10Gtek BCM57810-10G-2S

10Gtek BCM57810S 10Gb PCI-E NIC Network Card User Manual

Model: BCM57810-10G-2S

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the 10Gtek BCM57810S 10Gb PCI-E NIC Network Card. This network card is designed to deliver high-speed 10 Gigabit Ethernet connectivity for servers and desktop computers, utilizing the Broadcom BCM57810S controller chipset and dual SFP+ ports.
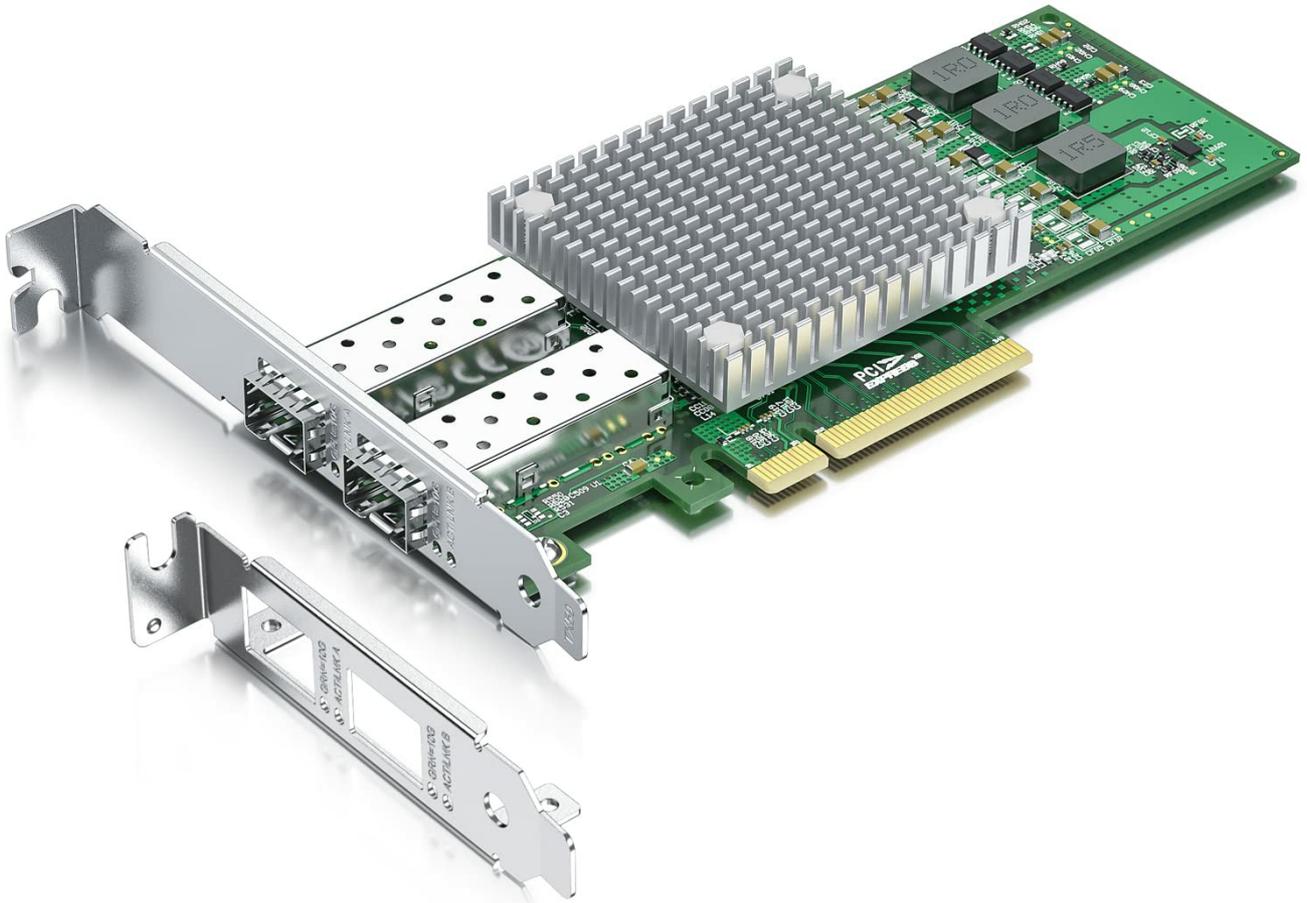
Image: The 10Gtek BCM57810S 10Gb PCI-E NIC Network Card, featuring dual SFP+ ports and a heatsink.

