

AOC-MHIBF-m2Q2G & AOC-MHIBF-m1Q2G



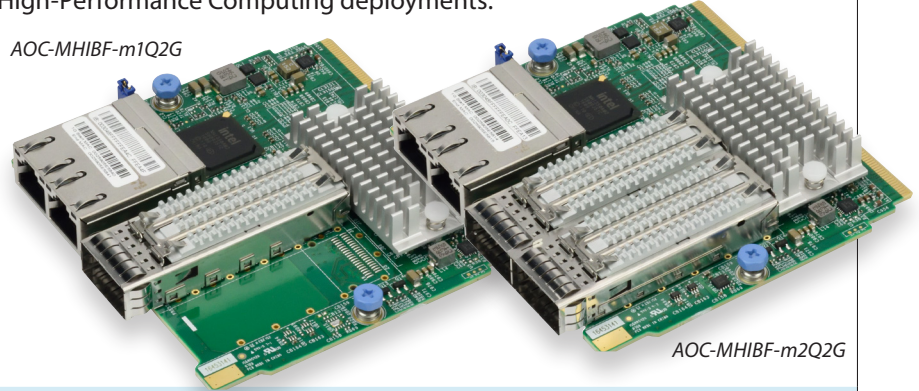
The Ultimate InfiniBand FDR Adapters, in Supermicro Super I/O Module (SIOM) Form Factor

The AOC-MHIBF-m2Q2G and AOC-MHIBF-m1Q2G are the most powerful InfiniBand controllers in the IT market. In small form factor SIOM, available as part of an integrated solution with Supermicro servers, they provide both InfiniBand FDR 56Gbps and 40Gbps Ethernet as well as remote server management through a dedicated Gigabit LAN controller. Based on Mellanox® ConnectX-3 Pro and Intel® i350 controllers, they provide the highest performing and most flexible interconnect solutions for Supermicro servers in Enterprise Data Centers and High-Performance Computing deployments.

Key Features:

- Super I/O Module (SIOM) Form Factor
- Mellanox® ConnectX-3 Pro InfiniBand FDR controller
- Dual and Single QSFP connector models
- Up to 56Gbps InfiniBand or 40Gbps Ethernet
- Virtual Protocol Interconnect (VPI)
- VXLAN and NVGRE
- Intel® i350 GbE controller
- Dual RJ45 Connectors
- NC-SI for Remote Management
- Asset Management Features with thermal sensor
- RoHS compliant 6/6

AOC-MHIBF-m1Q2G



AOC-MHIBF-m2Q2G

Specifications

General:

- Super I/O Module (SIOM) Form Factor
- Mellanox® ConnectX-3 Pro FDR controller
- Intel® i350 GbE controller
- Dual QSFP ports and Dual RJ45 port (AOC-MHIBF-m2Q2G)
- Single QSFP ports and Dual RJ45 port (AOC-MHIBF-m1Q2G)

Cables Support:

- InfiniBand FDR: QSFP 56Gbps Copper cables
- GbE: RJ45 Category 5/5e up to 100m

Power Consumption:

- AOC-MHIBF-m2Q2G: Maximum 11W
- AOC-MHIBF-m1Q2G: Maximum 9W

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: 92mm (3.62in) x 87.1mm (3.43in) (W x D)

Supported Platforms:

- Supermicro® motherboards with Super I/O Module slot
 - Supermicro® server systems with Super I/O Module slot
- See SIOM Compatibility Matrix online
http://www.supermicro.com/support/resources/AOC/AOC_Compatibility_SIOM.cfm

Please note that this product is sold only as part of an integrated solution with Supermicro server systems

InfiniBand FDR QSFP Specifications

Connectivity :

- Interoperable with InfiniBand or 40GbE switches
- Passive copper cable with ESD protection

InfiniBand:

- IBTA Specification 1.2.1 compliant
- Hardware-based congestion control
- 256 to 4Kbyte MTU, 2GB messages

Enhanced InfiniBand:

- Hardware-based reliable transport
- Collective operations offloads
- Hardware-based reliable multicast
- Extended Reliable Connected transport
- Enhanced Atomic operations

Ethernet:

- IEEE 802.3ba 40 Gigabit Ethernet
- IEEE Std 802.3ad Link Aggregation
- IEEE Std 802.3az Energy Efficient Ethernet
- IEEE Std 802.1Q .1P VLAN tags and priority
- IEEE P802.1bb D1.0 Priority-based Flow Control
- IEEE 1588
- Jumbo frame support (9600B)

Hardware-based I/O Virtualization:

- Single Root IOV
- Address translation and protection
- Dedicated adapter resources
- Multiple queues per virtual machine
- Enhanced QoS for vNICs
- VMware NetQueue support

Overlay Networks:

- VXLAN and NVGRE

Additional CPU Offloads:

