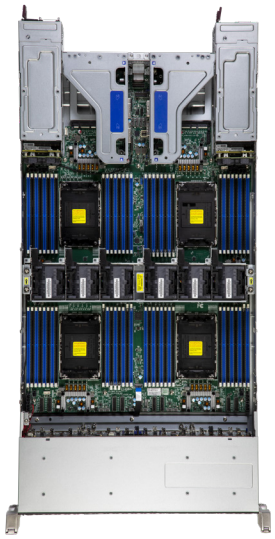
X14 Multi-Processor

High Capacity and Peak Computing Performance for Memory-Intensive Applications



Engineered for in-memory database, scientific simulation, mission-critical enterprise workloads, and AI training

- **Performance increase of up to 50% compared to the previous generation of Intel processors**
- **Unprecedented CPU computing performance with low latencies**
- **Quad high-performance Intel® Xeon® 6700 series processors with P-cores for a total of up to 344 cores**
- **Up to 64 DIMM slots supporting DDR5-6400MT/s**
- **Supports up to 6 double-width GPUs for enterprise AI workloads**
- **High-efficiency Titanium Level power supplies to further minimize total cost of ownership (TCO) and environmental impact**

Supermicro X14 is the Most Powerful, Flexible, and Efficient Platform Ever

X14 combines the flexibility of Supermicro's industry-leading Building Block Solutions with Supermicro's rack-scale integration to deliver solutions for memory-intensive workloads. Powered by the Intel Xeon 6700 series processors with P-cores, Supermicro X14 multi-processor systems deliver better performance-per-watt and performance-per-core to accelerate memory-intensive applications.

Built for Demanding Computing Performance

Supermicro's multi-processor systems, featuring 4 high-performance CPUs, deliver exceptional core counts (up to 344 powerful cores) and the capacity to distribute workloads efficiently across multiple processing units. In addition, the systems provide uncomparable PCIe lanes which allow more expansion cards for storage, networking, and even accelerators. Most importantly, CPU redundancies offer a robust safety net for enterprises, significantly mitigating the risk of operational downtime.

Enhanced Memory Bandwidth and Capacity

These systems are tailored for memory-intensive applications, such as in-memory databases, scientific simulations, mission-critical enterprise workloads, and AI training. Featuring up to 64 DIMM slots and supporting memory capacities of up to 16TB, these systems eliminate bottlenecks while elevating data center performance for maximum throughput.

Certified for SAP HANA and Oracle Linux

X14 multi-processor systems are certified for SAP HANA and Oracle Linux. With extensive memory pools, these systems enable superior SAP and Oracle performance as all workloads can be scaled up without the latency of horizontally scaling across networks. Furthermore, unmatched versatility and capabilities ensure the deployments are future-proofed against the rapid advancements in generative AI automation and ERP workflows.

Powered by Intel® Xeon® 6 Processors

With more cores, flexible microarchitecture, upgraded memory bandwidth, and exceptional input/output (I/O), the Intel Xeon 6 processor family delivers new degrees of performance and efficiency across a range of workloads. X14 multi-processor family servers currently support Intel Xeon 6700 series processors with P-cores (4S/8S), bringing a new dimension of choice and workload customization.

Multi-Processor	SYS-242B-NR	SYS-242H-NR	SYS-442B-NR
Form Factor	2U Rackmount 438.4 x 88 x 848.7mm (17.3" x 3.5" x 33.4")	2U Rackmount 438.4 x 88 x 848.7mm (17.3" x 3.5" x 33.4")	4U Rackmount 438.4 x 177 x 848.7mm (17.3" x 7" x 33.4")
Motherboard	X14QBH+	X14QBH+	X14QBH+
Processor Support	Quad Intel® Xeon® 6700 series processors with P-cores Up to 270W 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)
System Memory (Max.)	64 DIMM slots Up to 8TB DDR5-6400MT/s (1DPC) Up to 16TB DDR5-5200MT/s (2DPC)	64 DIMM slots Up to 8TB DDR5-6400MT/s (1DPC) Up to 16TB DDR5-5200MT/s (2DPC)	64 DIMM slots Up to 8TB DDR5-6400MT/s (1DPC) Up to 16TB DDR5-5200MT/s (2DPC)
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 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)
GPU Support	Up to 2 double-width GPUs	Up to 2 double-width GPUs	Up to 6 double-width GPUs
Drive Bays	24 hot-swap 2.5" NVMe/SAS/SATA drive bays 1 M.2 PCIe 4.0 x4 NVMe M-key (2280/22110) slot 1 M.2 PCIe 4.0 x4 NVMe M-key (22110) slot	8 hot-swap 2.5" NVMe drive bays 1 M.2 PCIe 4.0 x4 NVMe M-key (2280/22110) slot 1 M.2 PCIe 4.0 x4 NVMe M-key (22110) slot	24 hot-swap 2.5" NVMe/SAS/SATA drive bays 1 M.2 PCIe 4.0 x4 NVMe M-key (2280/22110) slot 1 M.2 PCIe 4.0 x4 NVMe M-key (22110) slot
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 Supplies	4 redundant 2700W Titanium Level power supplies	4 redundant 2700W Titanium Level power supplies	4 redundant 2700W Titanium Level power supplies