2. SAFETY INFORMATION

Please read and follow these safety guidelines to prevent damage to the device or personal injury:

- Always disconnect power from your computer before installing or removing any internal components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to the network card and other computer components.
- Handle the network card by its edges; avoid touching the gold connectors or integrated circuits.
- Ensure proper ventilation around your computer to prevent overheating.
- Do not expose the device to moisture or extreme temperatures.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 10Gtek BCM57810S-DA2 10GbE PCI-E X8 Network Card (x1)
- Low-profile Bracket (x1)

---

4. SETUP

4.1 Physical Installation

Follow these steps to install the network card into your computer:

1. Power off your computer and disconnect all cables.
2. Open the computer case.
3. Locate an available PCI Express 2.0 x8 or x16 slot on your motherboard. The card is compatible with both x8 and x16 slots.

Image: Diagram illustrating PCI Express x8 and x16 slot compatibility. The card fits into these larger slots.

4. Remove the metal slot cover from the back of the computer case corresponding to the chosen PCI-E slot.
5. Carefully insert the network card into the PCI-E slot, ensuring it is fully seated. Apply even pressure to both ends of the card until it clicks into place.
6. Secure the network card with a screw or the case's retention mechanism.
7. If your computer case requires a low-profile bracket, you will need to replace the standard bracket. Refer to the video below for instructions on how to remove and install the bracket correctly.

Video: Instructions on how to correctly remove and install the bracket on the 10Gtek network card.

4.2 Driver Installation

After physical installation, drivers must be installed for the network card to function correctly.

1. Boot your computer.
2. The network card is compatible with various operating systems, including Windows Server 2008/2008R2/HPC Server 2008 (32 and 64-bit), Microsoft Windows Server Hyper-V, Red Hat Enterprise Linux 5.7 and 6.1, SLES 10 and 11, and VMware 4.1u2 and 5.0u1.

Wide compatibility

Compatible with Windows 7/8/10, Windows Server 2008/2012/2016/2019, Centos/RHEL 6/7/8, Ubuntu 16/18/19/20, Debian 9/10/11, FreeBSD 10/11/12, Vmware Esxi 6/7, SLSE 11/12.

Image: Visual representation of the network card's broad operating system compatibility.

3. Drivers can be downloaded from the Broadcom website or the 10Gtek official support page. Search for drivers specific to the BCM57810S chipset and your operating system.

4. Follow the on-screen instructions to complete the driver installation. A system reboot may be required.

5. OPERATING

5.1 Connecting to Network

The network card features dual SFP+ ports for 10 Gigabit connectivity.

