Supermicro MegaDC

The First Commercial Off The Shelf (COTS) Systems Designed Exclusively for Hyperscale Datacenters

Transform Your Datacenter TCO with Supermicro servers featuring the New 2nd Gen Intel® Xeon® Scalable Processors
Meet the all-new Supermicro MegaDC
Optimized for Rapid Large-Scale Deployments and Highest Performance-per-Dollar with Open Standards including OpenBMC and OCP V3.0 SFF Cards

**BETTER**
Optimized for Hyperscale Infrastructures and Cost-Effectiveness

- Highly versatile and flexible platforms optimized for scalable high-performance compute, database/Big Data, AI/GPU, software-defined storage and I/O optimized applications
- Cost and performance optimizations at all component levels to deliver best performance, reliability, and efficiency
- Extended support of open standards including OpenBMC, OCP 3.0 SFF Cards, and OCP power supplies (for 2U models)

**FASTER**
Rapid Deployment and Highest Performance

- Improved performance/dollar with the new 2nd Gen Intel® Xeon® Scalable processors (Cascade Lake-R), 16 DIMM slots, and onboard 25G Ethernet
- More reliable and faster-to-replace drives with new slim storage drawer design
- Reduced infrastructure deployment times with bulk packaging

**GREENER**
Reduced Cooling Requirements and Lower Impact on the Environment

- Optimized mechanical designs to maximize airflow to CPUs, memory, and GPUs
- Low resistance 12V single-source power distribution increases system reliability and energy efficiency
- Better e-waste management with bulk packaging and options for included accessories
1U Compute
Compact Server with Onboard 25G Networking and AIOI

MegaDC Series

1U Storage
Top-Loading Storage Featuring New Slim Storage Drawer Design

www.supermicro.com/megadc

1U Compute
Compact Server with Onboard 25G Networking and AIOI

MegaDC Series

2U GPU
2 Double-Wide (FHFL) Active- and Passive-Cooled GPUs

2U I/O
Flexible I/O 5 Low-Profile Cards

2U Compute
3.5" Storage and Processing Built to Scale

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MegaDC 1U Compute

The 1U Compute node is a scalable, high-performance, and cost-efficient system with flexible I/O options optimized for general-purpose compute workloads. Designed exclusively for rapid large-scale deployments in hyperscale infrastructure, the short-depth chassis design can be easily deployed to standard 19" racks with front hot-swap drive bays and redundant power supplies for easy access and maintenance.

In addition to the dual 25G onboard Ethernet, the 1U system supports the new flexible Supermicro AIM networking adapters or any qualified OCP 3.0 card for extra I/O flexibility and capacity. The dual onboard M.2 SSD slots are ideal for O/S installation with optional high availability features through VROC.

SSG-1129P-ACR10N4L

TCO and TCE Optimized Compact Servers for Hyperscale Datacenters

- Easy-to-deploy compact chassis
- Chassis depth 23.5" (597mm)
- Rail kits included
- Dual Socket P (LGA-3647)
- Up to 205W CPU TDP
- Up to 2nd Gen Intel® Xeon® Scalable processors
- 10 front hot-swap 2.5" SAS/ SATA (4 hybrid NVMe)
- 2 onboard M.2 slots (NVMe/SATA)
- Redundant power supplies
- 800W rated output
- 80 Plus Platinum
- 16 DIMM slots
- DDR4-2933MHz
- 2 SFP28 onboard 25GbE
- 2 PCI-E 3.0 x16 LP and 1 PCI-E 3.0 x8 LP slots
- RAID: 0, 1, 5, 6, 10, 50

Supermicro® X11 MegaDC

A Highly Flexible, Future-Proof and Feature-Rich Powerhouse

The X11 MegaDC is specifically engineered to deliver the highest performance, flexibility and cost-effectiveness to the new MegaDC systems.
The 1U storage drawer system is a high-density compute and storage platform designed with multiple tiers of cold, warm, and hot storage partitions in a 1U space, and is optimized for maximum cost-effectiveness and efficiency with software-defined storage (SDS) architectures:

- Hot Storage: Intel® Optane™ persistent memory and front hot-swap NVMe drives
- Warm Storage: Front hot-swap NVMe and/or internal hot-swap SAS3 SSDs
- Cold Storage: Internal hot-swap SATA3 350/7200s

The system features a new patented internal cable management design that increases system reliability, speeds up system deployment and maintenance, and reduces cabling and rack hardware costs.

