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan
Manageability	-WOHS: w/o Heatsink SuperDoctor® 5, Watchdog	-WOHS: w/o Heatsink AMT, SuperDoctor® 5, vPro, Watchdog	-WOHS: w/o Heatsink AMT, SuperDoctor® 5, vPro, Watchdog	-WOHS: w/o Heatsink SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT
Thermal Control				
Other Features	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature 0°C to 70°C Operating Temperature (-WOHS)	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature 0°C to 70°C Operating Temperature (-WOHS)	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature 0°C to 70°C Operating Temperature (-WOHS);	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature 0°C to 70°C Operating Temperature (-WOHS)
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

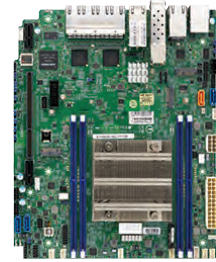
Xeon® D SoC  
Skylake-D  
Quad 10GbE LAN  
Embedded



Xeon® D SoC  
Skylake-D  
Quad 10GbE LAN  
Embedded



Xeon® D SoC  
Skylake-D  
Intel® Quick Assist Technology  
Quad 10GbE LAN  
Embedded



MODEL	X11SDW-4C-TP13F+	X11SDW-16C-TP13F+	X11SDW-14CN-TP13F+
Processor†	Intel® Xeon® Processor D-2123IT Single Socket FCBGA-2518 supported, CPU TDP supports up to 60W TDP	Intel® Xeon® Processor D-2183IT Single Socket FCBGA-2518 supported, CPU TDP supports up to 100W TDP	Intel® Xeon® Processor D-2177NT Single Socket FCBGA-2518 supported, CPU TDP supports 105W TDP
Chipset	System on Chip	System on Chip	System on Chip
Form Factor	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)
Optimized Chassis	513BTQC-350WB 513BTQC-505WB	513BTQC-350WB 513BTQC-505WB	513BTQC-350WB 513BTQC-505WB
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242/3042	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8211E PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Quad LAN with 10G SFP+ LAN via SoC Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Quad LAN with 10G SFP+ LAN via SoC Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)
Onboard VGA	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC
USB Ports	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)
Other Onboard I/O Devices	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header) Support TPM2.0 Onboard	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature
Thermal Control			
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL
BIOS	UEFI 256Mb	UEFI 256Mb	UEFI 256Mb

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Xeon® D SoC, Skylake-D  
Quad 10GbE LAN



Xeon® D SoC, Skylake-D  
Intel® Quick Assist Technology  
Quad 10GbE LAN



Xeon® D SoC, Skylake-D  
Quad 10GbE LAN



MODEL	X11SDW-4C-TP13F	X11SDW-8C-TP13F	X11SDW-12C-TP13F
Processor <sup>†</sup>	Intel® Xeon® Processor D-2123IT Single Socket FCBGA-2518 supported, CPU TDP supports up to 60W TDP	Intel® Xeon® Processor D-2146NT Single Socket FCBGA-2518 supported, CPU TDP supports up to 80W TDP	Intel® Xeon® Processor D-2163IT Single Socket FCBGA-2518 supported, CPU TDP supports up to 75W TDP
Chipset	System on Chip	System on Chip	System on Chip
Form Factor	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	Proprietary WIO, 8" x 9.6" (20.32cm x 24.38cm)	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)
Optimized Server	SYS-E303-9D-4C-FN13TP	SYS-1019D-FHN13TP SYS-E303-9D-8C-FN13TP	SYS-E403-9D-12C-FN13TP
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242/3042	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242/3042	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8211E PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Quad LAN with 1GbE with Intel® I350-AM4 Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)
Onboard VGA	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC
USB Ports	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)
Other Onboard I/O Devices	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, 6 -fan status, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature
Thermal Control	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Low noise fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Status monitoring for speed control, System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL
BIOS	UEFI 256Mb	UEFI 256Mb	UEFI 256Mb

<sup>†</sup> Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Xeon® D SoC, Skylake-D  
Quad 10GbE LAN



Xeon® D SoC, Skylake-D  
Intel® Quick Assist Technology  
Quad 10GbE LAN



Xeon® D SoC, Skylake-D  
Quad 10GbE LAN



MODEL	X11SDW-14C-TP13F	X11SDW-14CNT-TP13F	X11SDW-16C-TP13F
Processor†	Intel® Xeon® Processor D-2173IT Single Socket FCBGA-2518 supported, CPU TDP supports 70W TDP	Intel® Xeon® Processor D-2177NT Single Socket FCBGA-2518 supported, CPU TDP supports 105W TDP	Intel® Xeon® Processor D-2183IT Single Socket FCBGA-2518 supported, CPU TDP supports up to 100W TDP
Chipset	System on Chip	System on Chip	System on Chip
Form Factor	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	Proprietary WIO, 8" x 9.6" (20.32cm x 24.38cm)	Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)
Optimized Server	SYS-E403-9D-14C-FN13TP	SYS-1019D-14CN-FHN13TP	SYS-1019D-16C-FHN13TP SYS-E403-9D-16C-FN13TP
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2666MHz; up to 512GB LRDIMM LRDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242/3042	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Quad LAN with 1GbE with Intel® I350-AM4 Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)
Onboard VGA	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC
USB Ports	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rears Type A)
Other Onboard I/O Devices	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, 6 -fan status, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature
Thermal Control	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors		
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL
BIOS	UEFI 256Mb	UEFI 256Mb	UEFI 256Mb

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.



# Embedded

vPro AMT  
6-Core



(Mini-ITX, 6.75"W x 6.75"H)

High Performance  
6-Core



(Mini-ITX, 6.75"W x 6.75"H)

Skylake-D, 16-Core  
NVMe, Dual 10GbE



(Mini-ITX, 6.75"W x 6.75"H)

Skylake-D  
8-Core  
NVMe, Dual 10GbE



(Mini-ITX, 6.75"W x 6.75"H)

MODEL	X11SCV-Q	X11SCV-L	X11SDV-16C+~TLN2F	X11SDV-8C+~TLN2F
Processor	8th Generation Intel® Core™ i7/i5/i3/ Pentium®/Celeron® Processor. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 65W TDP	8th Generation Intel® Core™ i7/i5/i3/ Pentium®/Celeron® Processor. Single Socket H4 (LGA 1151) supported, CPU TDP support up to 65W TDP	Intel® Xeon® Processor D-2183IT, CPU TDP support up to 100W TDP	Intel® Xeon® Processor D-2141I, CPU TDP support up to 65W TDP
Chipset	Intel® Q370	Intel® H310	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)
Optimized Chassis	● SCe300 SC721TQ-250B	● SCe300 SC721TQ-250B		SC721TQ-250B
Memory Capacity & Slots*	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666 MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666 MHz, in 2 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz; up to 512GB ECC LRDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz; up to 512GB ECC LRDIMM, DDR4-2133 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 1 M.2 M-Key PCI-E 3.0 x4, 2242/2280 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230	1 PCI-E 3.0 x16 1 M.2 E-Key PCI-E 2.0 x1, 2230	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)
Onboard RAID Controller	Intel® Q370 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® H310 controller for 4 SATA3 (6 Gbps) ports; Only I-SATA0 - I-SATA3		
Onboard LAN	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Dual LAN with 10GBase-T with Intel® X557	Dual LAN with 10GBase-T with Intel® X557
Onboard VGA	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 3 Independent Displays, HDMI 2.0, Intel® HD Graphics	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 2 Independent Displays, Intel® HD Graphics	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC
USB Ports	4 USB 2.0 ports (4 headers, Type A)) 6 USB 3.1 ports (4 rears (2 Type A + 2 Type C) + 2 headers; USB 3.1 Gen 2)	4 USB 2.0 ports (4 headers, Type A)) 4 USB 3.1 ports (4 rears (2 Type A + 2 Type C))	2 USB 2.0 ports (2 headers, Type A)) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A)) 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	ALC 888S HD Audio TPM 2.0 Header & Chip both 6 COM Ports (2 rear, 4 headers); 4COM port support RS-232 thru pin header; 2COM support RS-232/422/485 in rear	ALC 888S HD Audio TPM 2.0 Header & Chip both 6 COM Ports (2 rear, 4 headers); 4COM ports support RS-232 thru pin header; 2COM ports support RS-232/422/485 in rear	TPM Header	TPM Header
Manageability	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	NMI, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog +1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3 -fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog +1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3 -fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT
PC Health Monitoring	+1.8V, +3.3V, +5V, +5V standby, 3 -fan status, HT, System level control, System temperature, VBAT	+1.8V, +3.3V, +5V, +5V standby, 3 -fan status, HT, System level control, System temperature, VBAT		
Thermal Control	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Fan speed control, Low noise fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Pulse Width Modulated (PWM) fan connectors, System level control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

\* Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

High Performance  
vPro AMT  
2666MHz DDR4



High Performance  
Workstation  
2666MHz DDR4



vPro AMT  
High Performance  
2666MHz DDR4



High Performance  
IPMI



MODEL	X115CQ	X115CQ-L	X115CZ-Q	X115CZ-F
Processor	8th/9th Generation Intel® Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP	8th/9th Generation Intel® Core™ i9/ Core™ i7/Core™ i5/Core™ i3/Pentium®/ Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports up to 95W TDP
Chipset	Intel® Q370	Intel® H310	Intel® Q370	Intel® C246
Form Factor	uATX, 9.6" x 9.6" (24.38cm x 24.38cm)	uATX, 9.6" x 9.6" (24.38cm x 24.38cm)	uATX, 9.6" x 9.6" (24.38cm x 24.38cm)	uATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots*	Up to 64GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 32GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 2 DIMM slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x1, 2 PCI-E 3.0 x4 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2242/2280/22110 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x16 1 PCI-E 2.0 x4 1 PCI-E 2.0 x1	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x4 (in x8 slot) <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x4 <b>M.2 Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x4 (in x8 slot) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110
Onboard RAID Controller	Intel® Q370 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® H310 controller for 4 SATA3 (6 Gbps) ports;	Intel® Q370 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210-AT Single LAN with Intel® PHY I219LM LAN controller
Onboard VGA	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 3 Independent Displays, Intel® HD Graphics	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 2 Independent Displays, Intel® HD Graphics	1 DVI - I port, 2 DP (DisplayPort) ports, 3 Independent Displays, Intel® HD Graphics	1 VGA D-Sub Connector port, 1 DVI - I port, 2 DP (DisplayPort) ports, 3 Independent Displays, ASPEED AST2500 BMC, Intel® HD Graphics
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 6 USB 3.2 Gen2 ports (4 rears (2 Rear Type A + 2 Rear Type C + 2 via headers)	6 USB 2.0 ports (2 rear + 4 via headers) 4 USB 3.1 Gen1 ports (2 Rears Type A + 2 Rears Type C)	7 USB 2.0 ports (6 via headers, 1 Type A) 2 USB 3.1 Gen1 ports(2 via headers) 6 USB 3.1 Gen2 ports (3 Rears Type A + 1 Rear Type C, 2 via headers)	7 USB 2.0 ports (6 via headers, 1 Type A) 2 USB 3.1 Gen1 ports(2 via headers) 6 USB 3.1 Gen2 ports (3 Rears Type A + 1 Rear Type C, 2 via headers)
Other Onboard I/O Devices	7.1 HD Audio TPM Header & Chip both 6 COM Ports (6 headers)	7.1 HD Audio TPM Header 6 COM Ports (6 headers)	1 Port SuperDOM ALC 888S HD Audio TPM Header & Chip both 4 COM Ports (4 headers)	ALC 888S HD Audio TPM Header & Chip both 4 COM Ports (4 headers)
Manageability	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	NMI, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, 1.2V (VDIMM), 4 fans with tachometer monitoring, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 4 fans with tachometer monitoring, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT	+1.35V, +1.5V, +1.8V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 5 -fan status	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6 -fan status, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT
Thermal Control				
Other Features	ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS	ACPI power management, ATX Power connector, Chassis intrusion header, RoHS, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

\* Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Xeon® D SoC  
Quad 10GbE LAN  
Quad 10GbE LAN  
IPMI



(Flex ATX, 9"W x 7.25"H)

8-Core Denverton  
Quad 10GbE LAN  
Intel® Quick Assist Technology  
IPMI, Intel® Xeon® D SoC



(Flex ATX, 9"W x 7.25"H)

12-Core Denverton  
Quad 10GbE LAN  
Intel® Quick Assist Technology  
IPMI, Intel® Xeon® D SoC



(Flex ATX, 9"W x 7.25"H)

