

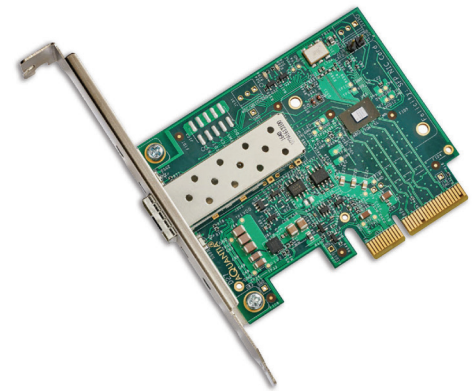
## AQN-100 10 Gigabit Ethernet Fiber Network Interface Card

Upgrade any existing Enterprise, gaming, or home networking platform with a reliable, cost-effective path

### Product Overview

The Aquantia AQN-100 is a SFP+ Network Interface Card (NIC) that allows you to upgrade your current server or high-performance workstation with reliable, high-performance network connectivity by adding a cost-effective solution, an open 10 Gigabit Ethernet (GbE) SFP+ copper or fiber SFP+ modules. SFP+ is an enhanced small form-factor pluggable version of the SFP that supports 10 Gbps data rates. This enhanced capability provides an easy path for upgrading any existing server or workstation to a copper or fiber network using your choice of SFP+ modules and supported multi-mode or single-mode fiber cabling.

The Aquantia AQN-100 NIC provides a solution for meeting the demands for greater network speed and addressing the requirement for increased bandwidth in your network infrastructure that is caused by an increasing number of network users and data-intensive applications such as multimedia streaming and large data file transfers. The Aquantia AQN-100 NIC lets you take advantage of the speed and stability of a 10GbE network, with data transfers up to 10 Gbps, in an existing server or workstation, by enabling you to reach higher data rates with zero additional changes required to your legacy cabling or infrastructure. It is compatible with most 10 GbE SFP+ transceivers, and this offers you the flexibility in choosing any pairing of SFP+ module and cable options – short reach (SR) or long reach (LR) – that match your specific combination of network environment, scalability plans, connector type, and distance requirements.



### Applications

The AQN-100 SFP+ NIC is well suited to be a game changer because it easily provides a simple way to upgrade any existing Enterprise, gaming, or home networking platform with a reliable, cost-effective path for moving beyond the 1 Gbps data rate to access 10 Gbps network speeds.

### Supported SFP+ Modules

Aquantia AQS SFP+ copper modules	Cisco GLC-SM-MM
Finisar FTLX8574D3BCV	GLC-T Cisco
Avago AFBR-709DMZ	Cisco SF-H10GB-CU1M DAC
Avago AFBR-709SMZ	Cisco SF-H10GB-CU5M DAC
Cisco SFP-10G-SR	

Features	Benefits
Single-board solution	Integrated PCI Express port and SFP+ slot in one package
PCI Express Gen3 x 4 Bus	Supports line rates of up to 8.0 GT/s

