

Preface

This manual describes how to install and use the PCI Express Ethernet Adapter. This PCI Express Ethernet Adapter allows options of the different fiber connections (such as connector types and segment distance).

To get the most out of this manual, you should have an understanding of Ethernet networking concepts.

In this manual, you will find:

- Introduction on PCI Express Ethernet Adapter
- Product features
- LEDs functions
- Hardware installation
- Software installation
- Specifications

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Product Overview

Package Contents

When you unpack the product package, you shall find the items listed below. Please inspect the contents, and report any apparent damage or missing items immediately to our authorized reseller.

- ✓ *PCI Express Ethernet Adapter*
- ✓ *CD includes User's Manual & Software Driver*

Product Features

- Provides (depends on models):
 - One 100Base-FX port or
 - One SFP slot
- fiber connections:
 - SC, ST or LC connectors for multi-mode, and SC connector for single-mode
 - Compliant with IEEE 802.3u 100Base-FX
- Supports PCI Express 1.1
- Supports Plug-and-Play
- Supports Wake-on-LAN and remote wake-up
- Supports IEEE802.1Q VLAN Tagging
- Supports IEEE802.1p Layer 2 Priority Encoding
- Supports 1-Lan 2.5Gbps PCI Express Bus
- IEEE 802.3x Full Duplex flow control
- Two LEDs: LNK/ACT (link/activity), SPD (speed)
- 0°C to 50°C (32°F to 122°F) operating temperature range

Driver Support

The Adapter supports a wide range of drivers for commonly used network operating systems:

- Microsoft Windows 98, Windows ME, Windows 2000, Windows XP, Windows 2003, Windows Vista, Windows 7 and Windows 2008
- SCO Unix 5.0.6 and 5.0.7
- SCO OpenServer 6 and Unixware 7.1.x
- FreeBSD 7.x and 8.0
- Linux kernel 2.4.x and 2.6.x (Support x86, x64)
- Novell client for DOS (ODI driver)
- Novell Netware Server driver (Support OS 5.x, 6.x)
- MacOS 10.4, 10.5 and 10.6 on Intel-based Mac computer

LEDs

① **LNK/ACT** Link/Activity

② **SPD** 100Mbps

LEDs	Status	Indication
LNK/ACT	Steady	A valid network connection established. LNK stands for LINK.
	Flashing	Transmitting or receiving data. ACT stands for ACTIVITY.
	Off	Neither connection nor activity.
SPD	Steady	100Mbps.
	Off	10Mbps.

Hardware Installation

Installing Ethernet Adapter into PCI Express slot

- Step 1:** Turn off the power to the PC.
- Step 2:** Remove any metal decorations from your hands and wrists.
- Step 3:** Remove the cover from your PC.
- Step 4:** Locate an empty bus mastering PCI Express slot and remove the corresponding backplate. Save the screw for use in Step 6.
- Step 5:** Carefully insert the PCI Express Ethernet Adapter into the chosen slot and press firmly with proper push to ensure it is fully seated in the slot.
- Step 6:** Secure the PCI Express Ethernet Adapter with the screw you saved in step 4.
- Step 7:** Replace the PC cover.
- Step 8:** Proceed to “Connecting to Your Network” section.

Connecting to Your Network

PCI Express Fiber Ethernet Adapter

This section describes how to connect the PCI Express Fiber Ethernet Adapter to a 100 Mbps fiber-based Ethernet network, which contributes to its optimal performance.

<Note>

You must connect the PCI Express Fiber Ethernet Adapter to the network before installing the network driver.

Step 1: Remove the protective covers from the PCI Express Fiber Ethernet Adapter's connector.

Step 2: Prepare a network cable with corresponding connectors for the two end devices, one end to the PCI Express Fiber Ethernet Adapter and the other to a 100Mbps fiber port on the network switch.

Step 3: Connect the network cable to the connector on the PCI Express Fiber Ethernet Adapter. This network cable consists of two individual cables: one for 'transmission (TX)', and the other for 'reception (RX)'.

Step 4: Connect the other end of the network cable to a 100BASE-SX/LX switch.

<Note>

- i. Insert the cable that is connected to the transmit (TX) connector on the PCI Express Fiber Ethernet Adapter into the receive (RX) connector on the network switch.
- ii. Insert the cable that is connected to the receive (RX) connector on the PCI Express Fiber Ethernet Adapter into the transmit (TX) connector on the network switch.