Intel® Xeon® Processor D,  
16 Core  
Dual 10GbE SFP+,  
Dual 10GbE SFP+, IPMI



(Flex ATX, 9"W x 7.25"H)

MODEL	X11SDV-4C-TP8F	X11SDV-8C-TP8F	X11SDV-12C-TP8F	X11SDV-16C-TP8F
Processor†	Intel® Xeon® Processor D-2123IT, CPU TDP supports up to 60W TDP	Intel® Xeon® Processor D-2146NT, CPU TDP support up to 80W TDP	Intel® Xeon® Processor D-2166NT, CPU TDP support up to 85W TDP	Intel® Xeon® Processor D-2183IT, CPU TDP support up to 100W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)
Optimized Chassis	<b>Mini 1U:</b> SC505-203B SC504-203B SC813MFTQ-R400CB SC512F-260 SC512-260B  <b>Mid-Tower:</b> SC721TQ-250B	<b>Mini 1U:</b> SC505-203B SC504-203B SC813MFTQ-R400CB SC512F-260 SC512-260B  <b>Mid-Tower:</b> SC721TQ-250B	<b>Mini 1U:</b> SC505-203B SC504-203B SC813MFTQ-R400CB SC512F-260 SC512-260B  <b>Mid-Tower:</b> SC721TQ-250B	<b>Mini 1U:</b> SC505-203B SC504-203B SC813MFTQ-R400CB SC512F-260 SC512-260B  <b>Mid-Tower:</b> SC721TQ-250B
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz; up to 512GB LRDIMM LRDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz; up to 512GB LRDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x16 1 Mini-PCI-E, 2 PCI-E 3.0 NVMe x4 Internal Port(s) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280 1 M.2 B-Key SATA/PCI-E 3.0 x2, 3042 <b>U.2 Interface:</b> 2 PCI-E 3.0 x4	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 and 1 SATA/PCI-E 3.0 x2 <b>M.2 Form Factor:</b> 2242/2280 <b>M.2 Key:</b> M-Key, B-Key <b>U.2 Interface:</b> 2 PCI-E 3.0 x4, 2 PCI-E 3.0 NVMe x4 Internal Ports	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 and 1 SATA/PCI-E 3.0 x2 <b>M.2 Form Factor:</b> 2242/2280 <b>M.2 Key:</b> M-Key, B-Key <b>U.2 Interface:</b> 2 PCI-E 3.0 x4, 2 PCI-E 3.0 NVMe x4 Internal Ports	1 PCI-E 3.0 x8, 1 PCI-E 3.0 x16 <b>M.2 Interface:</b> 1 PCI-E 3.0 x4 and 1 SATA/PCI-E 3.0 x2 <b>M.2 Form Factor:</b> 2242/2280 <b>M.2 Key:</b> M-Key, B-Key <b>U.2 Interface:</b> 2 PCI-E 3.0 x4, 2 PCI-E 3.0 NVMe x4 Internal Ports
Onboard RAID Controller	SoC controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T	Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T
Onboard VGA	1 VGA D-Sub Connector port, AsPEED AST2500 BMC	1 VGA D-Sub Connector port, AsPEED AST2500 BMC	1 VGA D-Sub Connector port, AsPEED AST2500 BMC	1 VGA D-Sub Connector port, AsPEED AST2500 BMC
USB Ports	2 USB 2.0 ports (2 via headers) 2 USB 3.2 Gen1 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	TPM 2.0 Header 1 COM Port (1 header)	TPM 2.0 Header 1 COM Port (1 header)	TPM 2.0 Header 1 COM Port (1 header)	TPM 2.0 Header 1 COM Port (1 header)
Manageability	IPMI2.0, KVM with dedicated LAN, Watchdog	IPMI2.0, KVM with dedicated LAN, Watchdog	IPMI2.0, KVM with dedicated LAN, Watchdog	IPMI2.0, KVM with dedicated LAN, Watchdog
PC Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, Monitors CPU voltages, System level control	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, Monitors CPU voltages, System level control	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, Monitors CPU voltages, System level control	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, Monitors CPU voltages, System level control
Thermal Control	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS
BIOS	UEFI 128Mb	UEFI 128Mb	UEFI 128Mb	UEFI 128Mb

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

High Performance  
Dual 10GbE, IPMI

Dual 10GbBase-T,  
IPMI

High Performance  
Dual 10GbE, IPMI

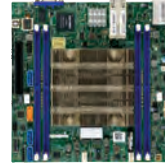
Dual 10GbBase-T,  
IPMI



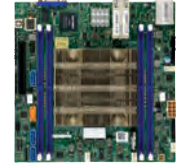
(Mini-ITX, 6.75"W x 6.75"H)



(Mini-ITX, 6.75"W x 6.75"H)



(Mini-ITX, 6.75"W x 6.75"H)



(Mini-ITX, 6.75"W x 6.75"H)

MODEL	X11SDV-4C-TLN2F	X11SDV-8C-TLN2F	X11SDV-12C-TLN2F	X11SDV-16C-TLN2F
Processor†	Intel® Xeon® Processor D-2123IT, CPU TDP support up to 60W TDP	Intel® Xeon® Processor D-2141I, CPU TDP support up to 65W TDP	Intel® Xeon® Processor D-2166NT, CPU TDP support up to 85W TDP	Intel® Xeon® Processor D-2183IT, CPU TDP support up to 100W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)	Mini-ITX, 6.75" x 6.75" (17.15cm x 17.15cm)	Mini-ITX 6.75" x 6.75" (17.15cm x 17.15cm)
Optimized Chassis	Mini 1U: SCe300 SC504-203B SC505-203B	Mini 1U: SCe300 SC504-203B SC505-203B	Mini 1U: SC515-R407	Mini 1U: SC515-R407
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz; up to 512GB ECC LRDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz; up to 512GB ECC LRDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz; up to 512GB ECC LRDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz; up to 512GB ECC LRDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink
Onboard RAID Controller	SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)	SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)	SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)	SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E 3.0 x4 for NVMe)
Onboard LAN	Dual LAN with 10GbBase-T with Intel® X557	Dual LAN with 10GbBase-T with Intel® X557	Dual LAN with 10GbBase-T with Intel® X557	Dual LAN with 10GbBase-T with Intel® X557
Onboard VGA	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC	1 VGA port, Aspeed AST2500 BMC
USB Ports	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	TPM Header	TPM Header	TPM Header	TPM Header
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3-fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT	+1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3-fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT	+1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3-fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT	+1.5V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3-fan status, Memory Voltages, Monitors CPU voltages, Supports system management utility, VBAT
Thermal Control	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Low Power

Low Power

Low Power



(3.5" SBC, 5.7"W x 4.0"H)



(3.5" SBC, 5.7"W x 4.0"H)



(3.5" SBC, 5.7"W x 4.0"H)

MODEL	X11SSN-H X11SSN-H-WOHS	X11SSN-E X11SSN-E-WOHS	X11SSN-L X11SSN-L-WOHS
Processor <sup>†</sup>	7th Generation Intel <sup>®</sup> Core <sup>™</sup> i7-7600U Processor. Single Socket FCBGA1356 supported, CPU TDP support up to 15W TDP	7th Generation Intel <sup>®</sup> Core <sup>™</sup> i5-7300U Processor. Single Socket FCBGA1356 supported, CPU TDP support up to 15W TDP	7th Generation Intel <sup>®</sup> Core <sup>™</sup> i3-7100U Processor. Single Socket FCBGA1356 supported, CPU TDP support up to 15W TDP
Chipset	System on Chip	System on Chip	System on Chip
Form Factor	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Optimized Chassis	Embedded Compact Chassis: SuperChassis E102	Embedded Compact Chassis: SuperChassis E102	Embedded Compact Chassis: SuperChassis E102
Memory Capacity & Slots*	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133 MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133 MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133 MHz, in 2 DIMM slots
Expansion Slots	1 Full size Mini-PCI-E with mSATA(USB 2.0 x1, PCI-E 3.0 x1, SATA 3.0 x1) <b>M.2 Interface:</b> SATA and PCI-E 3.0 x2 and USB 2.0 <b>M.2 Form Factor:</b> 2242, 2280, 3042 <b>M.2 Key:</b> B-Key M.2 2242/3042/2280 B-Key (USB 2.0 x1, PCI-E 3.0 x 2, SATA 3.0 x1)	1 x Full size Mini-PCI-E with mSATA(USB 2.0 x1, PCI-E 3.0 x1, SATA 3.0 x1) <b>M.2 Interface:</b> SATA and PCI-E 3.0 x2 and USB 2.0 <b>M.2 Form Factor:</b> 2242, 2280, 3042 <b>M.2 Key:</b> B-Key M.2 2242/3042/2280 B-Key (USB 2.0 x1, PCI-E 3.0 x 2, SATA 3.0 x1)	1 Full size Mini-PCI-E with mSATA (USB 2.0 x1, PCI-E 3.0 x1, SATA 3.0 x1) <b>M.2 Interface:</b> SATA and PCI-E 3.0 x2 and USB 2.0 <b>M.2 Form Factor:</b> 2242, 2280, 3042 <b>M.2 Key:</b> B-Key M.2 2242/3042/2280 B-Key (USB 2.0 x1, PCI-E 3.0 x 2, SATA 3.0 x1)
Onboard RAID Controller	I-SATA1 (1x SATA 3.0 Port)	I-SATA1 (1x SATA 3.0 Port)	I-SATA1 (1x SATA 3.0 Port)
Onboard LAN	Single LAN with Intel <sup>®</sup> Ethernet Controller I210IT Single LAN with Intel <sup>®</sup> PHY I219LM LAN controller	Single LAN with Intel <sup>®</sup> PHY I219LM LAN controller Single LAN with Intel <sup>®</sup> Ethernet Controller I210IT	Single LAN with Intel <sup>®</sup> PHY I219LM LAN controller Single LAN with Intel <sup>®</sup> Ethernet Controller I210IT
Onboard VGA	1 DP (DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 2.0 (max. resolution up to 4096x2160@60Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel <sup>®</sup> HD Graphics	1 DP (DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 2.0 (max. resolution up to 4096x2160@60Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel <sup>®</sup> HD Graphics	1 DP (DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 2.0 (max. resolution up to 4096x2160@60Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel <sup>®</sup> HD Graphics
USB Ports	4 USB 2.0 ports (4 headers, Type A)) 2 USB 3.0 ports (2 rear) 1 USB 3.1 ports ; 1 USB 3.0 OTG Header	4 USB 2.0 ports (4 headers, Type A)) 2 USB 3.0 ports (2 rear) 1 USB 3.1 ports ; 1 USB 3.0 OTG Header	4 USB 2.0 ports (4 headers, Type A)) 2 USB 3.0 ports (2 rear) 1 USB 3.1 ports ; 1 USB 3.0 OTG Header
Other Onboard I/O Devices	ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 Speaker header 1 System Fan <b>-WOHS:</b> w/o Heatsink	ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 Speaker header 1 System Fan <b>-WOHS:</b> w/o Heatsink	ALC 8885 HD Audio 4 COM Ports (4 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header Mic-in/Headphone-out 1 8-bit GPIO header 1 SMBus header 1 Speaker header 1 System Fan <b>-WOHS:</b> w/o Heatsink
Manageability	AMT, SuperDoctor <sup>®</sup> 5, vPro, Watchdog	SuperDoctor <sup>®</sup> 5, vPro, Watchdog	SuperDoctor <sup>®</sup> 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors for CPU Cores, System level control, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors for CPU Cores, System level control, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors for CPU Cores, System level control, System temperature, VBAT
Thermal Control	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v R/A Type DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v R/A Type DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v R/A Type DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI

<sup>†</sup> Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.