- RDMA over Converged Ethernet
- TCP/UDP/IP stateless offload
- Intelligent interrupt coalescence

FlexBoot™ Technology:

- Remote boot over InfiniBand
- Remote boot over Ethernet
- Remote boot over iSCSI

Protocol Support:

- Open MPI, OSU MVAPICH, Intel MPI, MS
- MPI, Platform MPI
- TCP/UDP, EoIB, IPoIB, RDS
- SRP, iSER, NFS RDMA
- uDAPL

Operating System Support:

- Citrix XenServer 6.1
- RHEL/CentOS 5.X and 6.X, Novell SLES10 SP4; SLES11 SP1, SLES 11 SP2, OEL, Fedora 14, 15, 17, Ubuntu 12.04
- Windows Server 2008/2012/2012 R2
- FreeBSD
- OpenFabrics Enterprise Distribution (OFED)
- OpenFabrics Windows Distribution (WinOF)
- VMware ESXi 4.x and 5.x

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GbE RJ45 Specifications

Ethernet and Virtualization Features:

- PC-SIG SR-IOV support
- Jumbo Frames support

Performance and Efficiency Features:

- Energy Efficient Ethernet (EEE)
- TCP/UDP, IPv4 and IPv6 checksum offloads to improve CPU usage
- Low Latency Interrupts

Management Features:

- Asset Management support on Supermicro® platforms
- Preboot eXecution Environment (PXE) support
- iSCSI Remote Boot Support
- NC-SI for Remote Management via Intel® i350 GbE RJ45 connector

Operating System Support:

- Windows Server 2012 R2, 2012, 2008 R2 (x64 Edition)
- Windows 8.1, 8, 7 (x64 Edition)
- RedHat Linux
- SUSE Linux
- FreeBSD
- UEFI
- VMWare

Available SKUs

SKUs	Part Number	Description
AOC-MHIBF-m2Q2G	AOC-MHIBF-m2Q2G	2-port InfiniBand FDR Adapter
	BKT-0122L	Swappable bracket for 2U+ chassis
AOC-MHIBF-m2Q2GM	AOC-MHIBF-m2Q2GM	2-port InfiniBand FDR Adapter
	BKT-0118L	Internal bracket
AOC-MHIBF-m1Q2G	AOC-MHIBF-m1Q2G	1-port InfiniBand FDR Adapter
	BKT-0123L	Swappable bracket for 2U+ chassis
AOC-MHIBF-m1Q2GM	AOC-MHIBF-m1Q2GM	1-port InfiniBand FDR Adapter
	BKT-0119L	Internal bracket

Optional Accessories

Product Part Number	Part Number	Description
QSFP Copper Cable	CBL-0490L	1M QSFP to QSFP InfiniBand FDR 56Gbs Passive Copper, PBF, 30AWG
QSFP Copper Cable	CBL-NTWK-0642	2M QSFP to QSFP InfiniBand FDR 56Gbs Passive Copper, PBF, 30AWG
QSFP Copper Cable	CBL-0496L	3M QSFP to QSFP InfiniBand FDR 56Gbs Passive Copper, PBF, 28AWG
QSFP Active Optical Cable	CBL-QSFP+56-AOC-3M	3M 56Gb/s QSFP to QSFP FDR Fiber Active Optical Cable
QSFP Active Optical Cable	CBL-QSFP+56-AOC-5M	5M 56Gb/s QSFP to QSFP FDR Fiber Active Optical Cable
QSFP Active Optical Cable	CBL-QSFP+56-AOC-10M	10M 56Gb/s QSFP to QSFP FDR Fiber Active Optical Cable
QSFP Active Optical Cable	CBL-QSFP+56-AOC-15M	15M 56Gb/s QSFP to QSFP FDR Fiber Active Optical Cable

Similar Products

Product Part Number	Form Factor	Speed	Connector Type	Total Ports	Chipset
AOC-MGP-i2	SIOM	1GbE	RJ45	2	Intel® i350
AOC-MGP-i4	SIOM	1GbE	RJ45	4	Intel® i350
AOC-MTGN-i2S	SIOM	10GbE	SFP+	2	Intel® 82599
AOC-MTG-i4S	SIOM	10GbE	SFP+	4	Intel® XL710
AOC-MTG-i2T	SIOM	10GbE	RJ45	2	Intel® X550
AOC-MTG-i4T	SIOM	10GbE	RJ45	4	Intel® X550
AOC-MH25G-m2S2T	SIOM	25GbE	SFP28	2	Mellanox® ConectX-4 Lx EN Intel® X550
		10GbE	RJ45	2	
AOC-MHIF-i1C	SIOM	Omni-Path	QSFP28	1	Intel® OP HFI ASIC

For the most current product information, visit:

www.supermicro.com