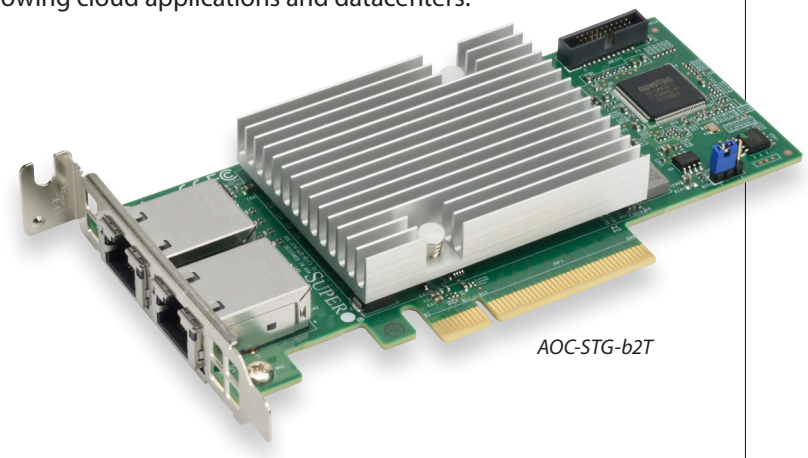
AOC-STG-b2T

Supermicro 10G Base-T Ethernet Adapter supporting Broadcom NetXtreme E-Series

Supermicro AOC-STG-b2T features the latest Broadcom NetXtreme BCM57416 Ethernet controller that is designed for today's rapid growing datacenter and cloud-scale applications. The auto-negotiation feature offers users backwards compatibility between 1GbE and 10GbE. The AOC-STG-b2T 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-STG-b2T is a truly exceptional 10GbE Ethernet Adapter for your continuously growing cloud applications and datacenters.

Key Features:

- **Dual RJ45 Connectors**
- **Low Profile, Short Length Standard Form Factor**
- **PCI-E 3.0 x8 interface**
- **Asset Management Features with thermal sensor**
- **Broadcom Dual-Port 10Gbps PCI Express Ethernet Controller**
- **Pass-through Energy Efficient Ethernet (IEEE STD 802.3az-2010)**
- **TruFlow**
- **NPAR (NIC Partitioning)**
- **VXLAN, NVGRE and Geneve**
- **Low latency RDMA over Converged Ethernet (RoCE)**
- **SR-iOV, VMQueue, NetQueue, Multiqueue**
- **Jumbo Frames (up to 9600-byte)**



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Specifications

- **General**
  - Broadcom BCM57416 dual-port 10Gbps controller
  - Compact size low-profile standard form factor
  - 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
  - RDMA over Converged Ethernet (RoCE)
- **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 and iSCSI 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: 13.1W
- **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: 14.224cm x 6.89cm (5.6in x 2.71in) (LxW)
  - Height of end brackets: standard – 12cm (4.725in), low-profile – 8cm (3.15in)

Please note that this product is sold only as part of an integrated solution with Supermicro server systems supporting low-profile or full-height PCI-E 3.0 x8 expansion slot

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