# Embedded

vPro AMT  
Desktop



(uATX 9.6"W x 9.6"H)

Desktop



(uATX 9.6"W x 9.6"H)

vPro AMT



(Mini-ITX 6.7"W x 6.7"H)

vPro AMT



(Mini-ITX 6.7"W x 6.7"H)

MODEL	X11SSQ	X11SSQ-L	X11SSV-Q	X11SSV-LVDS
Processor†	7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 95W	7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 91W	7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 91W	7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 91W
Chipset	Intel® Q170	Intel® H110	Intel® Q170 Express	Intel® Q170 Express
Form Factor	uATX 9.6" x 9.6"	uATX 9.6" x 9.6"	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC825MTQ-R700LPB</li> <li>● SC823MTQ-R700LPB</li> <li>● 2U Heatsink: SNK-P0046A4</li> <li>● SC731i-300B</li> <li>● 2U Heatsink: SNK-P0046A4</li> <li>● SC842i-500B</li> <li>● 2U Heatsink: SNK-P0046A4</li> </ul>	<ul style="list-style-type: none"> <li>● SC825MTQ-R700LPB</li> <li>● SC823MTQ-R700LPB</li> <li>● 2U Heatsink: SNK-P0046A4</li> <li>● SC731i-300B</li> <li>● 2U Heatsink: SNK-P0046A4</li> <li>● SC842i-500B</li> <li>● 2U Heatsink: SNK-P0046A4</li> </ul>	<ul style="list-style-type: none"> <li>● SC101i</li> <li>● SC101iF</li> <li>1U Heatsink: SNK-P0049A4</li> <li>● SC721TQ-250B</li> <li>● SC731i-300B</li> <li>● 2U Heatsink: SNK-P0046A4</li> </ul>	<ul style="list-style-type: none"> <li>● SC101i</li> <li>● SC101iF</li> <li>1U Heatsink: SNK-P0049A4</li> <li>● SC721TQ-250B</li> <li>● SC731i-300B</li> <li>● 2U Heatsink: SNK-P0046A4</li> </ul>
Memory Capacity & Slots*	Up to 64GB Unbuffered Non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 32GB Unbuffered Non-ECC UDIMM, DDR4-2133 MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 2 PCI-E 3.0 x4 (open) 1 PCI-E 3.0 x1 M.2 PCI-E x2 M Key 2242/2260/2280	1 PCI-E 3.0 x16 1 PCI-E 2.0 x4 1 PCI-E 2.0 x1	1 PCI-E 3.0 x16 Mini-PCI-E with mSATA support, M.2 PCI-E 3.0 x4 with SATA support, M Key M.2 Form Factor: 2242, 2280 Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RST Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	1 PCI-E 3.0 x16 Mini-PCI-E with mSATA support, M.2 PCI-E 3.0 x4 with SATA support, M Key M.2 Form Factor: 2242, 2280 Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RST Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT
Onboard RAID Controller	Intel® Q170 controller for 6 SATA3 (6Gb/s) ports; RAID 0,1,5,10;	Intel® H110 controller for 4 SATA3 (6Gb/s) ports	Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RST Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RST Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT
Onboard LAN	Dual 1GbE LAN with Intel® PHY i219LM & i210-AT	1GbE LAN with Intel® PHY i219LM	Single LAN with Intel® Ethernet Controller I210-AT	Single LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 HDMI 1 DP (DisplayPort) 1 DVI-D, 1 eDP (Embedded DisplayPort) Intel® HD Graphics 3 Independent Displays	1 HDMI, 1 DP (DisplayPort), 1 DVI - D, Intel® HD Graphics 2 Independent Displays	1 HDMI port, 1 DP (DisplayPort) port, 1 DVI - I port, 3 Independent Displays, Intel® HD Graphics	1 HDMI port, 1 DP (DisplayPort) port, 1 LVDS port, 3 Independent Displays, Intel® HD Graphics
USB Ports	4 USB 3.0 ports (2 rear + 2 via header) 8 USB 2.0 ports (4 rear + 4 via headers)	4 USB 3.0 ports (2 rear + 2 via header) 6 USB 2.0 ports (2 rear + 4 via headers)	5 USB 2.0 ports (4 via headers, 1 Type A) 6 USB 3.2 Gen1 ports (4 rear + 2 via headers)	5 USB 2.0 ports (4 via headers, 1 Type A) 6 USB 3.2 Gen1 ports (4 rear + 2 via headers)
Other Onboard I/O Devices	1 Port SuperDOM ALC 888S HD Audio PS/2 Combo mouse and keyboard TPM Header 4 COM Ports (headers) Force On mode by jumper and AC recovery	1 Port SuperDOM ALC 888S HD Audio PS/2 Combo mouse and keyboard TPM 2.0 Header 2 COM Ports (2 headers) Force On mode by jumper and AC recovery	2 ports SuperDOM ALC 888S HD Audio TPM Header 2 COM Ports (2 rear) SGPIO Header, SMBus header, GPIO	2 ports SuperDOM ALC 888S HD Audio TPM Header 1 COM Port (1 header) SGPIO Header, SMBus header, GPIO
Manageability	AMT, NMI, SSM, SuperDoctor® 5 vPro, Watchdog	NMI, SSM, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Thermal Control	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors		
Other Features	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, M.2 NGFF connector, System level control, WOL, RST	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, WOL, RST	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Quad 1GbE,  
AMT, vPro, VDI



(Mini-ITX 6.7"W x 6.7"H)

Quad 1GbE,  
AMT, vPro, VDI



(Mini-ITX 6.7"W x 6.7"H)

4-core mITX, 6W SoC  
Quad 1GbE/IPMI



(Mini-ITX 6.7"W x 6.7"H)

MODEL	X11SSV-M4	X11SSV-M4F	X11SBA-F X11SBA-LN4F
<b>Processor†</b>	Intel® Xeon® Processor E3-1515M v5 Single Socket FCBGA1440 supported; QPI up to 8.0GT/s; CPU TDP support 45W	Intel® Xeon® Processor E3-1585 v5 Single Socket FCBGA1440 supported; QPI up to 8.0GT/s; CPU TDP support 65W	Intel® Pentium® Processor N3700 Single Socket FCBGA1170 supported; CPU TDP support 6W
<b>Chipset</b>	Intel® CM236	Intel® C236	System on Chip
<b>Form Factor</b>	Mini-ITX 6.7" x 6.7"	Mini-ITX 6.7" x 6.7"	Mini-ITX 6.7" x 6.7"
<b>Optimized Chassis</b>	<ul style="list-style-type: none"> <li>● SC101iF</li> <li>● SC721TQ-250B</li> </ul>	<ul style="list-style-type: none"> <li>● SC504-203B</li> <li>● SC505-203B</li> </ul>	<ul style="list-style-type: none"> <li>● SC101S</li> <li>● SC101i</li> <li>● SC101iF</li> <li>● SC504-203B</li> <li>● SC505-203B</li> <li>● SC721TQ-250B</li> </ul>
<b>Memory Capacity &amp; Slots*</b>	Up to 32GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2133 MHz, in 2 DIMM slots	Up to 32GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2133 MHz, in 2 DIMM slots	8GB Unbuffered non-ECC SO-DIMM, DDR3-1600 MHz, in 2 DIMM slots
<b>Expansion Slots</b>	1 PCI-E 3.0 x16 Mini PCI-E with mSATA support, M.2 PCI-E 3.0 x4 with SATA support, PCI-E 3.0 x16 slot can bifurcate into two x8s M Key 2242/2280	1 PCI-E 3.0 x16 Mini PCI-E with mSATA support, M.2 PCI-E 3.0 x4 with SATA support, PCI-E 3.0 x16 slot can bifurcate into two x8s M Key 2242/2280	1 PCI-E 2.0 x1 (in x8 slot) 1 Mini-PCI-E with mSATA support
<b>Onboard RAID Controller</b>	Intel® CM236 controller for 4 SATA3 (6Gb/s) ports; RAID 0,1,5,10; Intel® RSTe	Intel® C236 controller for 4 SATA3 (6Gb/s) ports; RAID 0,1,5,10; Intel® RSTe	SoC controller for 2 SATA3 (6Gb/s) ports
<b>Onboard LAN</b>	Single LAN with Intel® PHY I219LM LAN controller; Single LAN with Intel® Ethernet Controller I210-AT; Dual LAN with Intel® Ethernet Controller I350-AM2	Single LAN with Intel® PHY I219LM LAN controller; Single LAN with Intel® Ethernet Controller I210-AT; Dual LAN with Intel® Ethernet Controller I350-AM2	-F: Dual LAN with Intel® Ethernet Controller I210-AT; -LN4F: Quad LAN with Intel® Ethernet Controller I210-AT
<b>Onboard VGA</b>	1 HDMI, 1 DP (DisplayPort), 1 DVI-I 1 Intel® Iris Pro Graphics P580	1 DVI-A, Aspeed AST2400 BMC	1 HDMI, 1 DP (DisplayPort), 1 VGA via Aspeed AST2400 BMC
<b>USB Ports</b>	5 USB 2.0 ports (+ 4 via headers + 1 Type A) 4 USB 3.0 ports (4 rear)	5 USB 2.0 ports (+ 4 via headers + 1 Type A) 4 USB 3.0 ports (4 rear)	7 USB 2.0 ports (2 rear + 4 via headers + 1 Type A) 2 USB 3.0 ports (2 rear)
<b>Other Onboard I/O Devices</b>	2 ports SuperDOM ALC 888S HD Audio TPM 1.2 Header 1 COM Ports (1 rear) COM Port in RJ45 Socket	2 ports SuperDOM ALC 888S HD Audio TPM 1.2 Header 1 COM Ports (1 rear) COM Port in RJ45 Socket	1 Port SuperDOM ALC 888S HD Audio TPM Header 2 COM Ports (2 headers)
<b>Manageability</b>	IPMI 2.0 + KVM with shared LAN (-M4F only); SuperDoctor® 5, Watchdog; AMT, vPro (-M4 only)	IPMI 2.0 + KVM with shared LAN (-M4F only); SuperDoctor® 5, Watchdog; AMT, vPro (-M4 only)	IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog
<b>PC Health Monitoring</b>	+1.8V, +12V, +3.3V, +5V, +5V standby, 3 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, 3 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control
<b>Thermal Control</b>	3 4-pin, Fan speed control, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3 4-pin, Fan speed control, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, System level control, Thermal control tachometer fan connectors	2 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
<b>Other Features</b>	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, System level control, WOL
<b>BIOS</b>	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

vPro AMT, IPMI  
Dual 10GbE, 1U Optimized



(uATX 9.6"W x 9.6"H)

vPro AMT, IPMI  
1U Optimized



(uATX 9.6"W x 9.6"H)

vPro AMT, IPMI  
1U Optimized



(uATX 9.6"W x 9.6"H)

MODEL	X11SSZ-TLN4F	X11SSZ-F	X11SSZ-QF
Processor†	Intel® Xeon® Processor E3-1200 v6/v5 product family, 7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 95W	Intel® Xeon® Processor E3-1200 v6/v5 product family, 7th/th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 95W	7th/6th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor, Single Socket H4 (LGA 1151) supported; CPU TDP support 95W
Chipset	Intel® C236	Intel® C236	Intel® Q170
Form Factor	uATX 9.6" x 9.6"	uATX 9.6" x 9.6"	uATX 9.6" x 9.6"
Memory Capacity & Slots*	64GB Unbuffered ECC/Non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered ECC/Non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	64GB Unbuffered Non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 (in x16 slot) 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x16 (in x16 slot) 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x16 (in x16 slot) 2 PCI-E 3.0 x4 (in x8 slot)
Onboard RAID Controller	Intel® C236 controller for 4 SATA3 (6Gb/s) ports; RAID 0,1,5,10	Intel® C236 controller for 4 SATA3 (6Gb/s) ports; RAID 0,1,5,10	Intel® Q170 controller for 4 SATA3 (6Gb/s) ports; RAID 0,1,5,10
Onboard LAN	Dual 10GbBase-T with X550; 1GbE LAN with Intel® PHY i219LM; 1GbE LAN with Intel® i210-AT	1GbE LAN with Intel® PHY i219LM; 1GbE LAN with Intel® i210-AT	1GbE LAN with Intel® PHY i219LM; 1GbE LAN with Intel® i210-AT
Onboard VGA	2 DP (DisplayPort) 1 DVI-I Intel® HD Graphics 3 Independent Displays 1 Aspeed AST2400 BMC VGA Port	2 DP (DisplayPort) 1 DVI-I Intel® HD Graphics 3 Independent Displays 1 Aspeed AST2400 BMC VGA Port	2 DP (DisplayPort) 1 DVI-I Intel® HD Graphics 3 Independent Displays 1 Aspeed AST2400 BMC VGA port
USB Ports	4 USB 3.0 ports (2 rear + 2 via header) 9 USB 2.0 ports (2 rear + 6 via headers + 1 Type A)	4 USB 3.0 ports (2 rear + 2 via header) 9 USB 2.0 ports (2 rear + 6 via headers + 1 Type A)	4 USB 3.0 ports (2 rear + 2 via header) 9 USB 2.0 ports (2 rear + 6 via headers + 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM 1 SATA DOM power connector ALC 888S HD Audio TPM Header 2 COM Ports (2 headers)	1 Port SuperDOM 1 SATA DOM power connector ALC 888S HD Audio TPM Header 2 COM Ports (2 headers)	1 Port SuperDOM 1 SATA DOM power connector ALC 888S HD Audio TPM Header 2 COM Ports (2 headers)
Manageability	IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5 vPro, Watchdog	IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5 vPro, Watchdog	IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5 vPro, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control
Thermal Control	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, System level control, UID, VHD, WOL. RSTe	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, System level control, UID, VHD, WOL. RSTe	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, System level control, UID, WOL. RSTe
BIOS	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Quad 1GbE LAN  
Quad Core