Step 5: When the cable is properly connected to two end devices, turn on the power to the PC.

Step 6: Check the LNK (Link) LED. The LED will come on when the PCI Express Fiber Ethernet Adapter is receiving a good link signal from the connected device, a switch.

Step 7: Proceed to next section for installing the network driver.

Cabling Requirements

For connector type, cabling requirements, and maximum segment distance when connecting the PCI Express Ethernet Adapter to your network, please refer to the following table.

Connector Type on Fiber Adapter	Wavelength of 1300nm Fiber Optic required	Maximum Distance (* full-duplex)
ST	Multi-mode, 50 or 62.5/125 μm	2 km
SC	Multi-mode, 50 or 62.5/125 μm	2 km
VF-45	Multi-mode, 50 or 62.5/125 μm	2 km
MT-RJ	Multi-mode, 50 or 62.5/125 μm	2 km
LC	Multi-mode, 50 or 62.5/125 μm	2 km
SC	Single-mode, 9 or 10/125 μm	20 km
SC	Single-mode, 9 or 10/125 μm	40 km
SC	Single-mode, 9 or 10/125 μm	60 km

<Note>

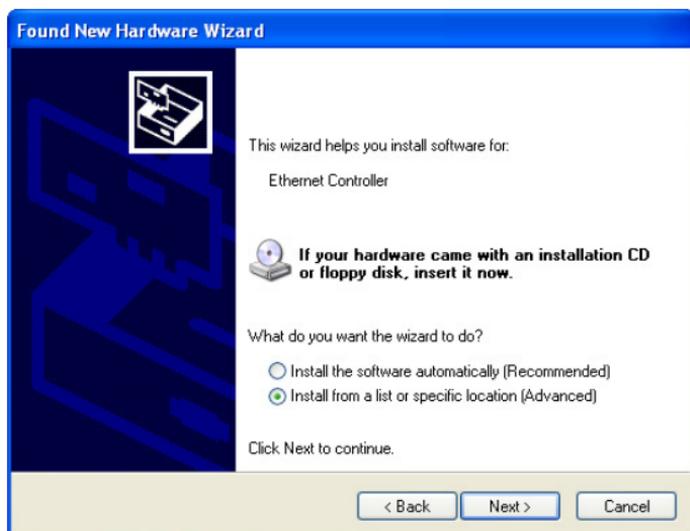
The maximum node-to-node network distance is in full-duplex operation.

Driver Installation

1. Turn on the computer after plugging PCI Express Ethernet Adapter to PCI Express slot. The “Found New Hardware Wizard” window pops up.



