# AOC-S200G-B1C

The Supermicro AOC-S200G-B1C is a high performance single port 200Gb/s Ethernet adapter utilizing the Broadcom NetXtreme E-Series BCM57508 controller with PCIe Gen 4 support and backward compatibility to PCIe Gen 3. It's using the shared hardware design of AOC-S100G-b2C by enabling the firmware setup to provide single port 200Gbps output in port1 while the port2 is disabled. This is a highly scalable NIC that is suitable for cloud-scale networking, storage, machine learning, data analytics and HPC. It is also a feature rich adapter that provides support to DCDB, VXLAN, NVGRE, Geneve and RoCE. Supermicro Asset Management and thermal detection provide an extra layer of controller health management and peace of mind. The Supermicro AOC-S200G-B1C 200GbE adapter is an excellent choice for your enterprise computing infrastructure.

Key Features:

- Dual Port QSFP56 connector (Port 1 supports 200Gb/s output and Port 2 is disabled)
- Low-Profile, Short Length Standard Form Factor
- PCI-E 4.0 x16 backward compatible to PCI-E 3.0 x16
- Broadcom BCM57508 Ethernet Controller
- Asset Management Feature with thermal sensor
- IEEE 1588 PTP and IEEE 802.1AS
- Energy Efficient Ethernet IEEE Std 802.3az
- TruFlow™
- NPAR
- Low Latency RDMA over Converged Ethernet (RoCE v1 and v2)
- VXLAN, NVGRE and Geneve
- NetQueue, VMQueue and Multiqueue
- Jumbo Frames up to 9600-byte
- NC-SI for IPMI support
- RoHS compliant 6/6

AOC-S200G-B1C
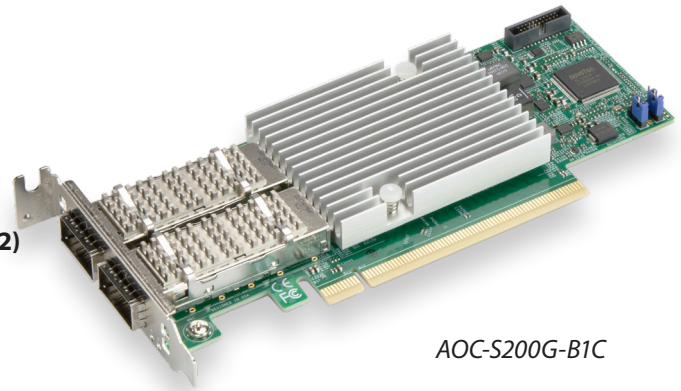
Specifications

- **General:**
  – Broadcom BCM57508 single port 200Gbps controller
  – Compact size low-profile standard form factor
  – PCI-E 4.0 x 16 (16GT/s) interface
  – Dual QSFP56 connectors (port 1: 200Gbps; port 2: Disabled)
  – TruFlow™ Technology
  – Network Partition (NPAR)

- **Host Interface:**
  – PCI-E v4.0 (16GT/s)
  – 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

- **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):**
  – 8 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 UEFI 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: 19.51W(MAX)

- **Physical Dimensions:**
  – 167.65mm x 68.90mm

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For the most current product information, visit:

Optional Parts List

	Product Part Number	Description
	CBL-NTWK-0956-QSFP56-3	200G, QSFP56, DAC, Straight, 3m, RoHS
Copper Cable	CBL-NTWK-0956-QSFP56-2	200G, QSFP56, DAC, Straight, 2m, RoHS 30awg
	CBL-NTWK-0956-QSFP56-1	200G, QSFP56, DAC, Straight, 1m, RoHS 26awg