Quad 1GbE LAN  
Quad Core



MODEL	A3SEV-4C-LN4	A3SEV-2C-LN4
Processor†	Intel® Atom® Processor x6425E Single Socket FCBGA-1493 supported, CPU TDP supports up to 12W TDP	Intel® Atom® Processor x6211E. Socket FCBGA-1493 supported, CPU TDP supports up to 6W TDP
Chipset	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Memory Capacity & Slots*	Up to 32GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-3200MHz, in 2 DIMM slots	Up to 32GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-3200MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 X2 (in x8 slot) 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 3042/2280 1 M.2 E-Key PCI-E 3.0 x1/USB 2.0, 2230	1 PCI-E 3.0 X2 (in x8 slot) 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 3042/2280 1 M.2 E-Key PCI-E 3.0 x1/USB 2.0, 2230
Onboard RAID Controller		
Onboard LAN	Single LAN with Intel® Ethernet Controller I210IT ONLY i210 support PXE 3 LAN with 1GbE with Marvell® 88E1512	Single LAN with Intel® Ethernet Controller I210IT ONLY i210 support PXE 3 LAN with 1GbE with Marvell® 88E1512
Onboard VGA	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, 1 eDP (Embedded DisplayPort) port, Supports 3 independent displays, Intel® HD Graphics	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, 1 eDP (Embedded DisplayPort) port, Supports 3 independent displays, Intel® HD Graphics
USB Ports	6 USB 2.0 ports (2 rear + 4 via headers) 2 USB 3.1 Gen2 ports (2 Rears Type A)	6 USB 2.0 ports (2 rear + 4 via headers) 2 USB 3.1 Gen2 ports (2 Rears Type A)
Other Onboard I/O Devices	1 Port SuperDOM ALC 8885 HD Audio TPM 2.0 Header & Chip both 4 COM Ports (4 headers); Supports RS232/422/485	1 Port SuperDOM ALC 8885 HD Audio TPM 2.0 Header & Chip both 4 COM Ports (4 headers); Supports RS232/422/485
Manageability	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Memory Voltages, System level control, System temperature, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Memory Voltages, System level control, System temperature, VBAT
Thermal Control		
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, RoHS, System level control, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, RoHS, System level control, WOL
BIOS	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

4-Core Denverton  
Eight 1GbE RJ45  
Intel® Quick Assist Technology



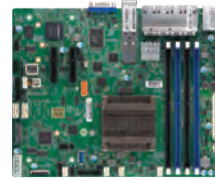
(Flex ATX 9.0"W x 7.25"H)

8-Core Denverton  
Eight 1GbE RJ45  
Intel® Quick Assist Technology



(Flex ATX 9.0"W x 7.25"H)

4-Core Denverton  
Eight 1GbE RJ45  
Dual 1GbE SFP  
Intel® Quick Assist Technology



(Flex ATX 9.0"W x 7.25"H)

8-Core Denverton  
Eight 1GbE RJ45  
Dual 1GbE SFP  
Intel® Quick Assist Technology



(Flex ATX 9.0"W x 7.25"H)

MODEL	A2SDV-4C-LN8F	A2SDV-8C-LN8F	A2SDV-4C-LN10PF	A2SDV-8C-LN10PF
Processor	Intel® Atom® Processor C3558. Single Socket FCBGA1310 supported, CPU TDP support up to 16W TDP	Intel® Atom® Processor C3758. Single Socket FCBGA1310 supported, CPU TDP support up to 25W TDP	Intel® Atom® Processor C3558. Single Socket FCBGA1310 supported, CPU TDP support up to 16W TDP	Intel® Atom® Processor C3758. Single Socket FCBGA1310 supported, CPU TDP support up to 25W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX, 9" x 7.25" (22.86cm x 18.42cm)
Optimized Chassis	Mini 1U: ● SCe300-LED SC504-203B SC505-203B	Mini 1U: ● SCe300-LED SC504-203B SC505-203B	Mini 1U: ● SCe300-LED SC504-203B SC505-203B	Mini 1U: ● SCe300-LED SC504-203B SC505-203B
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x2 (in x4 slot) Option for Slot 6 or Slot 7 <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x2/ USB 3.0 <b>M.2 Form Factor:</b> 3042, 2280 <b>M.2 Key:</b> B-Key	1 PCI-E 3.0 x4 Option for Slot 6 or Slot 7 1 M.2 M-Key SATA/PCI-E 3.0 x2, 2242/2280 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 3042/2280	1 PCI-E 3.0 up to x2 (in x4 slot) *Number of PCI-E lane (option for Slot 6 or Slot 7) is configurable in BIOS: 0 or 2. PCI-E expansion slot is disabled when number of SATA ports is set to 3. <b>M.2 Interface:</b> 1 SATA/PCI-E 3.0 x2/ USB 3.0 <b>M.2 Form Factor:</b> 3042, 2280 <b>M.2 Key:</b> B-Key	1 PCI-E 3.0 x4 Option for Slot 6 or Slot 7 1 M.2 M-Key SATA/PCI-E 3.0 x2, 2242/2280 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 3042/2280
Onboard RAID Controller	SoC controller for 3 SATA3 (6 Gbps) ports;	SoC controller for 5 SATA3 (6 Gbps) ports;	Up to 3 SATA3(6 Gbps) ports via SoC. *Number of SATA ports is configurable in BIOS: 1 or 3. One SATA port is available when PCI-E x2 expansion slot is enabled.	SoC controller for 5 SATA3 (6 Gbps) ports;
Onboard LAN	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller I350-AM4	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller I350-AM4	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with Intel® I210-IS 1G SFP	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller I350-AM4 Dual LAN with Intel® I210-IS 1G SFP
Onboard VGA	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	2 USB 2.0 ports (2 headers, Type A) 3 USB 3.0 ports (2 rear + 1 Type A)	2 USB 2.0 ports (2 headers, Type A) 3 USB 3.0 ports (2 rear + 1 Type A)	2 USB 2.0 ports (2 headers, Type A) 3 USB 3.0 ports (2 rear + 1 Type A)	2 USB 2.0 ports (2 headers, Type A) 3 USB 3.0 ports (2 rear + 1 Type A)
Other Onboard I/O Devices	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)
Manageability	IPMI2.0, NMI, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SuperDoctor® 5, Watchdog	IPMI2.0, NMI, SuperDoctor® 5, Watchdog
PC Health Monitoring	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

<sup>1</sup> Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.



# Embedded

16-Core Denverton  
2 10GbBaseT, 2 10Gb SFP+  
Intel® Quick Assist Technology  
IPMI



(Mini-ITX, 6.7"W x 6.7"H)

16-Core Denverton  
Quad 10GbE LAN  
Intel® Quick Assist Technology  
IPMI



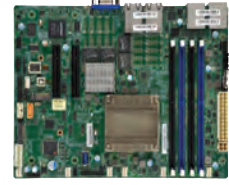
(Flex ATX 9.0"W x 7.25"H)

12-Core Denverton  
Quad 10GbE LAN  
Intel® Quick Assist Technology  
IPMI



(Flex ATX 9.0"W x 7.25"H)

8-Core Denverton  
Quad 10GbE LAN  
Intel® Quick Assist Technology  
IPMI



(Flex ATX 9.0"W x 7.25"H)

MODEL	A25Di-16C-TP8F	A25DV-16C-TLN5F	A25DV-12C+TLN5F	A25DV-8C-TLN5F
Processor†	Intel® Atom® Processor C3958. Single Socket FCBGA1310 supported, CPU TDP support 31W TDP	Intel® Atom® Processor C3958. Single Socket FCBGA1310 supported, CPU TDP support up to 31W TDP	Intel® Atom® Processor C3858. Single Socket FCBGA1310 supported, CPU TDP support up to 25W TDP	Intel® Atom® Processor C3708. Single Socket FCBGA1310 supported, CPU TDP support up to 17W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Flex ATX 9.0" x 7.25", 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX 9.0" x 7.25", 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX 9.0" x 7.25", 9" x 7.25" (22.86cm x 18.42cm)
Optimized Chassis	<b>Mini 1U:</b> e300 504-203B 505-203B	<b>Mini 1U:</b> e300 504-203B 505-203B	<b>Mini 1U:</b> e300 504-203B 505-203B	<b>Mini 1U:</b> e300 504-203B 505-203B
Memory Capacity & Slots*	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x4 1 mini-PCI-E with mSATA supports (half card only) <b>M.2 Interface:</b> PCI-E 3.0 x4 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x8 Option for Slot 6 or Slot 7 1 M-Key and 1 B-Key M-Key Form Factor: 2242/2280 M-Key Interface: PCI-E 3.0 x2/SATA B-Key Form Factor: 3042/2280 B-Key Interface: PCI-E 3.0 x2/SATA/USB3	1 PCI-E 3.0 x8 Option for Slot 6 or Slot 7 1 M-Key and 1 B-Key M-Key Form Factor: 2242/2280 M-Key Interface: PCI-E 3.0 x2/SATA B-Key Form Factor: 3042/2280 B-Key Interface: PCI-E 3.0 x2/SATA/USB3	1 PCI-E 3.0 x8 Option for Slot 6 or Slot 7 1 M-Key and 1 B-Key M-Key Form Factor: 2242/2280 M-Key Interface: PCI-E 3.0 x2/SATA B-Key Form Factor: 3042/2280 B-Key Interface: PCI-E 3.0 x2/SATA/USB3
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;
Onboard LAN	Quad LAN with Intel® C3000 SoC 2 10GbBaseT, 2 10Gb SFP+ Quad LAN with Intel® Ethernet Controller I350-AM4 1GbE	Quad LAN with 10GbBase-T with Intel® X557 Single LAN with Intel® i210 Gigabit Ethernet Controller	Quad LAN with 10GbBase-T with Intel® X557 Single LAN with Intel® i210 Gigabit Ethernet Controller	Quad LAN with 10GbBase-T with Intel® X557 Single LAN with Intel® i210 Gigabit Ethernet Controller
Onboard VGA	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (4 headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A) 5 USB 3.0 ports (4 rear + 1 Type A)	2 USB 2.0 ports (2 headers, Type A) 5 USB 3.0 ports (4 rear + 1 Type A)	2 USB 2.0 ports (2 headers, Type A) 5 USB 3.0 ports (4 rear + 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header) 1 COM Port in RJ45 Socket	TPM Header 1 COM Port (1 header) 1 COM Port in RJ45 Socket	TPM Header 1 COM Port (1 header) 1 COM Port in RJ45 Socket
Manageability	IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	IPMI2.0, NMI, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, NMI, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, NMI, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
PC Health Monitoring	4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	6-fan status, 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6-fan status, 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6-fan status, 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Thermal Control	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

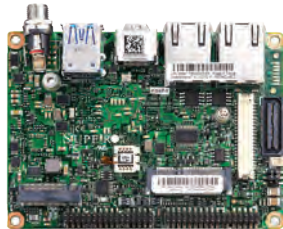
# Embedded

Low Power

Low Power

Low Power

Low Power



(Pico-ITX 2.5" SBC, 4"H x 2.83"H)



(Pico-ITX 2.5" SBC, 3.9"H x 2.8"H)



(Pico-ITX 2.5" SBC, 3.9"H x 2.8"H)



(Pico-ITX 2.5" SBC, 4"H x 2.83"H)