SSG-6119P-ACR12N4L

Best Performance, Serviceability, and Density Featuring Slim Storage Drawer

- Internal storage drawer tray
- Front LED matrix for internal drives
- Chassis depth 37” (940mm)
- Dual Socket P (LGA-3647)
- Up to 2nd Gen Intel® Xeon® Scalable processors
- 12 hot-swap 3.5” SAS/SATA
- 4 front hot-swap NVMe/SATA (7mm)
- 2 onboard M.2 slots (NVMe/SATA)
- Redundant power supplies
- 800W rated output
- 80 Plus Platinum
- 16 DIMM slots
- 2-1-1-1 DIMM channel topology optimized for Intel® PMem
- DDR4-2933MHz
- 2 SFP28 onboard 25GbE
- 1 AIOM slot (x16 link)
- 2 PCI-E 3.0 x16 LP, and 1 PCI-E 3.0 x8 LP slots

STORAGE

MEMORY

POWER

I/O

CPU

FORM-FACTOR

• High-density 1U form-factor
• Internal cable management reduces e-waste and eliminates potential connection faults
• Dual PCI3/2 and large memory footprint for demanding data-driven workloads
• onboard 25GbE Ethernet with optional 40GbE networking
• Non-expander storage backplane for full I/O bandwidth
MegaDC GPU System

The 2U GPU system is a flexible Machine Learning platform in a 19" 2U form-factor that supports multiple double-wide and/or single-wide GPU configurations with either active or passive cooling solutions:

- 2 full-length, double-wide (x16) GPU cards for general-purpose GPU applications
- 5 low-profile, single-wide GPU cards for Machine Learning applications
- 2 full-length, double-wide (x16) and 2 low-profile, single-wide GPU cards (x16 and x8)

The system also supports a wide range of storage and networking options, including hot-swap U.2 and onboard M.2 NVMe SSDs, Intel® Optane™ PMem, dual onboard 25Gb Ethernet and a flexible AIOM slot.

SSG-6129P-ACR12N4G

Performance and Cost-Effective System Optimized For Rapid Multi-GPU Deployments

- Optimized design to support multiple GPUs with active or passive cooling solutions
- Chassis depth 25.5" (647mm)
- Dual Socket P (LGA-3647)
- Up to 205W CPU TDP
- Up to 2nd Gen Intel® Xeon® Scalable processors
- 12 front hot-swap 3.5" SAS/SATA (4 hybrid NVMe)
- 2 onboard M.2 slots (NVMe/SATA)
- Common redundant power supplies (CRPS)
- 1600W/2000W rated output
- 80 Plus Titanium
- 16 DIMM slots
- 2-1-1 DIMM channel topology optimized for Intel® PMem
- DDR4-2933MHz
- 2 SFP28 onboard 25GbE
- 1 AIOM slot (x16 link)
- 5 PCI-E 3.0 slots (see the other side for more details)

STORAGE

- Configure up to 2 double-wide or 3 single-wide GPU cards
- Optimized system cooling design to support multiple GPUs with active or passive cooling solutions
- Dedicated 100V PMU power supply with optional 2000W supports standard CPO’s modules

MEMORY

- Dual processors (up to 205W TDP) and 16 DIMM slots
- Up to 2 double-wide GPUs at full PCI-E x16 link speed
- Onboard 25GbE ports and additional slot for AIOM options
- Up to 4 hot-swap 2.5" HHDs and 2 onboard M.2 SSDs

POWER

- 12V high voltage power transmission to serverboard, GPUs, and storage backplane
- Improved cooling and power efficiency with few cables
- No-compromise system reliability under the most demanding workloads

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BETTER

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**MegaDC I/O Optimized**

Cost-Effective Design Optimized For I/O Expandability at Scale

The MegaDC 2U I/O Optimized configuration brings the best cost-effectiveness for hosting multiple networking interface cards, standard PCIe-based Datacenter SSDs, and many PCIe expansion possibilities to hyperscale datacenters.

The tool-less design for PCIe slots and servicing front hot-swappable drive bays allow easy installation and maintenance.