2. Select “Install from a list or specific location (Advanced)” and click “Next” to continue.



5. Click “Finish” to complete the driver installation.

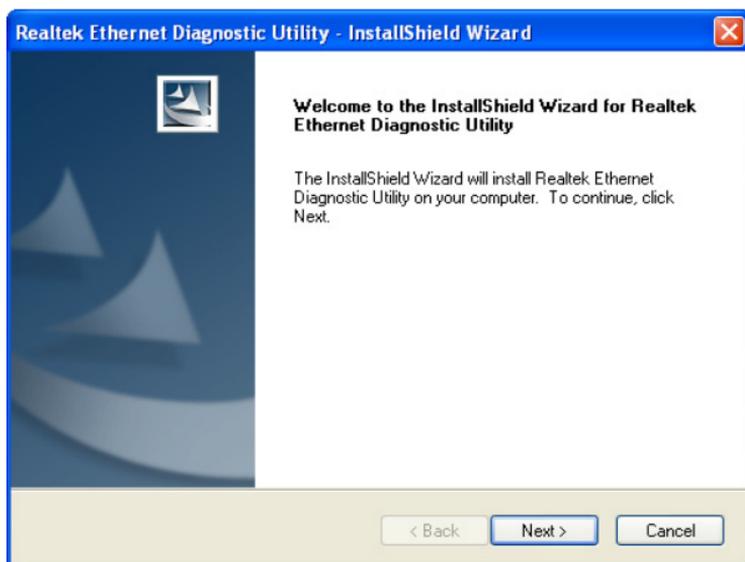


Diagnostics Utility

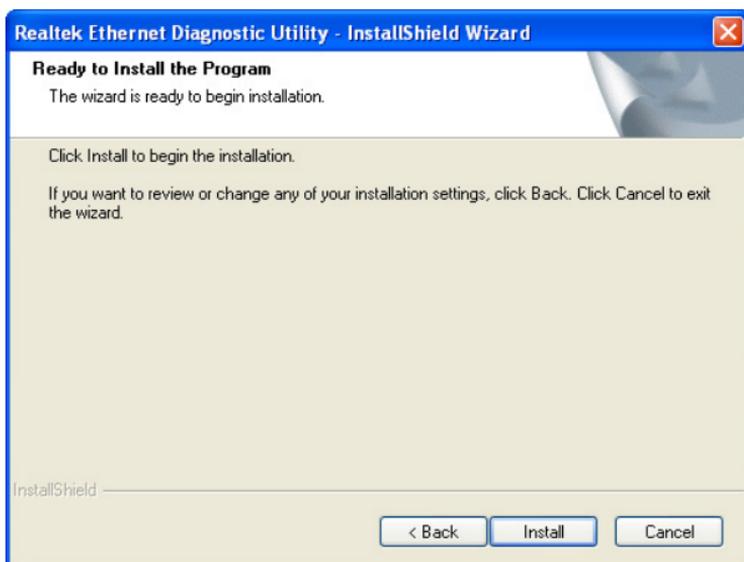
The Diagnostics Utility is a Windows platform application. It provides General information, VLAN ID settings, Driver property settings, Diagnostics function, Statistics, Cable analysis, and Wake On LAN function.

Diagnostics Utility Installation

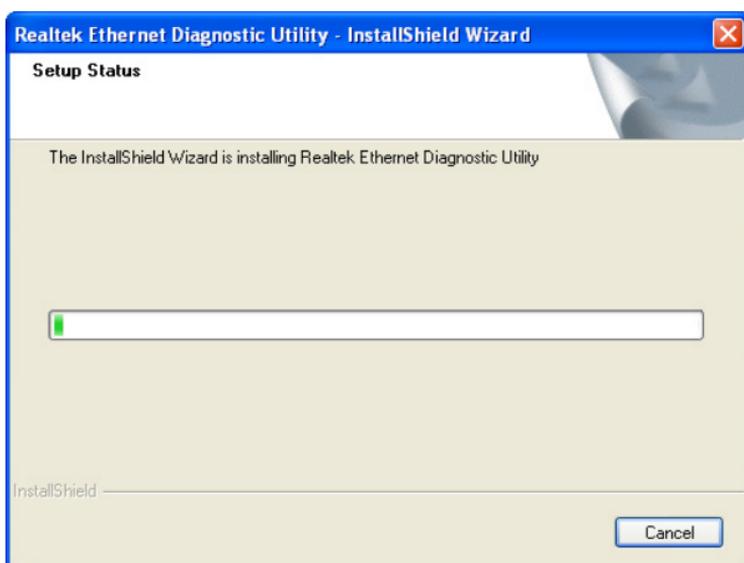
1. Look for the file named “setup.exe” on the installation CD-ROM. Double-click on it to start the installation for the Diagnostics Utility.



