

PCIe 200G/100G QSFP56 Ethernet Adapter

User Manual

Ver. 1.00

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Chapter 1: Introduction

1.1 Product Introduction

The PCIe 200G/100G QSFP56 PCIe network adapter — built on Broadcom's BCM57508/BCM57504 controller — enables highly-scalable, feature-rich networking solutions in servers. It caters to enterprise and cloud-scale applications, including high-performance computing, telco, machine learning, storage disaggregation, and data analytics. By combining a high-bandwidth Ethernet controller with optimized hardware acceleration engines, it enhances network performance and server efficiency. Notably, features like TruFlow™ boost VM density, and on-chip tunneling protocols improve throughput while reducing CPU utilization.

1.2 Features

- PCIe Gen4 x16 form factor
- Supports standard and low-profile systems
- Provides one or two QSFP56 ports for multiple high-speed connections
- Supports both RDMA iWARP and RoCEv2 for high-speed, low-latency connectivity to storage targets

- Standards-compliant 100/50/40/25/10G dual-port QSFP56 PCIe network adapter with line-rate, full-duplex throughput (For N-1190/N-1200).
- Standards-compliant 200/100/50/40/25/10G dual-port QSFP56 PCIe network adapter with line-rate, full-duplex throughput (For N-1210).
- NIC partitioning supporting 16 physical functions (PFs)
- TruFlow™ engine for intelligent flow processing to increase server VM density and accelerate vSwitch processing
- Industry's most secure PCIe network adapter solution leveraging Broadcom's BroadSAFE® technology to provide
- unparalleled platform security via Silicon Root of Trust
- New end-to-end congestion avoidance and management to anticipate and eliminate congestion before it happens
- Support for advanced networking technologies including RoCE, SDN, NFV and virtualization
- TruManage™ enhances server manageability and security for data center deployments
- Multi-host allows multiple compute and storage nodes to seamlessly connect to a single Ethernet adapter for cloud-scale networking and storage applications (For N-1210/N-1200)

1.3 Requirements

- Windows 10/11
- Windows Server 2022/2025

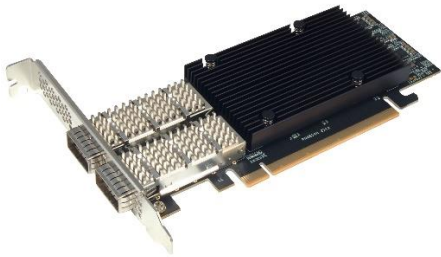
- Linux kernel versions 2.6.x or newer
- VMware ESXi 7.0 or above
- FreeBSD
- Airflow Requirements: 420 LFM at 55°C

1.4 Product Diagram

N-1190



N-1200



N-1210



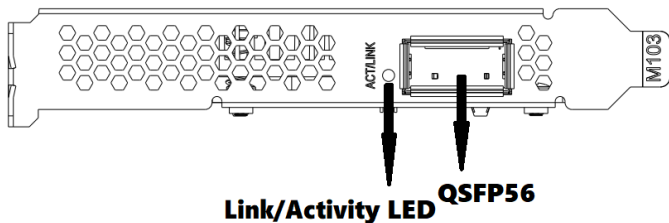
1.5 Package Contents

- 1 x PCIe 1-Port 100G QSFP56 Network Adapter (N-1190), or
1 x PCIe 2-Port 100G QSFP56 Network Adapter (N-1200), or
1 x PCIe 1-Port 200G QSFP56 Network Adapter (N-1210)
- 1 x User Manual

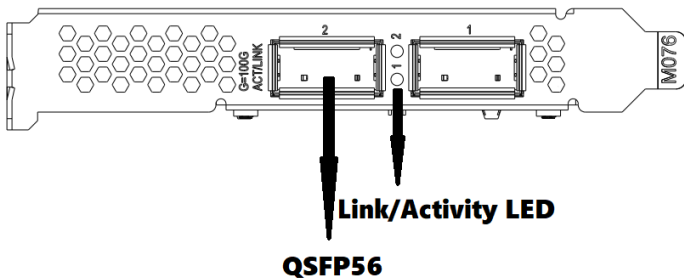
Chapter 2: Getting Started

2.1 Hardware Layout

2.1.1 Single Port (N-1210/N-1190)



2.1.2 Dual Port (N-1200)



LED Indicator:

LED	Description
Link/Activity LED	Indicates Network Card Activity: • Flashing Green = Network port is active • Off = No link

2.2 Hardware Installation

1. Power down your computer.
2. Unplug the power cord and remove your computer's cover.
3. Remove the slot bracket from an available PCIe slot.
4. To install the card, carefully align the card's bus connector with the selected PCIe slot on the motherboard. Push the board down firmly.
5. Replace the slot bracket's holding screw to secure the card.
6. Secure the computer cover and reconnect the power cord.

2.3 Driver Installation

The following section shows you how to install PCIe 200G/100G QSFP56 Network Adapter driver on different operating systems.

2.3.1 Installation for Windows

1. Go to URL <http://www.sunrichtech.com.hk/>
2. Search N-1210/N-1200/N-1190, download the driver.
3. Follow the on-screen instructions to finish installing the driver.

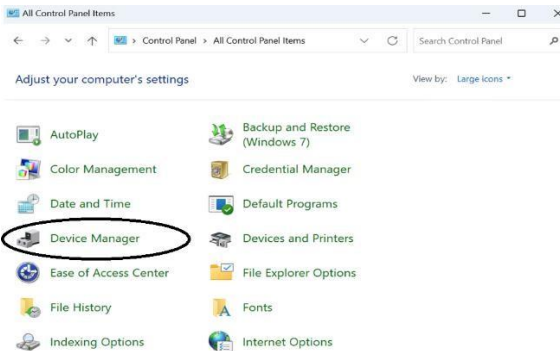
2.3.2 Installation for Linux

1. Go to URL <http://www.sunrichtech.com.hk/>
2. Search N-1210/N-1200/N-1190, download the driver.
3. Follow Readme.txt which is in the driver folder to finish installing the driver.

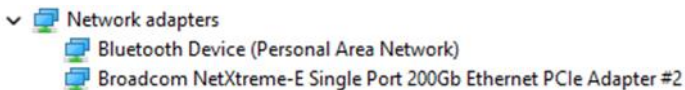
2.4 Verifying the installation

2.4.1 Verifying for Windows

1. Click on the “**Device Manager**” tab in the Windows Control Panel.
Start > Control Panel > Device Manager



2. Expand “**Network adapters**” item, and you can read “**Network connection card information**” in the Device Manager, as shown.



- a. N-1210 : “Broadcom NetXtreme-E Single Port 200Gb Ethernet PCIe Adapter”
- b. N-1200 : “Broadcom NetXtreme-E Dual-port 100Gb Ethernet PCIe Adapter”
- c. N-1190 : “Broadcom NetXtreme-E Singal Port 100Gb Ethernet PCIe Adapter”

2.4.2 Verifying for Linux

1. You can check whether the driver is loading by using following commands:

```
# lsmod | grep bnxt_en
```

```
# ifconfig -a
```

If there is a device name, ethX, shown on the monitor, the linux driver is load. Then, you can use the following command to activate the ethX.

```
# ifconfig ethX up, where X=0,1,2,...
```