X14 GrandTwin®

Multi-Node Architecture Optimized for Single-Processor Performance

Resource Saving Architecture with Modular Design

- **Single socket Intel® Xeon® 6700 series processors with E-cores per node**
- **X14 GrandTwin will also support Intel Xeon 6700 with P-cores in**
- **Q1'25**
- **Flexible front storage bays support EDSFF E1.S, 2.5" NVMe, or PCIe Gen5 x16 expansion**
- **Front-serviceable nodes for cold aisle serviceability**
- **Optional front I/O configuration with integrated GrandTwin module reduces cable complexity for space-constrained edge data centers**

Optimized Single Processor Twin Architecture

Supermicro's GrandTwin® family of servers is purpose-built for single-processor performance, with front-serviceable hot-swap nodes allowing easier installation and servicing in space constrained environments. Powered by Intel® Xeon® 6700 processors with E-cores, 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:

- 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 customers' specific 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 8 E1.S NVMe or 4 NVMe/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 Intel Xeon 6 Processor

The new Intel Xeon 6700 series processors with E-cores bring up to 2.5x higher core density per rack compared to 4th Gen Intel Xeon and improved performance per watt to enable Supermicro X14 multi-node solutions to deliver significantly more compute capacity in a smaller physical footprint.

GrandTwin®	SYS-212GT-HNF	SYS-212GT-HNR
Processor Support (node)	Single Intel® Xeon® 6700 series processor with E-cores Up to 350W TDP (air cooled)†	Single Intel® Xeon® 6700 series processor with E-cores Up to 300W TDP (air cooled)†
Memory Slots & Capacity (node)	16 DIMM slots; up to 4TB DDR5-6400MT/s	16 DIMM slots; up to 4TB DDR5-6400MT/s
I/O Ports (node)	1 RJ45 dedicated BMC LAN port 2 USB 3.0 ports (front) 1 VGA port	1 RJ45 dedicated BMC LAN port 2 USB 3.0 ports (rear; shared between 2 nodes) 1 VGA port (rear; shared between 2 nodes)
Motherboard	X14SBT-G	X14SBT-G
Form Factor	2U Rackmount 711.2mm/28″ depth	2U Rackmount 711.2mm/28″ depth
Expansion Slots (node)	1 PCIe 5.0 x16 LP slots	2 PCIe 5.0 x16 AIOM slots (OCP 3.0)
Drive Bays (node)	Default 8 front hot-swap E1.S PCIe 5.0 x4 NVMe drive bays Option A 4 front hot-swap E1.S PCIe 5.0 x4 NVMe drive bays + 1 PCIe AOC Option B 4 front hot-swap 2.5″ PCIe 5.0 x4 NVMe drive bays Option C 2 front hot-swap 2.5″ PCIe 5.0 x4 NVMe drive bays + 1 AIOM	6 front hot-swap 2.5″ PCIe 5.0 x4 NVMe drive bays
Cooling	2 heavy duty 8cm fans	2 heavy duty 8cm fans
Power	Redundant 3000W Titanium level (96%)	Redundant 2200W Titanium level (96%)

†CPUs with high TDP supported under specific conditions. Contact Technical Support for details.

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