Supermicro SIOM – Most Flexible, Cost-Optimized Server I/O

The Supermicro[®] Super I/O Module (SIOM) delivers up to 50% of I/O cost savings and freedom to select networking options from 1Gb/s to100Gb/s through a Supermicro optimized form factor that is easy to scale, service and manage across a broad range of Supermicro server and storage systems. The SIOM also enables a higher degree of system integration and increased capacity by saving PCI-E slots that are traditionally reserved for add on cards.

Key Features

- Mezzanine card design: frees a regular PCI-E slot on the motherboard for additional Add-on Cards (AOCs).
- GbE, 10GbE (SFP+ or RJ45), 25GbE, 50GbE, 100GbE, InfiniBand, Omni-Path and more.
- Better flexibility and cost effectiveness for upgrading networking capabilities without replacing the entire system or motherboard.
- Optimized mechanical and thermal design.

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- Better cost compared to standard PCI-E networking adapters.
- NC-SI for IPMI support
- Asset Management features

SIOM Benefits

Flexible on-motherboard I/O controllers significantly reduces I/O CapEx and increases the flexibility of I/O configuration.

For applications that require maximum I/O capacity or for I/O intensive applications, SIOM frees up PCI-E slots for additional I/O expansions.

Furthermore, since systems and motherboards are not tied to a fixed onboard I/O controller at the time of purchase, users are open to a broad array of upgrade options even after the deployment.

With SIOM, data centers 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 data center refresh.

Only Supermicro offers a consistent SIOM design across a broad spectrum of the product lines, versus limiting this feature to only the most premium and proprietary models.

Future Proof I/O

Until now, customers have had to tradeoff I/O cost savings versus I/O flexibility (SIOM cards are up to 50% lower cost than traditional AOCs).

The flexibility challenge of making purchase decisions on systems shipping with embedded on-board networking I/O has been the lack of future proofing versus AOCs, which can be uniquely customized and potentially upgraded for specific applications in a constantly evolving data center.

With SIOM, customers can achieve optimal cost with future proof flexibility.

Large Scale Deployment and Serviceability

For large scale cloud data centers, SIOM provides improved mechanical and thermal designs (improved airflow) and increased serviceability allowing the SIOM modules to be serviced and/or replaced without opening the chassis (on selected systems only).

Asset Management

Asset Management allows users to monitor SIOM cards in selected Supermicro server and storage systems. With Supermicro Server Management Utilities, users will be able to monitor the following:

Supermicro SIOM

- Model name
- PCB revision
- Serial Number
- MAC addresses
- Temperature
 - (on selected SIOM cards only)

Built-in Management Interface

The Network Controller Sideband Interface (NC-SI) enables the connectivity of a baseboard Management controller (BMC) to one or multiple Network Interface Controllers (NIC) in server systems for the purpose of enabling out-of-band remote manageability. This feature simplifies data center wiring or can provide additional redundancy of IPMI/BMC connectivity.

SIOM Card SKUs



AOC-MGP-i2



AOC-MGP-i4



AOC-MTGN-i2S





AOC-MTG-i4T



AOC-MTG-i4S

SKU#	Availability	Protocols	Chipsets	Ports	Power
AOC-MGP-i2	Released	Ethernet	Intel [®] i350-AM2	2 RJ45 (1Gb/port)	3.7W
AOC-MGP-i4	Released	Ethernet	Intel [®] i350-AM4	4 RJ45 (1Gb/port)	4.4W
AOC-MTGN-i2S	Released	Ethernet	Intel [®] 82599ES	2 SFP+ (10Gb/port)	7.2W
AOC-MTG-i4S	Released	Ethernet	Intel [®] XL710-BM1	4 SFP+ (10Gb/port)	7W
AOC-MTG-i2T	Q3'16	Ethernet	Intel [®] X550-AT2	2 RJ45 (10GBase-T)	13W
AOC-MTG-i4T	Q3'16	Ethernet	2x Intel [®] X550-AT2	4 RJ45 (10GBase-T)	26W
AOC-MH25G-b2S2G	Q3'16	Ethernet	Broadcom [®] BCM57414 Intel [®] i350	2 SFP28 (25Gb/port) 2 RJ45 (1Gb/port)	9W
AOC-MH25G-m2S2T	Q3'16	Ethernet	Mellanox [®] CX-4 Lx EN Intel [®] X550	2 SFP28 (25Gb/port) 2 RJ45 (10GBase-T)	25W
AOC-MHIBF-m1Q2G	Q3'16	Ethernet InfiniBand	Mellanox [®] CX-3 Pro Intel [®] i350	1 QSFP (56Gb/port) 2 RJ45 (1Gb/port)	9W
AOC-MHIBF-m2Q2G	Q3'16	Ethernet InfiniBand	Mellanox [®] CX-3 Pro Intel [®] i350	2 QSFP (56Gb/port) 2 RJ45 (1Gb/port)	11W
AOC-MHFI-i1C	Q3'16	Omni-Path	Intel [®] OP HFI ASIC (Wolf River WFR-B)	1 QSFP28 (100Gb/port)	15W

Visit Supermicro.com/Products/Accessories/ for the latest list of options.

Supported Server and Storage Systems



2U TwinPro^{2™} Server Systems

- SYS-2028TP-HTR-SIOM
- SYS-2028TP-HC0R-SIOM
- SYS-2028TP-HC1R-SIOM
- SYS-6028TP-HTR-SIOM
- SYS-6028TP-HC0R-SIOM
- SYS-6028TP-HC1R-SIOM



2U SuperStorage Simply Double 24-Bay Server

- SSG-6028R-E1CR24N
- SSG-6028R-E1CR24L



2U SuperStorage Simply Double 48-Bay Server

- SSG-2028R-NR48N
- SSG-2028R-E1CR48N
- SSG-2028R-E1CR48L



4U SuperStorage HyperScale 60-Bay Server

- SSG-6048R-E1CR60N
- SSG-6048R-E1CR60L

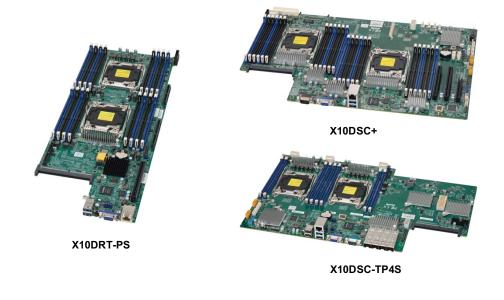


4U SuperStorage HyperScale 90-Bay Server

SSG-6048R-E1CR90L

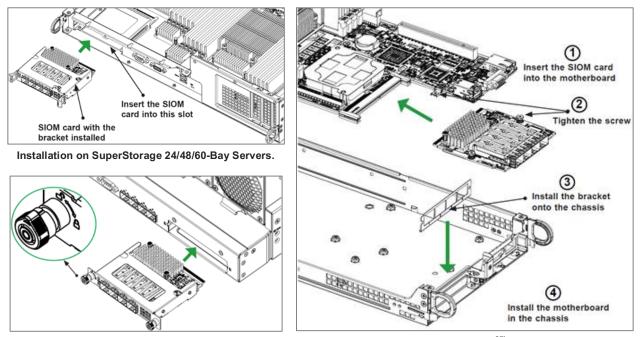
Visit Supermicro.com/Products for the latest list of supported systems.

Supported Motherboards



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Installation Diagrams



Installation on SuperStorage 90-Bay Servers.

Installation on TwinPro^{2™} Servers.