MODEL	A2SAP-L	A2SAP-L1	A2SAP-E	
Processor†	Intel® Atom® Processor E3940; up to 9.5W TDP	Intel® Atom® Processor E3930; up to 6.5W TDP	Intel® Atom® Processor E3940; up to 9.5W TDP	
Chipset	System on Chip	System on Chip	System on Chip	
Form Factor	Pico-ITX 2.5" SBC, 4" x 2.83" (10.16cm x 7.19cm)	Pico-ITX 2.5" SBC, 3.9" x 2.8" (9.91cm x 7.11cm)	Pico-ITX 2.5" SBC, 4" x 2.83" (10.16cm x 7.19cm)	
Optimized Chassis	Mini 1U: SCE50			
Memory Capacity & Slots*	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot	
Expansion Slots	1 Half size Mini-PCI-E (USB 2.0 x1, PCI-E 2.0 x1) 1 EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SATA3, SMBus, 12Vsb 2A, 5Vsb 2.8A) <b>M.2 Interface:</b> SATA and PCI-E 2.0 x1 and USB 2.0 <b>M.2 Form Factor:</b> 2242, 3042 <b>M.2 Key:</b> B-Key 1 M.2 2242/3042 B-Key (USB 2.0 x1, PCI-E 2.0 x1, SATA 3.0 x1)	1 Half size Mini-PCI-E (USB 2.0 x1, PCI-E 2.0 x1) 1 EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SMBus, 12Vsb 2A, 5Vsb 2.8A) (Note:A2SAP-E/-L does NOT support SATA signal) <b>M.2 Interface:</b> SATA and PCI-E 2.0 x1 and USB 2.0 <b>M.2 Form Factor:</b> 3042, 2242 <b>M.2 Key:</b> B-Key 1 M.2 2242/3042 B-Key (USB 2.0 x1, PCI-E 2.0 x1, SATA 3.0 x1)	1 Half size Mini-PCI-E (USB2.0 x 1, PCI-E Gen2 x 1) <b>M.2 Interface:</b> SATA and PCI-E 2.0 x1 and USB 2.0 <b>M.2 Form Factor:</b> 3042, 2242 <b>M.2 Key:</b> B-Key 1 M.2 2242/3042 B-Key (USB2.0 x 1, PCI-E Gen2 x 1, SATA Gen3 x 1)	1 Half size Mini-PCI-E (USB 2.0 x1, PCI-E 2.0 x1) 1 EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SATA3, SMBus, 12Vsb 2A, 5Vsb 2.8A) (Note:A2SAP-E/-L does NOT support SATA signal) <b>M.2 Interface:</b> SATA and PCI-E 2.0 x1 and USB 2.0 <b>M.2 Form Factor:</b> 3042, 2242 <b>M.2 Key:</b> B-Key 1 M.2 2242/3042 B-Key (USB 2.0 x1, PCI-E 2.0 x1, SATA 3.0 x1)
Onboard RAID Controller	N/A	SoC controller for 1 SATA3 (6 Gbps) ports;	SoC controller for 1 SATA3 (6 Gbps) ports;	
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210IT	Dual LAN with Intel® Ethernet Controller I210IT	Dual LAN with Intel® Ethernet Controller I210IT	
Onboard VGA	1 LVDS port, 1 48-bit LVDS port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI(max. resolution up to 3840x2160@30Hz), Intel® HD Graphics	1 LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI(max. resolution up to 3840x2160@30Hz), Intel® HD Graphics	1 LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI(max. resolution up to 3840x2160@30Hz), Intel® HD Graphics	
USB Ports	2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 headers, Type A)) 2 USB 3.0 ports (2 rear)	4 USB 2.0 ports (4 via headers) 2 USB 3.2 Gen1 ports (2 via headers)	
Other Onboard I/O Devices	ALC 8885 HD Audio 32 pin Connector A (2x16-Pin, 2.0mm pitch); 2 RS232/422/485, HD AUDIO Mic-in /Headphone-out (Note:Audio only support 0~60C) 34 pin Connector B (2x17-Pin, 2.0mm pitch); Power/Reset button, HDD/Power LED, 8-bit GPIO, 2 USB 2.0 1 x SMBus and 5V/1A SATA Power box header 1 x 12V DC Jack power input connector	ALC 8885 HD Audio 2 COM Ports (2 headers); RS232/422/485 1 HD Audio header (Mic-in/Headphone-out) (Note:Audio only support 0C~60C) 1 8-bit GPIO header 1 SMBus/5V SATA Power box header 1 2x4-Pin 12V DC-IN power input box header(2.0mm pitch) 1 EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SMBus, 12Vsb 2A, 5Vsb 2.8A) (Note:A2SAP-E/-L does NOT support SATA signal)	ALC 8885 HD Audio 2 COM Ports (2 headers); 2 S232/422/485 1 HD Audio header (Mic-in/Headphone-out) (Note:Audio only support 0~60C) 1 8-bit GPIO header 1 SMBus and 5V/1A SATA Power box header 1 2x4-Pin 12V DC-IN power input box header (2.0mm pitch)	ALC 8885 HD Audio 2 COM Ports (2 headers); 2 RS232/422/485 1 HD Audio header (Mic-in/Headphone-out) (Note:Audio only support 0~60C) 1 8-bit GPIO header 1 SMBus and 5V/1A SATA Power box header 1 2x4-Pin 12V DC-IN power input box header (2.0mm pitch) 1 EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SMBus, 12Vsb 2A, 5Vsb 2.8A) (Note:A2SAP-E/-L does NOT support SATA signal)
Manageability	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, 3.3V standby, Memory Voltages, System level control, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, 3.3V standby, Memory Voltages, System level control, System temperature, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, 3.3V standby, Memory Voltages, System level control, System temperature, VBAT, VCGI	
PC Health Monitoring	N/A	N/A	N/A	
Thermal Control	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL;	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL;	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL;	
Other Features	-30°C to 75°C Operating Temperature, +12V DC Input AMI UEFI	-30°C to 60°C Operating Temperature, +12V DC Input AMI UEFI	-30°C to 75°C Operating Temperature, +12V DC Input AMI UEFI	
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

16-Core Denverton  
Quad 1GbE LAN  
IPMI



(Mini-ITX 6.7"W x 6.7"H)

12-Core Denverton  
Intel® Quick Assist Technology  
Quad 1GbE LAN  
IPMI



(Mini-ITX 6.7"W x 6.7"H)

8-Core Denverton  
Intel® Quick Assist Technology  
Quad 1GbE LAN  
IPMI



(Mini-ITX 6.7"W x 6.7"H)

4-Core Denverton  
Quad 1GbE LAN  
IPMI



(Mini-ITX 6.7"W x 6.7"H)

2-Core Denverton  
Quad 1GbE LAN  
IPMI



(Mini-ITX 6.7"W x 6.7"H)

MODEL	A25Di-16C-HLN4F A25Di-16C+-HLN4F	A25Di-12C-HLN4F	A25Di-8C-HLN4F A25Di-8C+-HLN4F	A25Di-4C-HLN4F	A25Di-2C-HLN4F
Processor†	Intel® Atom® Processor C3955. Single Socket FCBGA1310 supported, CPU TDP support up to 32W TDP	Intel® Atom® Processor C3858. Single Socket FCBGA1310 supported, CPU TDP support up to 25W TDP	Intel® Atom® Processor C3758. Single Socket FCBGA1310 supported, CPU TDP support up to 25W TDP	Intel® Atom® Processor C3558. Single Socket FCBGA1310 supported, CPU TDP support up to 16W TDP	Intel® Atom® Processor C3388. Single Socket FCBGA1310 supported, CPU TDP support up to 9W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)
Optimized Chassis	SCe300 SC504-203B SC505-203B	SCe300 SC504-203B SC505-203B	SCe300 SC504-203B SC505-203B	SC101F SC300 SCe300LED	SC504-203B SC505-203B SC721TQ-250B
Memory Capacity & Slots*	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133 MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots 1 PCI-E 3.0 up to x4 (in x4 slot) *Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4.	Up to 128GB Registered ECC RDIMM, DDR4-1866 MHz Or 32GB Unbuffered ECC/non-ECC UDIMM, DDR4-1866 MHz, in 2 DIMM slots 1 PCI-E 3.0 up to x4 (in x4 slot) *Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4. Total combined PCI-E lanes and SATA ports is up to 8.
Expansion Slots	1 PCI-E 3.0 x4 <b>M.2 Interface:</b> PCI-E 3.0 x2 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x4 <b>M.2 Interface:</b> PCI-E 3.0 x2 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key	1 PCI-E 3.0 x4 <b>M.2 Interface:</b> PCI-E 3.0 x2 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key	Total combined PCI-E lanes and SATA ports is up to 8. <b>M.2 Interface:</b> PCI-E 3.0 x2 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key Up to 8 SATA3(6 Gbps) ports via SoC. *Number of SATA ports is configurable via BIOS setup: 4, 6, or 8. Total combined PCI-E lanes and SATA ports is up to 8.	*Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4. Total combined PCI-E lanes and SATA ports is up to 8.
Onboard RAID Controller	SoC controller for 12 SATA3 (6 Gbps) ports;	SoC controller for 12 SATA3 (6 Gbps) ports;	SoC controller for 12 SATA3 (6 Gbps) ports;	SoC controller for 12 SATA3 (6 Gbps) ports via SoC. *Number of SATA ports is configurable via BIOS setup: 4, 6, or 8. Total combined PCI-E lanes and SATA ports is up to 8.	Up to 8 SATA3(6 Gbps) ports via SoC. *Number of SATA ports is configurable via BIOS setup: 4, 6, or 8. Total combined PCI-E lanes and SATA ports is up to 8.
Onboard LAN	Quad LAN with Intel® C3000 SoC 1GbE	Quad LAN with Intel® C3000 SoC 1GbE	Quad LAN with Intel® C3000 SoC 1GbE	Quad LAN with Intel® C3000 SoC 1GbE	Quad LAN with Intel® C3000 SoC 1GbE
Onboard VGA	1 VGA port	1 VGA port	1 VGA port	1 VGA port	1 VGA port
USB Ports	Aspeed AST2400 BMC 4 USB 2.0 ports (2 rear + 2 headers) 1 USB 3.0 ports (+ 1 Type A) 1 Port SuperDOM	Aspeed AST2400 BMC 4 USB 2.0 ports (2 rear + 2 headers) 1 USB 3.0 ports (+ 1 Type A) 1 Port SuperDOM	Aspeed AST2400 BMC 4 USB 2.0 ports (2 rear + 2 headers) 1 USB 3.0 ports (+ 1 Type A) 1 Port SuperDOM	Aspeed AST2400 BMC 4 USB 2.0 ports (2 rear + 2 headers) 1 USB 3.0 ports (+ 1 Type A) 1 Port SuperDOM	Aspeed AST2400 BMC 4 USB 2.0 ports (2 rear + 2 headers) 1 USB 3.0 ports (+ 1 Type A) 1 Port SuperDOM
Other Onboard I/O Devices	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)	TPM Header 1 COM Port (1 header)
Manageability	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
PC Health Monitoring	Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT	Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
Thermal Control	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

# Embedded

Denverton  
12-Core, Dual/Quad 10GbE LAN,  
Intel® QAT, IPMI

Denverton  
12-Core, Dual/Quad 10GbE LAN,  
Intel® QAT, IPMI

Denverton  
8/16-Core, Quad 10GbE LAN,  
Intel® QAT, IPMI

Denverton  
8/16-Core, Quad 10GbE LAN,  
Intel® QAT, IPMI



MODEL	A2SDi-TP8F	A2SDi-LN4F	A2SDi-H-TP4F	A2SDi-H-TF
Processor†	Intel® Atom™ Processor C3858; FCBGA1310 supported, CPU TDP support 25W	Intel® Atom™ Processor C3850; Single Socket FCBGA1310 supported, CPU TDP support 25W	Intel® Atom™ Processor C3958, 25W; Single Socket FCBGA1310 supported	Intel® Atom™ Processor C3758, 31W; Single Socket FCBGA1310 supported
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Memory Capacity & Slots*	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x4 1 miniPCI-E with mSATA supports (half card only) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 1 miniPCI-E with mSATA supports (half card only) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 M.2 Interface: PCI-E 3.0 x2 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 M.2 Interface: PCI-E 3.0 x2 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports;	SoC controller for 4 SATA3 (6 Gbps) ports;	SoC controller for 12 SATA3 (6 Gbps) ports; 4 SATA3 ports, 2 MiniSAS HD ports	SoC controller for 12 SATA3 (6 Gbps) ports; 4 SATA3 ports, 2 MiniSAS HD ports
Onboard LAN	-TP8F: Quad LAN with Intel® C3000 SoC 2 10G BaseT, 2 10Gb SFP+	-LN4F: Quad LAN with Intel® Ethernet Controller i350-AM4 GbE	-TP4F: Quad LAN with Intel® C3000 SoC 2 10G BaseT, 2 10Gb SFP+	-TF: 2 10Gb SFP+
Onboard VGA	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (4 headers), 2 USB 3.0 ports (2 rear)	4 USB 2.0 ports (4 headers), 2 USB 3.0 ports (2 rear)	4 USB 2.0 ports (2 rear + 2 headers), 1 USB 3.0 ports (+ 1 Type A)	4 USB 2.0 ports (2 rear + 2 headers), 1 USB 3.0 ports (+ 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),
Manageability	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI
Thermal Control	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI



# Embedded

Embedded

Embedded

Embedded

Embedded



(Mini-ITX 6.7"W x 6.7"H)



(Mini-ITX 6.7"W x 6.7"H)



(Mini-ITX 6.7"W x 6.7"H)



(Mini-ITX 6.7"W x 6.7"H)

MODEL	A2SAV	A2SAV-L	A2SAV-2C-L	X11SAA
Processor <sup>†</sup>	Intel® Atom™ Processor E3940. Single Socket FCBGA1296 supported, CPU TDP support up to 9W TDP	Intel® Atom™ Processor E3940. Single Socket FCBGA1296 supported, CPU TDP support up to 9W TDP	Intel® Atom™ Processor E3930. Socket FCBGA1296 supported	Intel® Pentium™ Processor N4200. Single Socket FCBGA1296 supported, CPU TDP support up to 6W TDP
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Optimized Chassis	<ul style="list-style-type: none"> <li>SC101S</li> <li>SC101i</li> <li>SC101iF</li> </ul>	<ul style="list-style-type: none"> <li>SC101S</li> <li>SC101i</li> <li>SC101iF</li> </ul>	<ul style="list-style-type: none"> <li>SC101S</li> <li>SC101i</li> <li>SC101iF</li> </ul>	<ul style="list-style-type: none"> <li>SC101S</li> <li>SC101i</li> <li>SC101iF</li> </ul>
Memory Capacity & Slots*	Up to, DDR3-1866 MHz, in 1 DIMM slot Up to 8GB 1866 MHz DDR3L Non-ECC SO-DIMM in 1 socket	Up to, DDR3-1866 MHz, in 1 DIMM slot Up to 8GB 1866 MHz DDR3L Non-ECC SO-DIMM in 1 socket	Up to 8GB 1866 MHz DDR3L Non-ECC SO-DIMM in 1 socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot 1 PCI-E 2.0 x2 (in x8 slot)
Expansion Slots	1 PCI-E 2.0 x2 (in x8 slot) 1x Mini-PCI-E with mSATA <b>M.2 Form Factor:</b> 2242, 2280	1 PCI-E 2.0 x2 (in x8 slot) <b>M.2 Form Factor:</b> 2242, 2280	1 PCI-E 2.0 x2 (in x8 slot) <b>M.2 Form Factor:</b> 2242, 2280	1x Mini-PCI-E with mSATA <b>M.2 Interface:</b> PCI-E 2.0 x2 and SATA <b>M.2 Form Factor:</b> 2242, 2280 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,10 SoC controller for 2 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;	Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,10 SoC controller for 2 SATA3 (6 Gbps) ports;
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210IT	Dual LAN with Intel® Ethernet Controller I210IT	Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, Intel® HD Graphics	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, Intel® HD Graphics	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, Intel® HD Graphics	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, Intel® HD Graphics
USB Ports	8 USB 2.0 ports (2 rear + 5 headers + 1 Type A) 2 USB 3.0 ports (2 rear)	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, Intel® HD Graphics	4 USB 2.0 ports (2 rear + 2 headers) 2 USB 3.0 ports (2 rear)	8 USB 2.0 ports (2 rear + 5 headers + 1 Type A) 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	1 Port SuperDOM ALC 8885 HD Audio 3 COM Ports (1 rear, 2 headers) 1x COM in RJ45, 1X COM in RS232, and 1X COM in RS485.	1 Port SuperDOM 3 COM Ports (1 rear, 2 headers) 1x COM in RJ45, 1X COM in RS232, and 1X COM in RS485.	1 Port SuperDOM 3 COM Ports (1 rear, 2 headers) 1x COM in RJ45, 1X COM in RS232, and 1X COM in RS485.	1 Port SuperDOM ALC 8885 HD Audio TPM Header 3 COM Ports (1 rear, 2 headers) 1x COM in RJ45, 1X COM in RS232, and 1X COM in RS485.
Manageability	SuperDoctor™ 5, Watchdog	SuperDoctor™ 5, Watchdog	SuperDoctor™ 5, Watchdog	SuperDoctor™ 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, Monitors CPU voltages, System level control	+12V, +5V, +5V standby	+12V, +5V, +5V standby	+1.8V, +12V, +3.3V, +5V, +5V standby, Monitors CPU voltages, System level control
Thermal Control	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

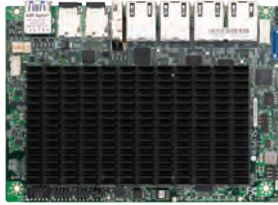
<sup>†</sup> Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.



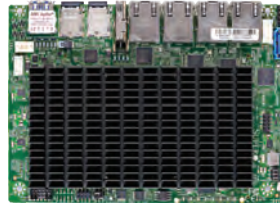
# Embedded

Low Power



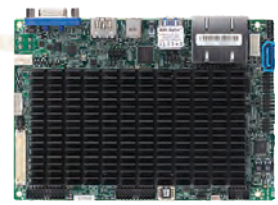
(3.5" SBC, 5.866" x 4.17")

Low Power



(3.5" SBC, 5.87" x 4.17")

Low Power



(3.5" SBC, 5.7" x 4.0")

MODEL	A2SAN-LN4-E	A2SAN-LN4-C	X11SAN X11SAN-WOHS
Processor†	Intel® Atom® Processor E3940; up to 9.5W TDP	Intel® Celeron® Processor J3455; up to 10W TDP	Intel® Pentium™ Processor N4200; up to 6W TDP
Chipset	System on Chip	System on Chip	System on Chip
Form Factor	3.5" SBC, 5.866" x 4.17" (14.9cm x 10.6cm)	3.5" SBC, 5.87" x 4.17" (14.9cm x 10.6cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Memory Capacity & Slots*	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slot
Expansion Slots	M.2 Key: B-Key, E-Key 1 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder (support SATA upon request) 2 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder 1 M.2 2230 E-Key (PCI-E 2.0 x1/USB2)	M.2 Key: B-Key, E-Key 1 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder (support SATA upon request) 2 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder 1 M.2 2230 E-Key (PCI-E 2.0 x1/USB2)	1 Full size Mini-PCI-E (USB2.0 1, PCI-E Gen2 x 1) 1 M.2 2280 B-Key (PCI-E Gen2 x 1, SATA x 1) M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key
Onboard RAID Controller	SoC controller for 1 SATA3 (6 Gbps) ports;	SoC controller for 1 SATA3 (6 Gbps) ports;	SoC controller for 1 SATA3 (6 Gbps) ports;
Onboard LAN	Quad LAN with Intel® Ethernet Controller I210IT	Quad LAN with Intel® Ethernet Controller I211-AT	Dual LAN with Intel® Ethernet Controller I210-AT
Onboard VGA	1 HDMI port, Intel® HD Graphics	1 HDMI port, Intel® HD Graphics	1 VGA port, 1 48-bit LVDS port, 1 HDMI port, Intel® HD Graphics
USB Ports	2 USB 2.0 ports (2 via headers) 2 USB 3.2 Gen1 ports (2 rear)	2 USB 2.0 ports (2 via headers) 2 USB 3.2 Gen1 ports (2 rear)	4 USB 2.0 ports (4 via headers) 2 USB 3.2 Gen1 ports (2 rear) 1 USB 3.2 Gen2 ports ALC 888S HD Audio TPM 2.0 Chip 4 COM Ports (2 headers); (2 RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header (Mic-in/headphone-Out)(Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 Panel backlight power header 1 Speaker 1 system Fan
Other Onboard I/O Devices	1 COM Port (1 header); (1 x RS232) 1 8-bit GPIO header 1 SMBus header 1 System Fan 4 onboard M.2 active LED 4 onboard GbE LAN active LED	1 COM Port (1 header); (1 x RS232) 1 SMBus header 1 System Fan 4 onboard M.2 active LED 4 onboard GbE LAN active LED	
Manageability	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog -WOHS: w/o Heatsink
PC Health Monitoring	+1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	+1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	+1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI
Thermal Control			
Other Features	8-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature	8-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature
BIOS	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Low Power

Low Power

Low Power

IoT Gateway  
Intel® Quark™ SoC X1021



(5.7"W x 4.0"H)



(5.7"W x 4.0"H)



(5.7"W x 4.0"H)



(4.1"W x 4.0"H)

MODEL	A2SAN-H	A2SAN-H-WOHS	A2SAN-E(-WOHS) A2SAN-L(-WOHS)	A1SQN A1SQN-E
Processor†	Intel® Atom® Processor E3940; up to 9.5W TDP	Intel® Atom® Processor E3940; up to 9.5W TDP	-E: Intel® Atom® Processor E3940; up to 9.5W TDP -L: Intel® Atom® Processor E3930; up to 6.5W TDP	Intel® Quark™ SoC X1021 Single Socket FCBGA393; CPU TDP support up to 2.2W
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	Proprietary 4.1" x 4.0"
Optimized Chassis	Embedded Compact Chassis: ● SCE101	Embedded Compact Chassis: ● SCE101	Embedded Compact Chassis: ● SCE101	Embedded Compact Chassis: ● SCE101
Memory Capacity & Slots*	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot 1 Full size Mini-PCI-E (USB 2.0 x1, PCI-E 2.0 x1) 1 M.2 2280 B-Key (PCI-E 2.0 x1, SATA x1)	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slot 1 x Full size Mini-PCI-E (USB2.0 x 1, PCI-E Gen2 x 1) 1 x M.2 2280 B-Key for SATA or PCI-E SSD (2242/3042 B-key M.2 module is supported by extender bracket)	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866 MHz, in 1 DIMM slot 1 Full size Mini-PCI-E (USB 2.0 x1, PCI-E 2.0 x1) 1 M.2 2280 B-Key (PCI-E 2.0 x1, SATA x1)	512MB DDR3 ECC on board 2 Mini-PCI-E slots
Expansion Slots	M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key	M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key	M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key	
Onboard RAID Controller	SoC controller for 1 SATA3 (6 Gbps) ports;	SoC controller for 1 SATA3 (6 Gbps) ports;	SoC controller for 1 SATA3 (6 Gbps) ports;	N/A
Onboard LAN	Dual LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® Ethernet Controller I210IT		
Onboard VGA	1 VGA port, 1 48-bit LVDS port, 1 HDMI port, Intel® HD Graphics	1 VGA port, 1 48-bit LVDS port, 1 HDMI port, Intel® HD Graphics	1 VGA port, 1 48-bit LVDS port, 1 HDMI port, Intel® HD Graphics	N/A
USB Ports	4 USB 2.0 ports (4 via headers, Type A) 2 USB 3.0 ports (2 rear) 1 USB 3.1 ports (Type-C)	4 USB 2.0 ports (4 via headers) 2 USB 3.2 Gen1 ports (2 rear)	4 USB 2.0 ports (4 via headers, Type A) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (2 rear + ) Device & Host
Other Onboard I/O Devices	ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (2 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header (Mic-in/Headphone-Out) 1 8-bit GPIO header 1 SMBus header 1 Panel backlight power header 1 Speaker 1 System Fan	ALC 8885 HD Audio TPM 2.0 Chip 6 COM Ports (3 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 HD Audio header (Mic-in/Headphone-Out) 1 8-bit GPIO header 1 SMBus header 1 Panel backlight power header 1 Speaker 1 System Fan	ALC 8885 HD Audio TPM 2.0 Chip 4 COM Ports (2 headers); (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control) 1 8-bit GPIO header 1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 SMBus header 1 Panel backlight power header 1 System Fan	TPM onboard 2 COM Ports (1 rear, 1 header) RS232 with DB9, KS485 and Analog input from terminal interface
Manageability	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	Watchdog N/A
PC Health Monitoring	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	N/A
Thermal Control	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; 0°C to 60°C Operating Temperature	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; -30°C to 75°C Operating Temperature, (-WOHS) without heatsink	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL; -30°C to 75°C Operating Temperature, -WOHS: w/o Heatsink	Wind River Linux* & McAfee Embedded Control OS License included Micro SDHC (up to 32GB) for OS and application use, 5-18V DC Input with locking design
Other Features				
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	8MB for Board Support Package

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded

2/4/8/Core mITX  
Quad 1GbE/IPMI

4/8/Core mITX  
Quad 1GbE/IPMI

Communication  
Rangeley

Avoton, Low Power  
Silvermont



(6.75"W x 6.75"H)



(6.75"W x 6.75"H)



(Micro-ATX 9.6"W x 7.5"H)



(Micro-ATX 9.6"W x 6.75"H)

