# AOC-UIBF-m1

SUPERMICRO®

Compact and Powerful InfiniBand FDR Adapter

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

Key Features
- Single QSFP Connector
- Low-profile UIO 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
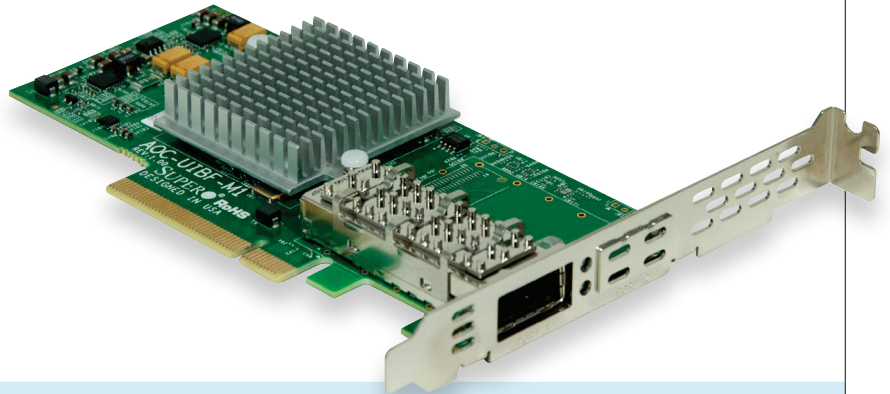
Specifications

- **General**
  - Mellanox® ConnectX-3 FDR controller
  - Compact size UIO form factor
  - Single QSFP port
  - 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

- **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): 14.29cm (5.63") x 6.35cm (2.50") (L x W)
  - Height of end brackets: Standard – 12cm (4.73"), low-profile – 7.94cm (3.13")
- **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 UIO Server Systems with UIO slot

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