1. Insert compatible 10 Gigabit SFP+ modules (transceivers) into the SFP+ ports on the network card.

2. Connect appropriate fiber optic cables or Direct Attach Cables (DAC) / Active Optical Cables (AOC) from the SFP+ modules to your 10 Gigabit network switch or other network devices.
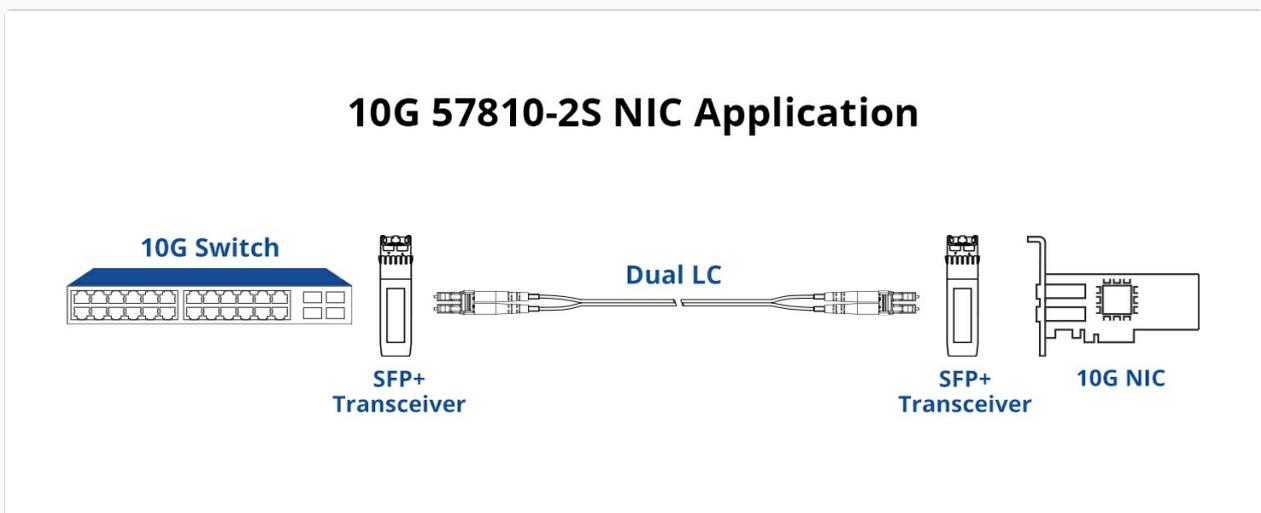

10G 57810-2S NIC Application

Image: Diagram showing the 10G NIC connected to a 10G switch via SFP+ transceivers and Dual LC fiber cables.

5.2 Basic Network Configuration

After connecting the cables, configure your network settings:

- **Windows:** Go to Network and Sharing Center > Change adapter settings. Right-click on the newly installed 10GbE adapter, select Properties, and configure TCP/IP settings (IPv4/IPv6) as required by your network.

- **Linux:** Use network configuration tools like ip or ifconfig to assign IP addresses and configure network interfaces. Consult your specific Linux distribution's documentation for detailed instructions.

- **VMware:** Configure the network adapter within the VMware vSphere Client or ESXi host interface to assign it

to virtual machines or for management network purposes.

6. MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your network card:

- **Cleaning:** Periodically clean dust from the heatsink and surrounding components using compressed air. Ensure the computer is powered off and unplugged before cleaning.
- **Firmware Updates:** Check the 10Gtek or Broadcom website for any available firmware updates. Firmware updates can improve performance, stability, and compatibility. Follow the provided instructions carefully when performing firmware updates.

7. TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting steps:

- **No Link Light:**
  - Ensure the network card is fully seated in the PCI-E slot.
  - Verify that SFP+ modules are correctly inserted and cables are securely connected to both the network card and the network switch.
  - Check the status of the network switch port.
  - Confirm that the correct drivers are installed and updated.

- **Slow Performance:**
  - Ensure all network components (switch, cables, transceivers) are rated for 10 Gigabit speeds.
  - Check for driver updates.
  - Monitor CPU usage during transfers; high CPU usage might indicate a system bottleneck.

- **Card Not Detected:**
  - Reseat the card in the PCI-E slot.
  - Try a different PCI-E slot if available.
  - Check your system's BIOS/UEFI settings to ensure PCI-E slots are enabled.

- **Driver Installation Issues:**
  - Download drivers directly from the Broadcom or 10Gtek website for your specific operating system.
  - Ensure you have administrative privileges to install drivers.

  Video: An overview of the 10Gtek 10Gb PCI-E SFP+ Port NIC Network Card, highlighting its features and applications.

8. SPECIFICATIONS

Feature	Specification
Brand	10Gtek
Model Number	BCM57810-10G-2S

Hardware Interface	PCIe x8
Data Link Protocol	Ethernet
Data Transfer Rate	10 Gigabytes Per Second
Compatible Devices	Server, Desktop
Controller Chipset	Broadcom BCM57810S
Ports	Dual SFP+
Item Weight	8.8 ounces (0.25 Kilograms)
Package Dimensions	8.86 x 6.02 x 1.18 inches

9. WARRANTY AND SUPPORT

This 10Gtek product is backed by:

- 30 Days Free-returned
- 1 Year Free Warranty
- Lifetime Technology Support

For technical assistance or warranty claims, please contact 10Gtek customer support through their official website or the platform where the product was purchased.