X13 GrandTwin™

Multi-Node Architecture Optimized for Single-Processor Performance

Resource Saving Architecture with Modular Design

- **Single 4th Gen Intel® Xeon® Scalable processor per node**
- **Maximum memory density with up to 16 DIMMs DDR5 per node**
- **Up to six 2.5" NVMe, SAS or SATA drives per node**
- **PCIe 5.0 and CXL 1.1+ support**
- **Front and rear I/O configurations available**
- **Integrated GrandTwin module per node with on-board networking and management interfaces**
- **Flexible networking options with PCIe 5.0 OCP 3.0 compliant AIOM slots**
- **Redundant Titanium level power supplies**

All-new Single Processor Twin Architecture

Supermicro's new GrandTwin™ family of servers is a new multi-node architecture prupose-built for single-processor performance, with front-serviceable hot-swap nodes allowing easier installation and servicing in space constrained environments. Powered by dual 4th Gen Intel Xeon Scalable processors, the GrandTwin architecture delivers high performance in a modular design that can be optimized for a wide range of applications, with Supermicro's Resource Saving Architecture delivering improved power efficiency and lower materials costs thanks to shared components including power and cooling.

Optimized for Single Processor Performance

GrandTwin is designed for applications that need a large number of discrete servers with high-speed interconnects for networked or clustered operations. They are ideal for virtualized and nonvirtualized applications including:

- HPC
- Mission Critical Web Applications
- EDA (Electric Design Automation)
- Telco Edge Cloud
- High-availability Cache Cluster
- Multi-Purpose CDN
- MEC (Multi-Access Edge Computing)
- Cloud Gaming

Modular Design Reduces Costs and Materials

The GrandTwin architecture was designed from the ground up to be as flexible and configurable as possible based on the specific customers' needs. The GrandTwin chassis was developed with future technologies in mind, allowing for new generations to support next-generation components with minimal alterations, minimizing development costs. Internal components are also fully modular, meaning customers only install—and pay for—the components they need, reducing cost and materials.

Maximum Flexibility with Front or Rear I/O

The GrandTwin family is available in front and rear I/O configurations for maximum flexibility. Each front I/O node features a GrandTwin module with on-board networking and management ports, plus up to 4 NVMe or SATA drives. Additional high-speed networking is also available via OCP 3.0 compliant PCIe 5.0 interfaces in place of storage bays. Rear I/O systems feature up to 6 front hot-swappable NVMe or SATA drives per node, with all I/O connectivity accessible at the rear of the chassis.

Powered by a Single 4th Gen Intel Xeon Scalable Processor

GrandTwin's single-processor optimzed design combined with the power and efficiency of new 4th Gen Intel Xeon Scalable processors means that many workloads which were previously run on dual-processor systems can now be handled by a single CPU per node. The 4th Gen Intel Xeon Scalable processors also include the built-in Intel Data Streaming Accelerator (Intel DSA) engine for improved data movement performance and efficiency and Intel QuickAssist Technology (Intel QAT) to offload popular compression and cryptographic algorithms, increasing core workload capacity.

GrandTwin	SYS-211GT-HNTF/HNC8F (node)	SYS-211GT-HNTR/HNC8R (node)
Processor Support	Single Socket E (LGA-4677) 4th Gen Intel® Xeon® Scalable processor†	Single Socket E (LGA-4677) 4th Gen Intel® Xeon® Scalable processor††
Outstanding Features	Single processor with 16 DIMM Front I/O design Four front access hot-swappable node in 2U Flexible storage selection	Single processor with 16 DIMM Four front access hot-swappable node in 2U 6x NVMe/SATA drives per node
Memory Slots & Capacity	16 DIMM slots Up to 4TB: 16x 256GB DRAM	16 DIMM slots Up to 4TB: 16x 256GB DRAM
I/O Ports	1 RJ45 Dedicated BMC LAN port 2 USB 3.0 port(s) (2 USB) 1 VGA port Networking via AIOM	1 RJ45 Dedicated BMC LAN port 2 USB 3.0 port(s) (2 USB) 1 VGA port Networking via AIOM
Motherboard	X13SET-G	X13SET-G
Form Factor	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")
Expansion Slots	2 PCIe 5.0 x16 AIOM slot(s)	2 PCIe 5.0 x16 AIOM slot(s)
Drive Bays	4x 2.5" hot-swap NVMe/SATA drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Intel® PCH (SYS-211GT-HNTF) 4x 2.5" hot-swap NVMe/SATA/SAS drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC (HNC8F)	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe dedicated; Optional RAID support via Intel® PCH (HNTR) 6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC (HNC8R)
Shared Power & Cooling	Redundant 2200W Titanium level (96%) 2x 8cm heavy duty fan(s)	Redundant 2200W Titanium level (96%) 2x 8cm heavy duty fan(s)

† Supports up to 350W TDP CPUs (Aircooled). CPUs with high TDP supported under specific conditions. Contact Technical Support for details.
†† Supports up to 300W TDP CPUs (Aircooled). CPUs with high TDP supported under specific conditions. Contact Technical Support for details.