# AOC-CIBF-m1

SUPERMICRO®

Compact and Powerful InfiniBand FDR Adapter

The AOC-CIBF-m1 is the most compact, yet powerful, InfiniBand adapter in the market. Based on Mellanox® ConnectX-3 with Virtual Protocol Interconnect (VPI), it provides the highest performing and most flexible interconnect solution for servers used in Enterprise Data Centers and High-Performance Computing. The AOC-CIBF-m1 simplifies the system development by serving both InfiniBand and Ethernet fabrics in one hardware design. The AOC-CIBF-m1 is designed in a small microLP form factor to fit Supermicro Twin server systems.

Key Features
- **Single QSFP Connector**
- **MicroLP Form Factor**
- **PCI Express 3.0 (up to 8GT/s)**
- **Virtual Protocol Interconnect (VPI)**
- **1µs MPI ping latency**
- **Up to 56Gbps InfiniBand or 40Gbps Ethernet**
- **CPU offload of transport operations**
- **Application offload**
- **GPU communication acceleration**
- **End-to-end QoS and congestion control**
- **Hardware-based I/O virtualization**
- **Ethernet encapsulation (EoIB)**
- **RoHS compliant 6/6**
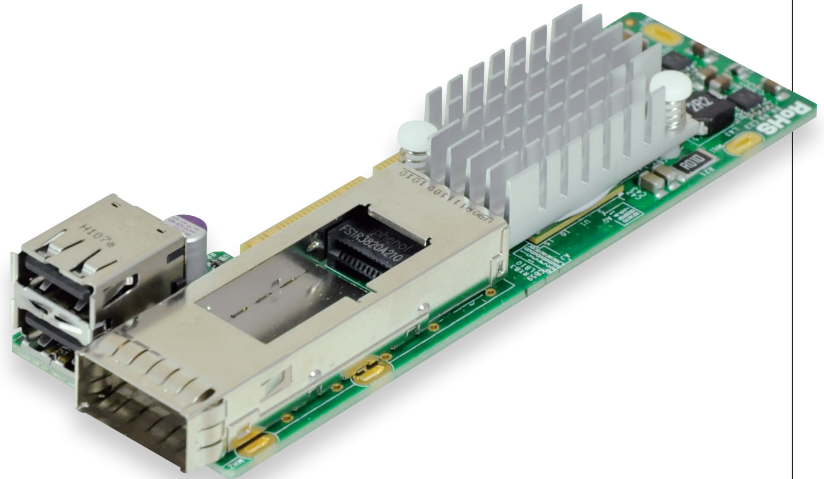
Specifications

General
- Mellanox® ConnectX-3 FDR controller
- Compact size microLP form factor
- Single QSFP port and dual USB 2.0 ports
- PCI-E 3.0 x8 (8GT/s) interface

Connectivity
- Interoperable with InfiniBand or 10/40GbE switches
- Passive copper cable with ESD protection
- Powered connectors for optical and active cable support

InfiniBand
- IBTA Specification 1.2.1 compliant
- Hardware-based congestion control
- 16 million I/O channels
- 256 to 4Kbyte MTU, 1Gbyte messages

Enhanced InfiniBand
- Hardware-based reliable transport
- Collective operations offloads
- GPU communication acceleration
- Hardware-based reliable multicast
- Extended Reliable Connected transport
- Enhanced Atomic operations

Ethernet
- IEEE Std 802.3ae 10 Gigabit Ethernet
- IEEE Std 802.3ba 40 Gigabit Ethernet
- IEEE Std 802.3ad Link Aggregation and Failover
- IEEE Std 802.3az Energy Efficient Ethernet
- IEEE Std 802.1Q, .1p VLAN tags and priority
- IEEE Std 802.1Qau Congestion Notification
- IEEE P802.1Qaz D0.2 ETS
- IEEE P802.1Qbb D1.0 Priority-based Flow Control
- Jumbo frame support (9.6KB)

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

Manageability Features:
- 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, SDP, RDS
- SRP, iSER, NFS RDMA
- uDAPL

Operating Systems/Distributions
- Novell SLES, Red Hat Enterprise Linux (RHEL), and other Linux distributions
- Microsoft Windows Server 2008/CCS 2003, HPC Server 2008
- OpenFabrics Enterprise Distribution (OFED)
- OpenFabrics Windows Distribution (WinOF)
- VMware ESX Server 3.5, vSphere 4.0/4.1

Physical Dimensions
- Card PCB dimensions (without end brackets):
- 12.32cm (4.85in) x 3.90cm (1.54in) (LxW)

Operating Condition
- Operating Temperature: 0ºC to 55ºC

Optional Accessories
- CBL-0490L: 39.4"(100cm) QSFP to QSFP InfiniBand FDR 56Gbs Passive Copper
- CBL-0496L: 118.1" (300cm) QSFP to QSFP InfiniBand FDR 56Gbs Passive Copper

Compliance/Environmental
- RoHS Compliant 6/6, Pb Free

SUPERMICRO® RoHS compliant

Supported Platforms
- Supermicro Twin Server Systems with microLP expansion slot

Please note that this product is only available as an integrated solution with Supermicro server systems