The Supermicro AOC-S100G-m2C provides exceptionally high performance at 100Gb/s Ethernet connectivity. Utilizing the Mellanox ConnectX®-4 EN chipset with features such as VXLAN and NVGRE, this card offers network flexibility, high bandwidth with specific hardware offload for I/O virtualization, and efficiently optimizes bandwidth demand from virtualized infrastructure in the data center or cloud deployments. The AOC-S100G-m2C supports the RoCE specification with CPU offload, delivering low-latency and high-efficiency over Ethernet networks. Supermicro® Asset Management and thermal detection provide an extra layer of controller health management and peace of mind. The Supermicro AOC-S100G-m2C is the building block of choice for the next generation of high speed Ethernet data center networks.

Key Features:
- Dual QSFP28 Connectors
- Low-Profile, Short Length Standard Form Factor
- PCI-E 3.0 x16
- Mellanox ConnectX®-4 EN Ethernet Controller
- Asset Management Features with thermal sensor
- Hardware offloads for VXLAN, NVGRE and GENEVE encapsulated traffic
- Low latency RDMA over Converged Ethernet (RoCE)
- SR-IOV compliant
- Jumbo Frames support up to 9.6KB
- PXE Support
- Erasure Coding Offload
- NC-SI for IPMI support
- RoHS compliant 6/6

Specifications

**General:**
- Mellanox ConnectX®-4 EN dual port 100Gbps controller
- Compact size low-profile standard form factor
- PCI-E 3.0 x16 interface
- Dual QSFP28 connectors
- Max power consumption: 16.3W

**Host Interface:**
- PCI-E 3.0 x16
- Message Signal Interrupt (MSI-X)

**Networking Features:**
- IEEE 802.2bj, 802.3bm 100 Gigabit Ethernet
- 25G Ethernet Consortium 25, 50 Gigabit Ethernet
- IEEE 802.3ba 40 Gigabit Ethernet
- IEEE802.3ae 10 Gigabit Ethernet
- IEEE802.3ad Energy Efficient Ethernet
- IEEE 802.3ap based auto-egotiation and KR startup
- IEEE 802.2ad, 802.1AX Link Aggregation
- IEEE 802.1Q, 802.1p VLAN tags and priority
- IEEE802.1Qau (QCN) – Congestion Notification
- IEEE 802.1Qeb (ETS)
- IEEE 802.1Qbb (PFC)
- IEEE 802.1Qbg
- IEEE 802.1Qaz (ETS)
- IEEE 802.1Qbg
- IEEE 1588v2
- Jumbo frame support (9.6KB)

**CPU Offload Features:**
- RDMA over Converged Ethernet (RoCE)
- TCP/UDP/IP stateless offload
- LSO, LRO, checksum offload
- RSS, TSS, HDS, VLAN insertion/stripping. Receive flow steering
- Intelligent interrupt coalescence

**Storage Offloads:**
- RAID offload – erasure coding (Reed-Solomon) offload

**Overlay Networks:**
- Stateless offloads for overlay networks and tunneling protocols
- Hardware offload of encapsulation and decapsulation of NVGRE and VXLAN overlay networks

**Hardware-Based I/O Virtualization:**
- Single Root IOV
- Multi-function per port
- Address translation and protection
- Multiple queues per virtual machine
- Enhanced QoS for vNICs
- VMware NetQueue support

**Operating Systems/Distribution:**
- RHEL/CentOS
- Windows
- FreeBSD
- VMware
- OpenFabrics Enterprise Distribution (OFED)
- OpenFabrics Windows Distribution (WinOF)

**Management Features:**
- NC-SI for IPMI support
- Asset Management with Thermal Sensor

**Remote Boot:**
- Remote boot over iSCSi
- PXE and UEFI

**Operating Conditions:**
- Operating temperature: 0°C to 55°C (32°F to 131°F)
- Storage temperature: -40°C to 70°C (-40°F to 158°F)
- Storage humidity: 90% non-condensing relative humidity at 35°C

**Physical Dimensions:**
- Card PCB dimensions: 16.76cm x 6.89cm (6.6in x 2.71in) (LxW)
- Height of end brackets: standard – 12cm (4.725in), low-profile – 8cm (3.15in)

**Weight:**
- 116.12g (0.2560lb)

**Supported Platforms:**
- Supermicro® motherboards with minimum PCI-E 3.0 x16 expansion slot
- Supermicro® server systems with low-profile or full-height PCI-E 3.0 x16 expansion slot
- NC-SI feature is only supported by Supermicro® motherboards with corresponding NC-SI connectors

For the most current product information, visit: www.supermicro.com
### Similar Products

<table>
<thead>
<tr>
<th>Product Part Number</th>
<th>Form Factor</th>
<th>Speed</th>
<th>PCI-E</th>
<th>Connector Type</th>
<th>Total Ports</th>
<th>Chipset</th>
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<tbody>
<tr>
<td>AOC-S40G-i1Q</td>
<td>Standard Low Profile</td>
<td>40GbE</td>
<td>PCI-E 3.0 x8</td>
<td>QSFP+</td>
<td>1</td>
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</tr>
<tr>
<td>AOC-S40G-i2Q</td>
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<td>QSFP+</td>
<td>2</td>
<td>Intel® XL710</td>
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<tr>
<td>AOC-S25G-m2S</td>
<td>Standard Low Profile</td>
<td>25GbE</td>
<td>PCI-E 3.0 x8</td>
<td>SFP28</td>
<td>2</td>
<td>Mellanox ConnectX®-4 Lx EN</td>
</tr>
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### Optional Parts List

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<th>Description</th>
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<td>CLB-NTWK-0942-MQ28C05M</td>
<td>Ethernet, QSFP28, 100GbE, Passive, 0.5M</td>
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<tr>
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<td>Ethernet, QSFP28, 100GbE, Passive, 1M</td>
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<td>CLB-NTWK-0942-MQ28C15M</td>
<td>Ethernet, QSFP28, 100GbE, Passive, 1.5M</td>
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<td>CLB-NTWK-0942-MQ28C25M</td>
<td>Ethernet, QSFP28, 100GbE, Passive, 2.5M</td>
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<td>CLB-NTWK-0942-MQ28C30M</td>
<td>Ethernet, QSFP28, 100GbE, Passive, 3M</td>
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<td>CLB-NTWK-0943-SQ28C10M</td>
<td>Ethernet, QSFP28, 100GbE, Passive, 1M</td>
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<tr>
<td>CLB-NTWK-0932-QS28C50M-1</td>
<td>Ethernet, 100GbE/QSFP28 to 4x 25GbE/SFP28, Passive, 5M</td>
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<tr>
<td>CLB-NTWK-0998-QS28C50M-2</td>
<td>Ethernet, 100GbE/QSFP28 to 4x 25GbE/SFP28, Passive, 5M</td>
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<tr>
<td>AOM-100GBE-5RA-FT</td>
<td>QSFP transceiver module for short range fiber cables (up to 100m), 100G, 850nm, MMF</td>
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