MODEL	<b>A1SRi-2758F</b> <b>A1SRi-2558F</b> <b>A1SRi-2358F</b>	<b>A1SAi-2750F</b> <b>A1SAi-2550F</b>	<b>A1SRM-2758F</b> <b>A1SRM-2558F</b>	<b>A1SAM-2750F</b> <b>A1SAM-2550F</b>
Processor†	Intel® Atom™ Processor C2758, Intel® Atom™ Processor C2558 & Intel® Atom™ Processor C2358 product families; Single Socket FCBGA1283 supported; CPU TDP support up to 20W / 15W/7W	Intel® Atom™ Processor C2750 & Intel® Atom™ Processor C2550 product families; Single Socket FCBGA1283 supported; CPU TDP support up to 20W / 14W	Intel® Atom™ Processor C2758 Single Socket FCBGA1283 supported; CPU TDP support 20W	Intel® Atom™ Processor C2550 Single Socket FCBGA1283 supported; CPU TDP support 20W
Chipset	SoC (System on Chip)	SoC (System on Chip)	SoC (System on Chip)	SoC (System on Chip)
Form Factor	Mini-ITX 6.75" x 6.75"	Mini-ITX 6.75" x 6.75"	Micro-ATX 9.6" x 7.5"	Micro-ATX 9.6" x 7.5"
Optimized Chassis	SC101i SC101S SC504-203B ● SC505-203B ● SC721TQ-250B SC731i-300B	SC101i SC101S ● SC504-203B SC505-203B SC731i-300B SC721TQ-250B	● SC 813MTQ-202CB SC512L-200B SC813MTQ-350CB SC510T-203B SC512L-260-LCD SC510-203B SC731i-300B	SC 512L-260-LCD SC 510-203B ● SC512L-200B SC813MTQ-350CB SC813MTQ-202CB SC510T-203B SC731i-300B
Memory Capacity & Slots*	-2758/2558: up to 64GB Unbuffered ECC SO-DIMM, DDR3-1600 MHz, in 4 slots; -2358: up to 16GB Unbuffered ECC SO-DIMM, DDR3-1333MHz, in 2 slots	Up to 64GB ECC SODIMM in 4 slots	Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 4 DIMM slots x8 Width only	Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 4 DIMM slots x8 Width only
Expansion Slots	1 PCI-E 2.0 x8	1 PCI-E 2.0 x8	1 PCI-E 2.0 x8 1 PCI-E 2.0 x4	1 PCI-E 2.0 x8 1 PCI-E 2.0 x4
Onboard RAID Controller	-2758/2558: SoC controller for 4 SATA2 (3Gb/s) ports; 2 SATA3 (6Gb/s) -2358: 2 SATA3 (6Gb/s); 2 SATA2 (3Gb/s)	SoC controller for 4 SATA2 (3Gb/s) ports; 2 SATA3 (6Gb/s)	SoC controller for 4 SATA2 (3 Gb/s) ports; 2 SATA3 (6Gb/s)	SoC controller for 4 SATA2 (3 Gb/s) ports; 2 SATA3 (6Gb/s)
Onboard LAN	Quad LAN with Intel® C2000 SoC I354	Quad LAN with Intel® C2000 SoC I354	Quad LAN with Intel® C2000 SoC I354	Quad LAN with Intel® C2000 SoC
Onboard VGA	VGA, Aspeed AST2400 BMC	VGA, Aspeed AST2400 BMC	VGA, Aspeed AST2400 BMC	VGA, Aspeed AST2400 BMC
USB Ports	4 USB 3.0 ports (2 rear + 1 via header + 1 Type A); 2 USB 2.0 ports (2 rear)	4 USB 3.0 ports (2 rear + 1 via header + 1 Type A); 2 USB 2.0 ports (2 rear)	7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)	7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	1 SATA DOM power connector 2 COM Ports (1 rear, 1 header) TPM header	2 COM ports (1 rear, 1 header); 1 TPM header	1 SATA DOM power connector 2 fast UART 16550 serial; TPM Header 2 COM Ports (1 rear, 1 header)	1 SATA DOM power connector 2 fast UART 16550 serial; TPM Header 2 COM Ports (1 rear, 1 header) Support one SMC SATA DOM
Manageability	IPMI 2.0 + KVM with dedicated LAN, NMI, SuperDoctor® 5, SSM, Watchdog	IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SuperDoctor® 5, Watchdog	IPMI 2.0 + KVM with dedicated LAN, NMI, SuperDoctor® 5, SSM, Watchdog	IPMI 2.0 + KVM with dedicated LAN, NMI, SuperDoctor® 5, SSM, Watchdog
PC Health Monitoring	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Supports system management utility, System level control	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control
Thermal Control	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, System level control, UID, WOL, 0°C -60°C operating temperature, Intel® QuickAssist Technology	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, System level control, UID, WOL, 0°C -60°C operating temperature	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, System level control, UID, WOL	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, System level control, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.

# Embedded

Embedded/  
Communication  
3-Pair LAN Bypass



(Micro-ATX 8.0" x 9.6")

Embedded/  
Communication  
3-Pair LAN Bypass



(Micro-ATX 8.0" x 9.6")

Embedded/  
Communication  
3-Pair LAN Bypass



(Micro-ATX 8.0" x 9.6")

MODEL	A1SRM-LN7F-2758	A1SRM-LN7F-2358	A1SRM-LN5F-2358
Processor†	Intel® Atom™ Processor C2758 & Intel® Atom™ Processor C2358 product families; Single Socket FCBGA1283 supported; CPU TDP support up to 20W/7W	Intel® Atom™ Processor C2758 & Intel® Atom™ Processor C2358 product families; Single Socket FCBGA1283 supported; CPU TDP support up to 20W/7W	Intel® Atom™ Processor C2758 & Intel® Atom™ Processor C2358 product families; Single Socket FCBGA1283 supported; CPU TDP support up to 20W/7W
Chipset	SoC (System on Chip)	SoC (System on Chip)	SoC (System on Chip)
Form Factor	Micro-ATX 8.0" x 9.6"	Micro-ATX 8.0" x 9.6"	Micro-ATX 8.0" x 9.6"
Optimized Chassis	<ul style="list-style-type: none"> <li>● SC510-203B (Rev. N)</li> <li>SC813MTQ-202CB</li> <li>SC510T-203B (Rev. N)</li> <li>SC512L-200B</li> <li>SC512L-260-LCD</li> <li>SC813MTQ-350CB</li> </ul>	<ul style="list-style-type: none"> <li>● SC510-203B (Rev. N)</li> <li>SC813MTQ-202CB</li> <li>SC510T-203B (Rev. N)</li> <li>SC512L-200B</li> <li>SC512L-260-LCD</li> <li>SC813MTQ-350CB</li> </ul>	<ul style="list-style-type: none"> <li>● SC510-203B (Rev. N)</li> <li>SC813MTQ-202CB</li> <li>SC510T-203B (Rev. N)</li> <li>SC512L-200B</li> <li>SC512L-260-LCD</li> <li>SC813MTQ-350CB</li> </ul>
Memory Capacity & Slots*	-2758: 64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 4 DIMM slots; x8 Width only	-2558: 64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 4 DIMM slots; x8 Width only	-2358: 16GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 2 DIMM slots; x8 Width only
Expansion Slots	1 PCI-E 2.0 x4 (in x8 slot)	1 PCI-E 2.0 x4 (in x8 slot)	1 PCI-E 2.0 x4 (in x8 slot)
Onboard RAID Controller	SoC controller for 4 SATA2 (3 Gb/s) ports; 2 SATA3 (6Gb/s)	SoC controller for 4 SATA2 (3 Gb/s) ports; 2 SATA3 (6Gb/s)	SoC controller for 4 SATA2 (3 Gb/s) ports; 2 SATA3 (6Gb/s); -2358: with 2 SATA2 and 2 SATA3 ports)
Onboard LAN	Quad LAN with Intel® C2000 SoC, 2 pairs LAN bypass; Single LAN with Intel® Ethernet Controller i210-AT -LN7F: Extra Dual LAN with Intel® Ethernet Controller i350-AM2, 1 additional pair LAN bypass	Quad LAN with Intel® C2000 SoC, 2 pairs LAN bypass; Single LAN with Intel® Ethernet Controller i210-AT -LN7F: Extra Dual LAN with Intel® Ethernet Controller i350-AM2, 1 additional pair LAN bypass	Quad LAN with Intel® C2000 SoC, 2 pairs LAN bypass; Single LAN with Intel® Ethernet Controller i210-AT -LN7F: Extra Dual LAN with Intel® Ethernet Controller i350-AM2, 1 additional pair LAN bypass
Onboard VGA	VGA, Aspeed AST2400 BMC	VGA, Aspeed AST2400 BMC	VGA, Aspeed AST2400 BMC
USB Ports	7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)	7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)	7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	SuperDOM TPM header 2 COM Ports (1 rear, 1 header)	SuperDOM TPM header 2 COM Ports (1 rear, 1 header)	SuperDOM TPM header 2 COM Ports (1 rear, 1 header)
Manageability	IPMI 2.0 + KVM with shared i210 LAN, NMI, SuperDoctor® 5, SSM, Watchdog	IPMI 2.0 + KVM with shared i210 LAN, NMI, SuperDoctor® 5, SSM, Watchdog	IPMI 2.0 + KVM with shared i210 LAN, NMI, SuperDoctor® 5, SSM, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control
Thermal Control	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® QuickAssist Technology, System level control, UID, WOL, 0°C -60°C operating temperature	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® QuickAssist Technology, System level control, UID, WOL, 0°C -60°C operating temperature	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® QuickAssist Technology, System level control, UID, WOL, 0°C -60°C operating temperature
BIOS	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.  
\* For detailed memory configurations please refer to Supermicro website.

# Embedded



Intel® Xeon® Processor D, SoC  
16/12/8-core  
Up to 128GB DDR4 RDIMM  
Dual 10SFP+, Dual 1GbE



(Mini-ITX 6.7" x 6.7")

Intel® Xeon® Processor D, SoC  
4/6/8/12/16-Core  
128GB Memory  
Dual 10GbE, Dual 1GbE



(Mini-ITX 6.7" x 6.7")

Intel® Xeon® Processor D, SoC  
2/4-Core  
128GB Memory  
Dual 10GbE



(Mini-ITX 6.7" x 6.7")

Intel® Xeon® Processor D, SoC  
8-Core  
128GB Memory  
Dual 1GbE



(Mini-ITX 6.7" x 6.7")

MODEL	X10SDV-16C-TLN4F+ X10SDV-12C-TLN4F+ X10SDV-8C-TLN4F+	X10SDV-16C-TLN4F X10SDV-12C-TLN4F X10SDV-8C-TLN4F X10SDV-6C-TLN4F X10SDV-4C-TLN4F	X10SDV-4C-TLN2F X10SDV-2C-TLN2F	X10SDV-8C+-LN2F X10SDV-F
Processor†	Intel® Xeon® Processor D product family, Single Socket FCBGA 1667 supported; 16C: D-1587, 24MB, 16 Core, 65W; 12C: D-1557, 18MB, 12 Core, 45W; 8C: D-1537, 12MB, 8 Core, 35W;	Intel® Xeon® Processor D product family, Single Socket FCBGA 1667 supported; 16C: D-1587, 24MB, 16 Core, 65W; 12C: D-1557, 18MB, 12 Core, 45W; 8C: D-1541, 12MB, 8 Core, 45W; 6C: D-1528, 9MB, 6 Core, 35W; 4C: D-1518, 6MB, 4 Core, 35W; with Passive Heatsink	Intel® Xeon® Processor D product family, Single Socket FCBGA 1667 supported; 4C: D-1520/1521, 6MB, 4 Core, 45W; 2C: D-1508, 3MB, 2 Core, 25W; with Passive Heatsink	Intel® Xeon® Processor D-1541, 8 Core; Single Socket FCBGA1667 supported; CPU TDP support 45W; -8C+: with Active Heatsink -F: with Passive Heatsink
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX 6.7" x 6.7"	Mini-ITX 6.7" x 6.7"	Mini-ITX 6.7" x 6.7"	Mini-ITX 6.7" x 6.7"
Optimized Chassis	● SC504-203B ● SC505-203B	● SC504-203B ● SC505-203B	● SC504-203B ● SC505-203B	● SC504-203B ● SC505-203B ● SC721TQ-250B
Memory Capacity & Slots*	Up to 128GB Registered ECC RDIMM, DDR4-2133 MHz; or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 M.2 PCI-E 3.0x4, M Key 2242/2280 M.2 Interface: PCI-E 3.0 x4 and SATA M Key 2242/2280	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280
Onboard RAID Controller	SoC controller for 6 SATA3 (6Gb/s) ports; RAID 0,1,5,10; RSTe Dual LAN with 10G SFP+	SoC controller for 6 SATA3 (6Gb/s) ports; RAID 0,1,5,10 RSTe Dual 10GBase-T with SoC	SoC controller for 6 SATA3 (6Gb/s) ports; RAID 0,1,5,10 RSTe	SoC controller for 6 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0,1,5,10
Onboard LAN	Dual LAN with Intel® Ethernet Controller I350-AM2	Dual 1GbE LAN with Intel® i350-AM2;	Dual 10GBase-T with SoC	Dual 1GbE LAN with Intel® i350-AM2
Onboard VGA	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC
USB Ports	2 USB 2.0 ports (+ 2 via headers) 2 USB 3.0 ports (2 rear) 1 Port SuperDOM	4 USB 2.0 ports (4 via headers) 2 USB 3.0 ports (2 rear) 1 Port SuperDOM	4 USB 2.0 ports (4 via headers) 2 USB 3.0 ports (2 rear) 1 Port SuperDOM	4 USB 2.0 ports (4 via headers) 2 USB 3.0 ports (2 rear) 1 Port SuperDOM
Other Onboard I/O Devices	TPM 1.2 Header 1 COM Ports (1 header) GPIO and SMBus headers	TPM Header 1 COM Ports (1 header) GPIO and SMBus headers	TPM Header 1 COM Ports (1 header) GPIO and SMBus headers	TPM Header 1 COM Ports (1 header) GPIO and SMBus headers
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog +1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT
PC Health Monitoring	4 4-pin, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Thermal Control	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL, SDDC
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL, SDDC
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

† Supermicro chassis required for optimal functionality and performance.

