

X14 Multi-Processor

Maximum density single-node systems for enterprise applications



Maximum Performance and Density

Realizing value from the vast quantities of data available to modern organizations requires significant compute power and memory density not available in traditional server architectures. Supermicro X14 Multi-Processor systems feature four Intel Xeon 6700 series processors with P-cores in a single compute node for an unprecedented number of compute cores, DDR5 DIMM slots, and PCIe lanes in a standard rackmount form factor. These systems are available in multiple configurations optimized for various storage, thermal, or acceleration requirements and scale effortlessly to support growing workload requirements.

More Cores, Faster Memory

The unique architectural design of Supermicro X14 Multi-Processor systems delivers unprecedented compute and memory density in a single-node configuration. With support for the new Intel Xeon 6700 Series processors with P-cores, each system can fit as many as 344 performance cores in a 2U or 4U rackmount chassis, providing more single-node compute density than any other X14 system. Multi-Processor systems also have 64 DIMM slots supporting DDR5 memory up to 6400MT/s and MRDIMMS up to 8000MT/s for a maximum of 8TB in a single node.

Ready to Accelerate

All X14 Multi-Processor systems feature PCIe 5.0 slots to support double-width GPUs for acceleration of scientific simulation and large database workloads. 2U systems can support a maximum

Mission-Critical Platform with up to 4 Processors

- 4-Way systems featuring Intel Xeon 6700 series processors with P-cores
- 64 DDR5 DIMM slots for maximum memory density, supporting DDR5 up to 6400MT/s
- Support for up to 2 double-width accelerators in 2U and up to 6 in 4U with air cooling
- Configurations optimized for compute, storage, and acceleration

of two double-width GPU cards, while the 4U configuration's larger form factor has been optimized for thermal performance, supporting up to 6 double-width GPUs at an ambient temperature of 35°C.

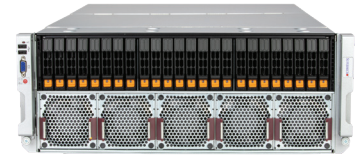
Powered by Intel® Xeon® 6 Processors

New Intel Xeon 6700 series processors with P-cores are the most powerful and efficient Intel Xeon processors ever, with more performance-per-core and up to 47% more cores per socket than the previous generation. These processors also include a number of built-in Intel accelerator engines designed to offload common compute tasks, freeing up CPU cores and improving efficiency for data-intensive workloads:

Intel Data Streaming Accelerator (Intel DSA) offloads common data movement tasks to reduce overhead and increase CPU and memory workload performance.

Intel QuickAssist Technology (Intel QAT) offloads popular compression and cryptographic algorithms, increasing core workload capacity.

Intel In-Memory Analytics Accelerator (Intel IAA) increases query throughput for in-memory database and analytics workloads and decreases memory footprint in analytics.



Multi-Processor	SYS-242B-NR	SYS-242H-NR	SYS-442B-NR
Processor Support	Quad Intel® Xeon® 6700 series processors with P-cores Up to 350W TDP (air cooled)†	Quad Intel® Xeon® 6700 series processors with P-cores Up to 350W TDP (air cooled)†	Quad Intel® Xeon® 6700 series processors with P-cores Up to 350W TDP (air cooled)†
Memory Slots & Capacity	64 DIMM slots; Up to 8TB DDR5	64 DIMM slots; Up to 8TB DDR5	64 DIMM slots; Up to 8TB DDR5
GPU Support	Up to 2 double-width GPUs	Up to 2 double-width GPUs	Up to 6 double-width GPUs
Motherboard	X14QBH	X14QBH	X14QBH
Form Factor	2U Rackmount	2U Rackmount	4U Rackmount
Expansion Slots	Default 2 PCIe 5.0 x8 FHHL slots 4 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option A 2 PCIe 5.0 x16 FHFL double-width slots 2 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)	Default 2 PCIe 5.0 x8 (in x16) FHHL slots 4 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option A * 2 PCIe 5.0 x16 FHFL double-width slots 2 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)	Default 4 PCIe 5.0 x8 FHHL slots 2 PCIe 5.0 x16 FHHL slots 8 PCIe 5.0 x8 FHFL slots 4 PCIe 5.0 x16 FHFL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option A * 6 PCIe 5.0 x16 FHFL double-width slots 2 PCIe 5.0 x16 FHHL slots 4 PCIe 5.0 x8 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)
Drive Bays	24 front hot-swap 2.5" NVMe/SAS/SATA drive bays	Default 8 front hot-swap 2.5" NVMe drive bays Option A 8 front hot-swap 2.5" SAS/SATA drive bays	24 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays
Cooling	6 heavy duty counter-rotating 6cm fans	2 Internal heavy duty counter-rotating 6cm fans 3 heavy duty counter-rotating 8cm fans	10 heavy duty counter-rotating 8cm fans
Power Supply	4x 2700W Redundant (2 + 2) Titanium Level (96%) hot-plug power supplies	4x 2700W Redundant (2 + 2) Titanium Level (96%) power supplies	4x 2700W Redundant (2 + 2) Titanium Level (96%) hot-plug power supplies

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