

X14 CloudDC

All-in-one Rackmount Platform for Cloud Data Centers



1U and 2U rackmounts with NVMe and GPU support

- Single and dual socket Intel® Xeon® 6700/6500 series processors with P-cores or 6700 series processors with E-cores
- Up to 32 DIMM slots supporting DDR5-6400 and MRDIMMs up to 8000MT/s (P-core only)
- 2.5" storage with PCIe 5.0 NVMe support
- Up to 3 PCIe 5.0 slots in 1U or 6 PCIe 5.0 slots in 2U
- Dual PCIe 5.0 AIOM slots supporting up to 400G networking
- Support for the OCP Data Center Modular Hardware System (DC-MHS)

Designed for Data Centers

Supermicro X14 CloudDC systems are designed to provide cost-effective, flexible architectures for large-scale data center deployments. Convenient serviceability with tool-less brackets, hot-swap drive trays and redundant power supplies ensure rapid deployment and more efficient maintenance, while high-efficiency Titanium Level redundant power supplies provide resiliency and lower carbon footprint.

Scale-out and Cloud-Native

X14 CloudDC systems are designed for cost-effective service delivery in large-scale cloud computing environments with dual and single processor configurations available to support a range of demanding workloads:

- Virtualization
- Public and private cloud computing
- Content-delivery networks (CDNs)

Advanced I/O

The X14 CloudDC family of systems supports up to 3 PCIe 5.0 x16 expansion slots in 1U or 6 PCIe 5.0 x16 slots in 2U plus up to an additional 2 OCP 3.0-compliant Supermicro Advanced I/O Modules (AIOMs). This flexible I/O configuration enables highly

customizable networking configurations for a range of workloads, including support for 100GbE to connect to today's standard data center networks, as well as 400Gbps InfiniBand connectivity for extremely high-bandwidth, low-latency cluster interconnections. For accelerated workloads, up to 3 double-width GPUs or NPUs are supported in 2U.

Data Center Modular Hardware System (DC-MHS)

The Open Compute Project (OCP) DC-MHS aims to standardize interfaces and form factors for modular data center infrastructure that can be standardized across multi-vendor platforms. Supermicro X14 CloudDC servers utilize DC-MHS-defined common form factors for Host Processor Modules (similar to motherboards) and Security, Control, and Management (SCM) modules, meaning an upgrade or replacement of the BMC or BIOS only requires the changing of a single module, not an entire motherboard. By adopting CloudDC systems with DC-MHS, operators can reduce complexity and simplify deployment, servicing, and maintenance for large-scale data centers.

Powered by Intel® Xeon® 6 Processors

The new Intel Xeon 6 processors allow optimization of CloudDC systems for a range of cloud and enterprise workloads, with socket compatibility for processors with P-cores and E-cores. For scale-out and cloud-native workloads, Intel Xeon 6700 series processors with E-cores are performance-per-watt optimized with

high core density and high-throughput performance. For more compute intensive cloud and enterprise compute workloads, Intel Xeon 6700/6500 series processors with P-cores can provide maximum performance-per-core, with up to 47% more performance cores per socket than previous generation Xeon.



CloudDC	SYS-112C-TN	SYS-122C-TN	SYS-222C-TN
Processor Support	Single Intel® Xeon® 6700/6500 series processor with P-cores Single Intel® Xeon® 6700 series processor with E-cores Up to 350W TDP (air cooled) [†]	Single Intel® Xeon® 6700/6500 series processor with P-cores Dual Intel® Xeon® 6700 series processors with E-cores Up to 350W TDP (air cooled) [†]	Single Intel® Xeon® 6700/6500 series processor with P-cores Single Intel® Xeon® 6700 series processor with E-cores Up to 350W TDP (air cooled) [†]
Memory Slots & Capacity	16 DIMM slots; up to 1TB DDR5-6400 Support for MRDIMMs up to 8000MT/s (P-core only)	32 DIMM slots; up to 2TB DDR5-6400 Support for MRDIMMs up to 8000MT/s (P-core only)	32 DIMM slots; up to 2TB DDR5-6400 Support for MRDIMMs up to 8000MT/s (P-core only)
Management (via DC-SCM)	Networking via AIOM 1 dedicated RJ45 IPMI LAN port 2 USB 3.2 Gen1 ports (rear)	Networking via AIOM 1 VGA port 1 dedicated RJ45 IPMI LAN port 2 USB 3.0 ports (rear)	Networking via AIOM 1 VGA port 1 dedicated RJ45 IPMI LAN port 2 USB 3.0 ports (rear)
Motherboard	X145BHM	X14DBHM	X14DBHM
Form Factor	1U Rackmount 747mm/29.4" depth	1U Rackmount 755.1mm/29.7" depth	2U Rackmount 780mm/30.7" depth
Expansion Slots	2 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0) 1 DC-SCM	2 PCIe 5.0 x16 LP slots 1 PCIe 5.0 x8 LP slot 2 PCIe 5.0 x16 AIOM slots (OCP 3.0) 1 DC-SCM	Default 4 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x8 (in x16) FHFL slot 2 PCIe 5.0 x16 AIOM slots (OCP 3.0) 1 PCIe 5.0 x8 DC-SCM Option 1 2 PCIe 5.0 x16 FHFL slot(s) 1 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x16 AIOM slots (OCP 3.0) 1 DC-SCM
Drive Bays	8 hot-swap 2.5" NVMe/SATA/SAS drive bays (default) 12 hot-swap 2.5" NVMe/SATA/SAS drive bays (optional)	12 hot-swap 2.5" NVMe/SAS/SATA drive bay	24 hot-swap 2.5" NVMe/SATA/SAS hybrid drive bays
Cooling	8 counter-rotating 4cm fans	8 counter-rotating 4cm fans	4 heavy duty 8cm fans
Power Supply	Redundant 1000W Titanium level (96%)	Redundant 1000/2000W Titanium level (96%)	Redundant 2000W Titanium level (96%)

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