\* For detailed memory configurations please refer to Supermicro website.



# Embedded

Intel® Xeon® Processor D SoC  
4/6/8/16-Core  
128GB Memory  
Dual 10GbE, Dual 1GbE



(Mini-ITX 6.7" x 6.7")

Intel® Xeon® Processor D SoC  
16-Core, 128GB Memory  
22x SATA Storage Device  
2x 10GbE SFP+, 6x 1GbE



(Flex ATX 9.0" x 7.25")

Intel® Xeon® Processor D SoC  
2/4/8 Core, 128GB Memory  
22x SATA Storage Device  
2x 10GbE SFP+, 2x 1GbE



(Flex ATX 9.0" x 7.25")

Intel® Xeon® Processor D SoC  
2/4 Core, 128GB Memory  
2x 10GbE SFP+, 6x 1GbE



(Flex ATX 9.0" x 7.25")

MODEL	<b>X10SDV-TLN4F</b> <b>X10SDV-16C+-TLN4F</b> <b>X10SDV-6C+-TLN4F</b> <b>X10SDV-4C+-TLN4F</b>	<b>X10SDV-7TP8F</b>	<b>X10SDV-7TP4F</b> <b>X10SDV-4C-7TP4F</b> <b>X10SDV-2C-7TP4F</b>	<b>X10SDV-TP8F</b> <b>X10SDV-2C-TP8F</b>
Processor†	Intel® Xeon® Processor D product family; Single Socket FCBGA 1667 supported; D-1541, 12MB, 8 Core, 45W; 16C+: Intel® Xeon® Processor D-1587, 24MB, 16 Core, 65W; 6C+: Intel® Xeon® Processor D-1528, 9MB, 6 Core, 35W; 4C+: Intel® Xeon® Processor D-1518, 6MB, 4 Core, 35W; with Active Heatsink	Intel® Xeon® Processor D-1587 product family; Single Socket FCBGA1667 supported; CPU TDP support 65W	Intel® Xeon® Processor D-1537, 8 Core; Single Socket FCBGA 1667 supported; CPU TDP support 35W 4C: Intel® Xeon® Processor D-1518, 6MB, 4 Core, 35W 2C: Intel® Pentium® Processor D1508 Socket FCBGA1667 supported; CPU TDP support 25W	Intel® Xeon® Processor D-1518, 4 Core; Single Socket FCBGA 1667 supported; CPU TDP support 35W; 2C: Intel® Pentium® Processor D1508 Single Socket FCBGA1667 supported; CPU TDP support 25W
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX 6.7" x 6.7"	Flex ATX 9.0" x 7.25"	Flex ATX 9.0" x 7.25"	Flex ATX 9.0" x 7.25"
Optimized Chassis	● SC721TQ-250B	● SCe300 ● SC504-203B ● SC505-203B SC813MTQ-350CB	● SCe300 ● SC504-203B ● SC505-203B SC813MTQ-350CB	● SCe300 ● SC504-203B ● SC505-203B ● SC515-R407 SC514-505 SC813MTQ-350CB
Memory Capacity & Slots*	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280	2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support
Onboard RAID Controller	SoC controller for 6 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0,1,5,10	SoC controller for 4 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0,1,5,10; Broadcom® 2116 SW controller for 16 SATA3 (6Gb/s) ports; SAS2 and SATA3;	SoC controller for 4 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0,1,5,10; Broadcom® 2116 SW controller for 16 SATA3 (6Gb/s) ports; SAS2 and SATA3;	SoC controller for 4 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0,1,5,10
Onboard LAN	Dual 10GbE-T with SoC Dual 1GbE LAN with Intel® i350-AM2;	Dual 10GbE SFP+ from SoC; Dual 1GbE LAN with Intel® I210; Quad 1GbE LAN with Intel® i350-AM4	Dual 10GbE SFP+ from SoC; Dual 1GbE LAN with Intel® I210	Dual 10GbE SFP+ from SoC; Dual 1GbE LAN with Intel® I210; Quad 1GbE LAN with Intel® i350-AM4
Onboard VGA	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (4 via headers) 2 USB 3.0 ports (2 rear)	2 USB 3.0 ports (2 rear); 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	2 USB 3.0 ports (2 rear); 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	2 USB 3.0 ports (2 rear); 5 USB 2.0 ports (+ 4 via headers + 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM TPM Header 1 COM Ports (1 header) GPIO and SMBus headers	2 ports SuperDOM TPM 2.0 Header 1 COM Ports (1 header) GPIO and SMBus headers	2 ports SuperDOM TPM 2.0 Header 1 COM Ports (1 header) GPIO and SMBus headers	2 ports SuperDOM TPM 2.0 Header 1 COM Ports (1 header) GPIO and SMBus headers
Manageability	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT
Thermal Control	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI

# Embedded

Intel® Xeon® Processor D SoC  
2/4 Core, 128GB Memory  
2x 10GbE SFP+, 2x 1GbE

Low Power

vPro AMT  
mSATA Slot  
Q87, 7 Year DT

Embedded



(Flex ATX 9.0" x 7.25")



(Mini-ITX 6.7" x 6.7")



(Micro-ATX 9.6" x 9.6")



(Mini-ITX 6.7" x 6.7")

MODEL	X10SDV-4C+TP4F X10SDV-2C-TP4F	X10SBA X10SBA-L	X10SLQ X10SLQ-L	X10SLV X10SLV-Q
Processor†	Intel® Xeon® Processor D-1518, 4 Core; Single Socket FCBGA 1667 supported; CPU TDP support 35W 2C: Intel® Pentium® Processor D1508 Single Socket FCBGA1667 supported; CPU TDP support 25W	Intel® Celeron® Processor J1900, Single Socket FCBGA1170 supported; CPU 10W, 4C, 2.0GHz-2.42GHz	4th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor; Single Socket LGA 1150 supported	4th Generation Intel® Core™ Processors, Intel® Celeron® Processor, Intel® Pentium® Processor; Single Socket LGA 1150 supported
Chipset	System on Chip	System on Chip	Intel® Q87 Express	X10SLV: Intel® H81 X10SLV-Q: Intel® Q87
Form Factor	Flex ATX 9.0" x 7.25"	Mini-ITX 6.7" x 6.7"	Micro-ATX 9.6" x 9.6"	Mini-ITX 6.7" x 6.7"
Optimized Chassis	SCe300 ● SC504-203B ● SC505-203B ● SC515-R407 SC514-505 SC813MTQ-350CB SC731i-300B (X10SDV-4C+TP4F only)	● SC101S SC101I SC101F SC504-203B SC505-203B SC721TQ-250B	● SC825MTQ-R700LPB ● SC823MTQ-R700LPB 2U Heatsink: SNK-P0046A4 SC731D-300B SC731I-300B 2U Heatsink: SNK-P0046A4	SC73204F-500B/865B/903B SC732D4-500B/865B/903B SC732D2-500B/865B/903B SC732i-500B/865B 2U Heatsink: SNK-P0046A4
Memory Capacity & Slots*	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133 MHz, in 4 DIMM slots 2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	Up to 8GB with two 4GB SODIMM configuration in 2 DIMM slots, 1.35V only	Up to 32GB Unbuffered non-ECC, DDR3-1600 MHz in 4 DIMM slots; X10SLQ-L supports up to 16GB with 2 DIMM slots 1 PCI-E 3.0 x16 (in x16 slot), 1 PCI-E 2.0 x4, 1 PCI-E 2.0 x1, Mini-PCI-E with mSATA support (N/A in -L)	Up to 16GB non-ECC SODIMM in 2 slots
Expansion Slots		1 PCI-E 2.0 x2, 1 Mini-PCI-E slot, Mini-PCI-E with mSATA support (N/A in -L)		1 PCI-E 3.0 x16 Mini-PCI-E with mSATA support
Onboard RAID Controller	SoC controller for 4 SATA3 (6Gb/s) ports; RSTe, Intel® Raid 0, 1, 5, 10	SoC controller for 2 SATA2 (3 Gb/s) ports; Marvel 885E9230 controller for 4 SATA3 (6Gb/s) ports; RAID 0, 1, 10 (X10SBA only)	Intel® Q87 controller for 6 SATA3 (6Gb/s) ports; RAID 0, 1, 5, 10	X10SLV: Intel® H81 controller for 2 SATA3 (6Gb/s) ports; RAID 0, 1, 5, 10 X10SLV-Q: Intel® Q87 controller for 4 SATA3 (6Gb/s) ports; RAID 0, 1, 5, 10
Onboard LAN	Dual 10GbE SFP+ from SoC; Dual 1GbE LAN with Intel® i210	Dual LAN with Intel® Ethernet Controller i210-AT 1 VGA, 1 HDMI, 1 DP (Display Port) 1 eDP (Embedded Display Port for X10SBA only) 1 Intel® HD Graphics 2 independent displays	Dual LAN with Intel® i217LM & i210AT HDMI, DP (Display Port) DVI-D, VGA Intel® HD 4600 Graphics 3 Independent Displays 4 USB 3.0 ports (2 rear + 2 via headers + 8 USB 2.0 ports (4 rear + 4 via headers) -L with 2 USB 3.0 rear header and 6 USB 2.0 ports	Dual LAN with Intel® i217V & i210AT 1 HDMI, 1 DP (Display Port) 1 DVI-I Intel® HD 4600 Graphics 3 independent Displays
Onboard VGA	1 VGA via Aspeed AST2400 BMC			
USB Ports	2 USB 3.0 ports (2 rear); 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	1 USB 3.0 ports (1 rear + ) 5 USB 2.0 ports (1 rear + 3 via headers + 1 Type A)		2 USB 3.0 ports (2 rear + ) 5 USB 2.0 ports (2 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM 2.0 Header 1 COM Ports (1 header) GPIO and SMBus headers	1 SATA DOM power connector ALC 8885 HD Audio TPM header 4 COM ports (4 headers)	7.1 HD Audio Audio 4 COM port headers PS/2 Combo mouse & keyboard (-L: w/o PS/2 KB/MS) TPM header 1 com port with RS422/485 support	1 SATA DOM power connector; ALC 8885 HD Audio; 5 fast UART 16550 serial COM port headers (2 rear 3 header); PS/2 Combo mouse and keyboard; 1 com port with RS422/485 support; TPM header
Manageability	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	SuperDoctor® 5, SSM, Watchdog	SuperDoctor® 5, SSM, Watchdog, AMT vPro	SuperDoctor® 5, SSM, Watchdog
PC Health Monitoring	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	Supports system management utility, System level control	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, 4 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control
Thermal Control	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	2 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	Overheat LED indication, fan speed control, Thermal control tachometer fan connectors	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, System level control, WOL, 0°C -60°C operating temperature	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, Intel® Smart Response Technology, System level control, WOL, 0°C -60°C operating temperature	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for Processor protection, System level control, WOL, 0°C -60°C operating temperature
BIOS	AMI UEFI	AMI UEFI	AMI UEFI	AMI UEFI



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