# AOC-SGP-i2

The Most Compact and Cost Effective 2-port Ethernet Controller in the Market

With the AOC-SGP-i2, Supermicro has extended the boundaries of Ethernet technology to create the most compact, cost effective, and feature-packed 2-port Ethernet controller in the market, allowing it to fit easily into the tightest high-density server add-on card locations. With ultra-small footprint and rich power management technology feature set, the AOC-SGP-i2 represents the next step in the Gigabit Ethernet networking evolution for enterprise and data center environments.

Key Features
- **3.9-inch Length, Low-Profile Standard Form Factor**
- **Low-Profile Standard Form Factor**
- **PCI Express 2.1 (2.5GT/s or 5GT/s)**
- **2 RJ-45 ports**
- **Intel® I/O Acceleration Technology (I/O AT)**
- **VMDq, Next-Generation VMDq, and PC-SIG SR-IOV for Virtualized Environments**
- **Jumbo Frame Support up to 9.5KB**
- **IEEE 802.3az Energy Efficient Ethernet (EEE)**
- **Low Power Consumption (4W Typical)**
- **iSCSI Remote Boot Support**
- **Flexible I/O Virtualization and Quality of Service (QoS)**
- **PXE Boot Support**
- **RoHS compliant 6/6**

AOC-SGP-i2
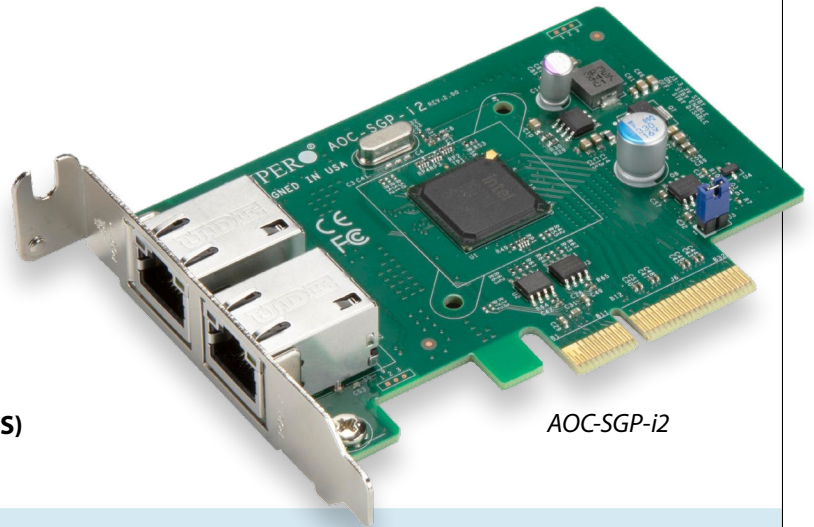
Specifications

- **General**
  - Intel® i350 GbE controller
  - Compact size low-profile standard form factor
  - PCI-E 2.1 x4 (2.5GT/s or 5GT/s) interface
  - Dual RJ-45 connectors
  - Intel® PROSet Utility for Windows® Device Manager
  - Intel® I/O Acceleration Technology (I/O AT)

- **Ethernet Features**
  - IEEE 802.3 auto-negotiation for speed, duplex, and flow control
  - IEEE 802.3x and 802.3z compliant flow control support
  - Automatic cross-over detection function (MDI/MDI-X)
  - 1Gb/s Ethernet IEEE 802.3, 802.3u, 802.3ab PHY specifications Compliant
  - IEEE 1588 protocol and 802.1AS implementation

- **Power Management and Efficiency**
  - IEEE 802.3az Energy Efficient Ethernet (EEE) which reduces power consumption of the PHY by about 50%
  - DMA Coalescing reduces platform power consumption
  - Active State Power Management (ASPM) support
  - LAN disable function
  - MAC Power Management controls
  - Low Power Link Up Link Speed Control
  - Power consumption: 4W

- **Virtualization Features**
  - VM to VM Packet forwarding (Packet Loopback)
  - Eight TX and RX queue pairs per port to support VMWare NetQueue and Microsoft VMQ
  - Flexible Port Partitioning: 32 Virtual Functions
  - PC-SIG SR-IOV implementation
  - IEEE 802.1q VLAN support
  - IEEE 802.1q advanced packet filtering

- **Performance Features**
  - TCP/UDP, IPv4 and IPv6 checksum offloads to improve CPU usage
  - Low Latency Interrupts
  - Tx TCP segmentation offload (IPv4, IPv6) increases throughput and lowers processor usage
  - Receive Side Scaling (RSS) for Windows environment, Scalable I/O for Linux environments
  - Jumbo Frames support up to 9.5K Bytes
  - Intelligent interrupt generation

- **Remote Boot Options**
  - Preboot eXecution Environment (PXE) support
  - iSCSI remote boot for Windows, Linux, and VMware

- **OS Support**
  - Windows® XP SP3, Vista SP2, 7 SP1 2003 SP2, 2008 SP2, 2008 R2S
  - RedHat EL 5.5, 6.0; SuSe SLES 10 SP3, 11 SP1
  - FreeBSD 8.0
  - VMware ESX 4.0, 4.1, 5.0
  - Xen

- **Cables Support**
  - RJ-45 Category-5/5e up to 100m

- 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)

- **Physical Dimensions**
  - Card PCB dimensions: 9.91cm (3.90in) x 6.90cm (2.73in) (L x H)
  - Height of end brackets:
    standard 12cm (4.725in),
    low-profile 7.94cm (3.13in)

Compliance/Environmental
RoHS Compliant 6/6, Pb Free

Supported Platforms
- Motherboards with minimum PCI-E x4 slot
- Server Systems with low-profile or full-height PCI-E x8 expansion slot

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

August 2020

For the most current product information, visit:
www.supermicro.com