**SSG-6129P-ACR12N4L+**

- Optimized design for up to 5 PCIe expansion cards
- Chassis depth 25.5” (647mm)
- Up to 12 hot-swap 2.5” or 3.5” drive bays

**STORAGE**
- 12 hot-swap 2.5" SAS/SATA (4 hybrid NVMe)
- 4 onboard M.2 slots (NVMe/SATA)

**MEMORY**
- Up to 5 PCE-6.3 0 low-profile cards

**POWER**
- Common redundant power supplies (XRPS)
- 750W rated output
- 80 Plus Platinum
- 16 DIMM slots
- 2-1-1 DIMM channel topology optimized for Intel® PMem
- DDR4-2933MHz
- 2 SFP28 onboard 25GbE
- 1 AIOM slot (x16 link)
- 2 PCI-E 3.0 x16, and 3 PCI-E 3.0 x8 LP slots

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**MegaDC 2U Compute**

High-Performance Platform For General Purpose Compute and Storage Applications

The 2U Compute node is a low-cost and versatile system that can be easily deployed at scale for general-purpose computing and storage applications for hyperscale infrastructure.

Supporting the new 2nd Generation Intel® Xeon® Scalable processors, the 2U Compute node is designed to operate at the highest performance, frequencies, and core counts with free-air cooling.

**SSG-6129P-ACR12N4L**

- Standard 2U rackmount
- Chassis depth 25.5” (647mm)

**STORAGE**
- 12 hot-swap 3.5" SAS/SATA (4 hybrid NVMe)
- 4 onboard M.2 slots (NVMe/SATA)

**MEMORY**
- Up to 5 PCE-6.3 0 low-profile cards

**POWER**
- Common redundant power supplies (XRPS)
- 750W rated output
- 80 Plus Platinum
- 16 DDR4 DIMMs
- 2 SFP28 onboard 25GbE
- 1 PCIe 3.0 x16, and 1 PCIe 1.0 x8 LP slots
AIOM Networking Options
Delivering Flexibility and Scalability From the Edge to Datacenters

With AIOM, datacenters may enjoy longer refresh cycles and receive better ROI.
As newer I/O technologies become available, it is easier and more cost effective
to upgrade the I/O controller independently without triggering an entire
datacenter refresh.

For large scale cloud datacenters, AIOM provides improved mechanical and
thermal designs (improved airflow) and increased serviceability, allowing the
AIOM modules to be serviced and/or replaced without opening the chassis.

Supermicro AIOM (Advanced I/O Module) extends the OCP 3.0 specification with
unique features that tackle some of the biggest challenges such as thermal
control, ability to support a wide range of networking options in a small size
form factor, remote management, and quick and simple deployment.

FUTURE-PROOF I/O
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Supermicro offers the broadest and deepest
portfolio of advanced technology server and
storage systems in the IT industry. This offers several
advantages to our customers. First, customers
can readily select the most optimized solutions to
satisfy their business requirements, helping them to
reduce their costs and improve the quality and time-
to-market (TTM) of their offerings. Additionally,
the breadth and depth of Supermicro’s product
line provides the efficiency, cost, and reduced
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Better. Faster. Greener. Networking Options
Expect Better Datacenter Performance, TCO & Impact on the Environment

FUTURE-GENERATION SUPERMICRO NETWORKING
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More AIOM options are coming soon!

AOC-A25G-A2M
Dual-Port 25 Gigabit Ethernet
2x SFP28
7.7 Watts
Broadcom® BCM57414

AOC-AG-i4SM
Quad-Port Gigabit Ethernet
4x SFP
4.4 Watts
Intel® I350-AM4

4x 10G RJ45/SFP+ + 2x 10G QSFP28
2x 25G SFP28 + 2x 10G RJ45
2x 100G QSFP28

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Systems featuring 2nd Gen Intel® Xeon® Scalable processors

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Supermicro®, the leading innovator in high-performance, high-efficiency server technology is a premier provider of advanced server Building Block Solutions® for Datacenter, Cloud Computing, Enterprise IT, Hadoop/Big Data, HPC and Embedded Systems worldwide. Supermicro is committed to protecting the environment through its “We Keep IT Green®” initiative and provides customers with the most energy-efficient, environmentally-friendly solutions available on the market.

Learn more at www.supermicro.com

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