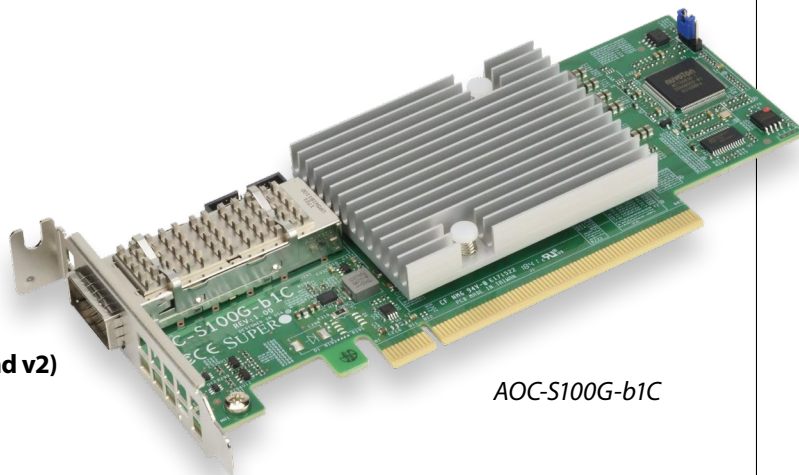


The Supermicro AOC-S100G-b1C is a leading-edge 100GbE controller featuring the Broadcom BCM57454 chipset. With features such as VxLAN, NVGRE, Geneve and RoCE, this card offers high degree of flexibility and performance for any data center or high performance computing workload. The support of RoCE provides CPU offload, delivering low-latency and high efficiency over Ethernet networks. Supermicro Asset Management and thermal detection provide an extra layer of controller health management and peace of mind. The Supermicro AOC-S100G-b1C high performance 100GbE adapter solution is an excellent solution in your data centers and high performance computing infrastructure.

Key Features:

- **Single QSFP28 Connector**
- **Low-Profile, Short-Length Standard Form Factor**
- **PCI-E 3.0 x16**
- **Broadcom BCM57454 Ethernet Controller**
- **Asset Management Feature with thermal sensor**
- **IEEE 1588 PTP and IEEE 802.1AS**
- **Energy Efficient Ethernet IEEE Std 802.2az**
- **Truflow**
- **NPAR**
- **Low Latency RDMA over Converged Ethernet (RoCE v1 and v2)**
- **VxLAN, NVGRE and Geneve**
- **NetQueue, VMQueue and MultipleQueue**
- **Jumbo Frames up to 9600-Byte**
- **NC-SI for IPMI support**
- **RoHS compliant 6/6**



Specifications

- **General:**
 - Broadcom BCM57454 single-port 100Gbps controller
 - Compact size low-profile standard form factor
 - PCI-E 3.0 x 16 (8GT/s) interface
 - QSFP28 connector
 - TruFlow Technology
 - Network Partition (NPAR)
- **Host Interface:**
 - PCI-E v3.0 (8GT/s)
 - MCTP over SMBus
 - MCTP over PCIe VDM
 - 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
- **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
 - Partitioning control via sideband communication
 - Stateless offload configuration per partition
 - VEB/VEPA support
- **Flow Processing:**
 - Exact/Wildcard Match Flow Lookup
 - VLAN insertion/deletion
 - NAT/NAPT
 - Mirroring
- **Virtualization Features:**
 - NetQueue, VMQueue, and Multiqueue
 - Support for 128 Virtual Functions
 - VXLAN
 - NVGRE
 - Geneve
 - Edge Virtual Bridging (EVB)
- **RDMA over Converged Ethernet (RoCE):**
 - RoCEv1 and RoCEv2
 - Data Center Bridging with RoCE
 - Up to 126 outstanding RDMA Reads or Atomics
 - Congestion Avoidance (RoCE flows tracking and rate adjustment)
- **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)
- **Operating Conditions:**
 - Storage temperature: -40°C to 70°C (-40°F to 158°F)
 - Storage humidity: 90% non-condensing relative humidity at 35°C
 - Typical Power Consumption: 17.8W (preliminary)
- **Physical Dimensions:**
 - 167.65mm x 68.90mm

Optional Parts List

	Product Part Number	Description
Copper Cable	CBL-NTWK-0942-MQ28C05M	Ethernet, QSFP28, 100GbE, Passive, 0.5M
	CBL-NTWK-0942-MQ28C10M	Ethernet, QSFP28, 100GbE, Passive, 1M
	CBL-NTWK-0942-MQ28C15M	Ethernet, QSFP28, 100GbE, Passive, 1.5M
	CBL-NTWK-0942-MQ28C20M	Ethernet, QSFP28, 100GbE, Passive, 2M
	CBL-NTWK-0942-MQ28C25M	Ethernet, QSFP28, 100GbE, Passive, 2.5M
	CBL-NTWK-0942-MQ28C30M	Ethernet, QSFP28, 100GbE, Passive, 3M
	CBL-NTWK-0943-SQ28C10M	Ethernet, QSFP28, 100GbE, Passive, 1M