AOC-ATG-b2TM & AOC-ATG-b2TG

Advanced 10Gb Ethernet controller in Supermicro Advanced I/O Module (AIOM)

Supermicro 10G Base-T Ethernet Adapter supporting Broadcom NetXtreme E-Series Supermicro AOC-ATG-b2TM/G features the latest Broadcom NetXtreme BCM57416 Ethernet controller that is designed for today's rapidly growing data center and cloud-scale applications. The auto-negotiation feature offers users backwards compatibility between 1GbE and 10GbE. The AOC-ATG-b2TM/G also features VXLAN, NVGRE and Geneve along with Broadcom TruFlow technology that enables users to reduce the CPU load and increase the VM density. In addition, NPAR (NIC Partitioning) technology provides flexible connectivity for different networking requirements. The Supermicro AOC-ATG-b2TM/G is a truly exceptional 10GbE Ethernet Adapter for your continuously growing cloud and data center applications.

Key Features

- **Advanced I/O Module (AIOM) Form Factor**
- **Broadcom BCM57416 Ethernet Controller**
- **Dual RJ45 Connectors**
- **PCI-E 3.0 x8 interface**
- **Asset Management Features with thermal sensor**
- **Broadcom Dual-Port 10Gbps**
- **Pass-through Energy Efficient Ethernet (IEEE STD 802.3az-2010)**

- **TruFlow**
- **NPAR (NIC Partitioning)**
- **VXLAN, NVGRE and Geneve**
- **vSAN/RDMA**
- **SR-iOV, VMQueue, NetQueue, Multiqueue**
- **Jumbo Frames (up to 9600-byte)**

AOC-ATG-b2TM

AOC-ATG-b2TG

Specifications

- **General**
  - Broadcom BCM57416 dual-port 10Gbps controller
  - PCI-E 3.0 x8 (8GT/s) interface
  - Dual RJ45 connectors
  - TruFlow Technology
- **Host Interface**
  - PCI-E 3.0 (8GT/s)
  - MCTP over SMBus
  - Function level Rest (FLR) support
  - Message Signal Interrupt (MSI-X)
- **Networking Features**
  - Jumbo Frames (up to 9600-byte)
  - 802.3x flow control
  - Link Aggregation (802.3ad)
  - Virtual LANs 802.1q VLAN tagging
  - Configurable Flow Acceleration
  - IEEE 1588 and Time Sync
  - vSAN/RDMA
- **Stateless Offload Features**
  - TCP, UDP, IPv4, IPv6 checksum offload
  - Large Send Offload
  - Receive Segment Coalescing
  - TCP segmentation Offload
  - Large Receive Offload
  - Receive Side Scaling (RSS)
  - Transmit Side Scaling (TSS)
- **NIC partitioning (NPAR)**
  - 16 Physical Functions
  - QoS per partition
  - Partitioning control via sideband communication
  - Up to 64MAC/VLAN filter per partition
  - Stateless offload configuration per partition
  - VEB/VEPA support
- **Virtualization Features**
  - NetQueue, VMQueue, and Multiqueue
  - Support for 128 Virtual Functions
  - VXLAN
  - NVGRE
  - Geneve
  - Edge Virtual Bridging (EVB)

- **Flow Processing**
  - Exact/Wildcard Match Flow Lookup
  - VLAN insertion/deletion
  - NAT/NAPT
  - Mirroring
- **Data Center Bridging**
  - Priority-based flow control (PFC; IEEE 802.1Qbb)
  - Enhanced transmission selection (ETS; IEEE802.1Qau)
  - Quantized congestion Notification (QCN; IEEE802.1Qau)
  - Data Center Bridging Capability eXchange (DCBX; IEEE802.1Qaz)
  - 8 traffic classes per port; fully DCB compliant per 802.1Qbb
- **Manageability**
  - Network Controller Sideband Interface (NC-SI)
  - PXE boot
  - Asset Management with Thermal Sensors
- **Power Savings**
  - ACPI compliant power management
  - PCI Express Active State Power Management (ASPM)
  - Ultra low-power mode
  - Pass-through Energy Efficient Ethernet (IEEE802.3az-2010)
- **Power Consumption**
  - Maximum power consumption: 14.1W
- **Operating Conditions**
  - Storage temperature: -40°C to 70°C (-40°F to 158°F)
  - Storage humidity: 90% non-condensing relative humidity at 35°C
- **Physical Dimensions**
  - PCB dimensions: 76mm x 115mm (W x D)

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

Available SKUs

SKUs	Bracket Included	Description
AOC-ATG-b2TM	BKT-0185L	2-port 10 Gigabit Ethernet Adapter with a 0.5U height bracket.
AOC-ATG-b2TG	BKT-0208L	2-port 10 Gigabit Ethernet Adapter with a 0.5U height narrow bracket for Grand Twin Front IO systems.

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