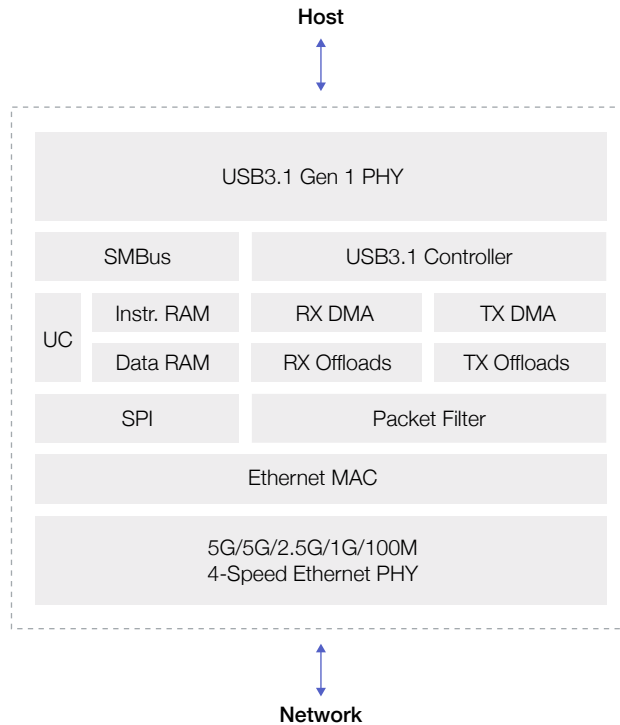
Features	Benefits
10G NIC compliant with SR/LR transceivers	10 Gbps network performance that supports both short-reach (SR) and long-reach (LR)
Preboot Execution Environment (PXE) network boot	Supports easier set-up and installations
IEEE standards compliant	<ul style="list-style-type: none"> <li>• 802.3ae</li> <li>• 802.3aq</li> <li>• PCI Express Rev. 3.0 (supports PCIe x4)</li> </ul>
Supports multi-mode/single-mode fiber cables	<ul style="list-style-type: none"> <li>• 10GbE multi-mode OM3 Duplex 50/125 micro fiber</li> <li>• 10GbE multi-mode LC Duplex 62.5/125 micro fiber</li> <li>• 10GbE single-mode</li> </ul>
Chipset manufacturer	AQC100: high-performance, multi-gigabit Ethernet MAC controller (Aquantia Corp, P/N: AQC100-B1-C)
NIC Card Type (full-height with spare half-height bracket)	Suitable for either network server or workstation installations
Network performance	<ul style="list-style-type: none"> <li>• Compatible with selected 10 Gbps fiber network</li> <li>• Supports full-duplex mode</li> <li>• Supports 10 Gbps as maximum data transfer rate</li> <li>• Supports Promiscuous mode (CPU passes all traffic)</li> </ul>
Supported IEEE Protocols	<ul style="list-style-type: none"> <li>• 802.3ad (Link Aggregation)</li> <li>• 802.3x (Flow Control support)</li> <li>• 802.1Q (VLAN tagging)</li> </ul>
Supported connectors	1 – PCI Express x4 (male) 1 – SFP+ cage (female)
Supported operating systems	<ul style="list-style-type: none"> <li>• Windows 7, 8, 8.1, and 10</li> <li>• Windows Server 2008 Rev. 2, 2012, 2012 Rev. 2, and 2016</li> <li>• Linux 3.2, 3.10, 3.16, 4.1, 4.4, 4.9, and 4.11</li> </ul>
Environmental conditions	<ul style="list-style-type: none"> <li>• Humidity (20-40% relative humidity)</li> <li>• Operating Temperature (5°C to 50°C)</li> <li>• Storage Temperature (-20°C to 60°C)</li> </ul>
Safety Standard compliance	UL, VDE, CB
Electromagnetic Compatibility (EMC) standard-compliance	FCC
RoHS standard-compliance	EN 2002/95/EU
Product weight and dimensions	<ul style="list-style-type: none"> <li>• 3.6 ounces (102 grams)</li> <li>• 3.228-inches x 2.430-inches (without bracket)</li> </ul>

AQC-100 NIC MAC-Specific Features (AQN-100)	Benefits
<ul style="list-style-type: none"> <li>• Large Send Offload (LSO)</li> <li>• Receive Side Scaling (RSS)</li> <li>• Direct Cache Access (DCA)</li> <li>• Header Checksum</li> </ul>	Supports increased network performance and lower host CPU utilization
Wake-on-LAN (WoL) power management	Supports lower power modes
On chip CPU DASH	Supports desktop management
Quality of Service (QoS)	Supports up to eight traffic classes and Data Center Bridging (DCB)
IPv4/IPv6, IPv6/TCP, and IPv6/UDP checksum offload	Supports offloading of calculations and improves CPU usage

## Ordering Codes

Device Name	Description and Speed	Ordering Part Number
AQN-100	x4 PCIe 10G SFP+ adapter (full height bracket)	AQN-100-104-SFA

### AQtion AQN-100 Block Diagram



Note: The production version NIC includes a heat sink.

