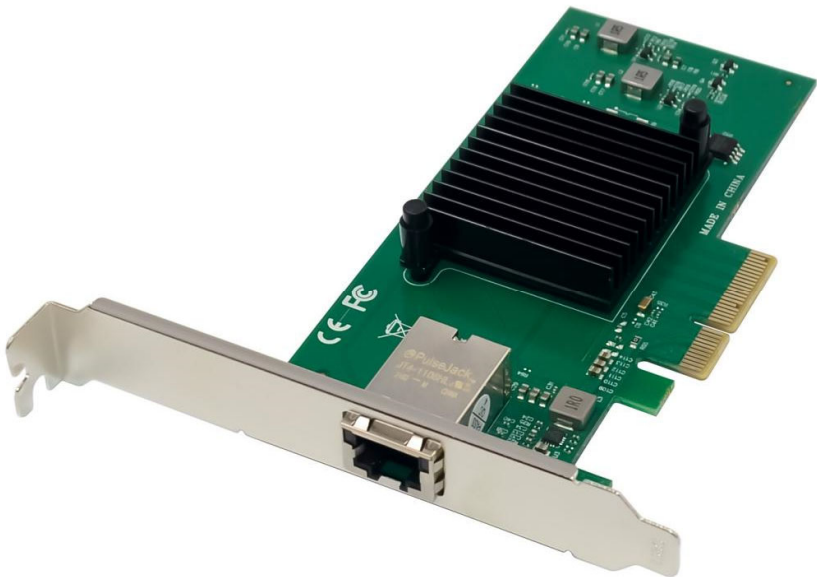# PCIe X4 AQC107 Single- 10G Server Converged NIC

Overview

The PCI Express AQ107 10GbE Ethernet card is a high-performance, Multi- gigabit Ethernet card that supports the 10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T/ 100BASE-T , with a PCI Express Gen3x4 or Gen2x4, the AQtion Ethernet controller easily handles the 10GbE Line-rate performance. The AQC107 incorporates Aquantia's AQrate® PHY technology which delivers 10GbE network connectivity speed through Cat 6a, and delivers 5 GbE and 2.5 GbE network connectivity speed through 100 meters of Cat 5e or better cabling enabling higher data rates with zero change to legacy cabling.

Specification

• Compliant with PCIE Express Revision 3.0 and downstream with PCI Express Reivison2.0

• Supports line rate of 8.0GT/s and 5.0GT/s per lane

• Supports Gen 3x4 or Gen 2x4

• Supports communication and management function

• Integrated Aquantia AQrate PHY featuring NBASE-T technology

• Supports PHY specifications with 10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T /100BASE-T.

• On-chip high resolution cable analyzer for advanced cable diagnostics

• Energy Efficient Ethernet(EEE) Support

• Supports IEEE1588v2 Precision Time Protocol

• Support large send offload, Receive Side Scaling(RSS),Direct Cache Access(DCA) and Header

• checksum for increased network performance and lower host CPU utilization

• Supports IPv4,IPv6 and IPv6/UDP checksum offload

• Supports Jumbo frame(up to 16kbytes)

• Quality of Service(QoS)

• Supports up to eight traffic classes and Data Center Bridging(DCB)

• Support Operation Systems:

   Winddows^{O,R}Win7/Win8/Win8.1/Win10/ Server2012 / Server2016/ Linux

Package content

- 1 x PCIe AQC107 Single- 10G Server NIC

- 1 x User's Manual

- 1 x CD driver

- Low-profile bracket

- ~~Accessories~~

System Requirements

- FreeBSD, Linux , VMWare ESXi, Win7/ Win-server2012/ Win-server2008/ Win8/Win8.1/Win-server2016/win10

- One available PCI Express x4 slot

Cabling Requirements:

Intel 10 Gigabit adapters

- For 10GBASE-T on Category 6,Category6a,or Category 7 wiring, twisted 4-pair copper:

- Category 6 wiring supports 55 meters max.

- Category 6a wiring supports 100 meters max.

- Category 7 wiring supports up to 100 meters

Intel 1 Gigabit adapters

- For 1000BASE-T or 100BASE-TX.use Category 5 or Category5e wiring, twisted 4-pair copper:

- Make sure you use Category 5 cabling that complies with the TIA-568 wiring specification For more information on this specification.

- Length is 100 meters max.

- Category 3 wiring supports only 10Mbps

  CAUTION: If using less than 4-pair cabling, you must manually configure the speed and duplex setting of the adapter and the link partner. In addition,with2-and3-pair cabling the adapter can only achieve speeds of up to 100Mbps

- For 100BASE-TX.use Category 5 wiring.

- For10BASE-T.use Category 3 or 5wiring
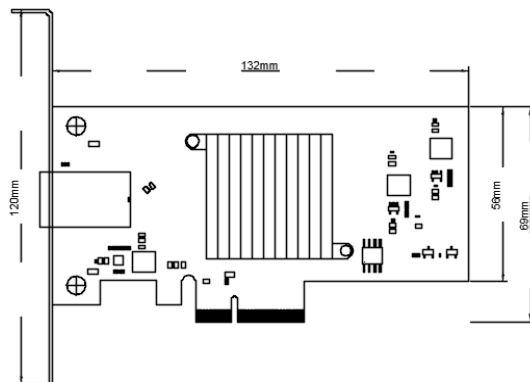
Cabling Requirements:

Transmission bandwidth	Twisted pair type	Transmission distance
10Gbps	Cat 6a or better	100 meters
5Gbps	Cat5e or better	100 meters
2.5Gbps	Cat5e or better	100 meters
1000Mbps	Cat5e or better	100 meters
100Mbps	Cat5e or better	100meters

LED Indicators

Link speeds	LED Green	LED Orange
10Gbps	ACT blinking	10G link
5Gbps/2.5Gbps/1000Mbps/100Mbps	ACT blinking	No bright

Hardware installation

1. Turn off the computer and unplug the power cord
2. Remove the computer cover and the adapter slot cover from the slot that matches your adapter
3. Insert the adapter edge connector into the slot and secure the bracket to the chassis
4. Replace the computer cover ,then plug in the power cord
5. Power on the computer

Install Drivers and software
Windows®Operating Systems

You must have administrative rights to the operating system to install the drivers.

1, insert the CD driver bound with PCI Express AQ107 10GbE Ethernet card driver into your

CD-ROM drive:

2, If the Found New Hardware Wizard screen is displayed, click **Cancel**

3, Open the location of the driver file and select the driver file according to the system type.

For **Windows 32bit**

   Type

"**Driver\AQC107\Windows\WindowsInstaller\Aquantia_AQtion_x32_Win_ver2.1.1 7.0.msi**"

   For **Windows 64bit**

   Type

"**Driver\AQC107\Windows\WindowsInstaller\Aquantia_AQtion_x64_Win_ver2.1.1 7.0.msi**"

4, Double click it

5, Follow the instructions in the install wizard to finish it

Installing Linux Drivers from Source Code

1, Download and expand the base driver tar file.

2, Compile the driver module

3, Install the module using the modprobe command

4, Assign an IP address using the ifconfig command

Support

More information and settings, please refer to the Intel Adapter User Guides or you can contact us.