2. Click **Install** to install Diagnostics Utility.

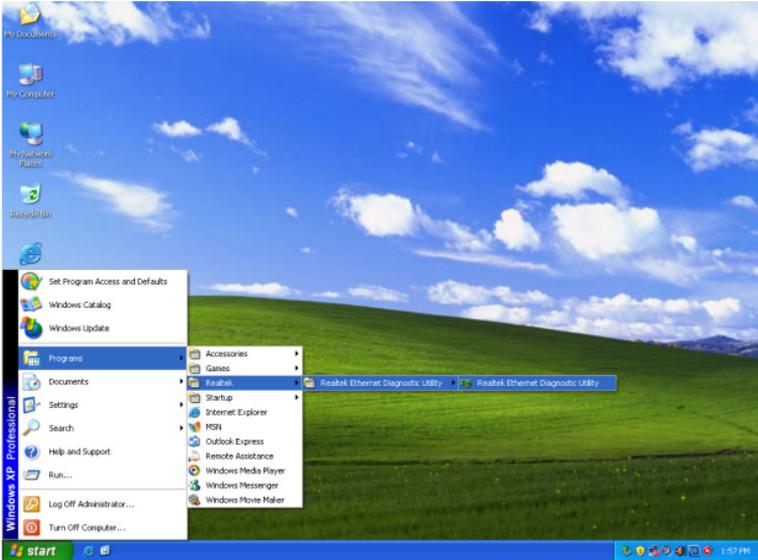


3. Installing



4. After Diagnostics Utility has been successfully installed, click on **Finish**.

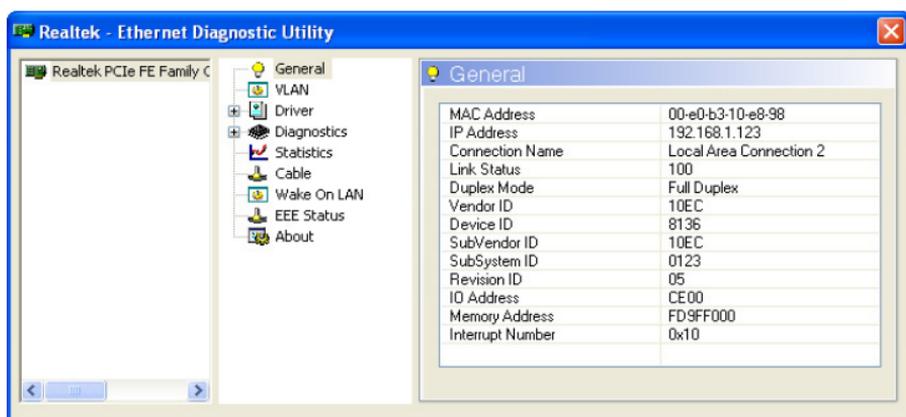
5. Simply click **Diagnostics Utility** under **Programs** → **Realtek** → **Diagnostics** to launch the Diagnostics Utility.



Diagnostics Utility Configuration

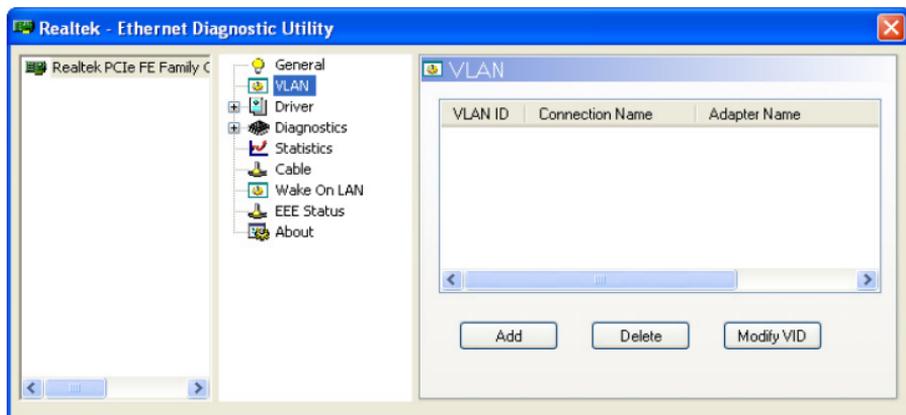
General

This page displays general information about the selected network adapter.



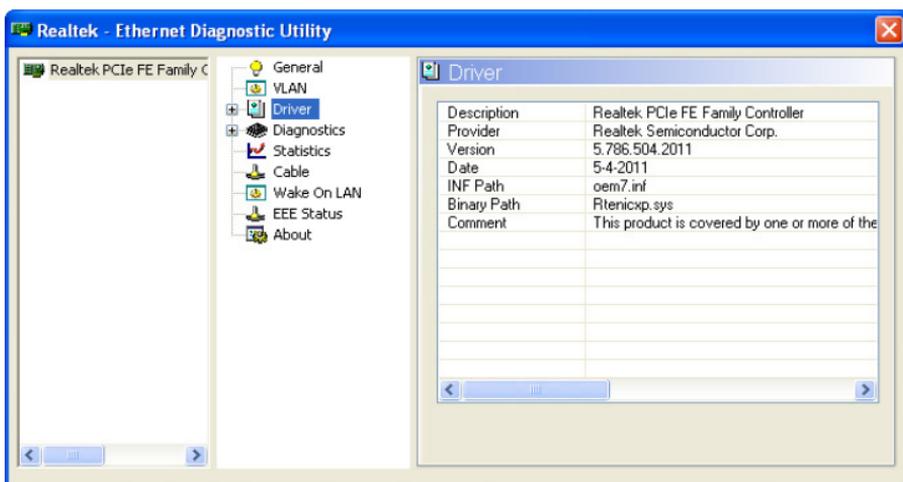
VLAN

This page shows information about VLANs on current selected network adapter. User can add or remove VLAN here. Besides, user can change the VLAN ID of existing VLAN.



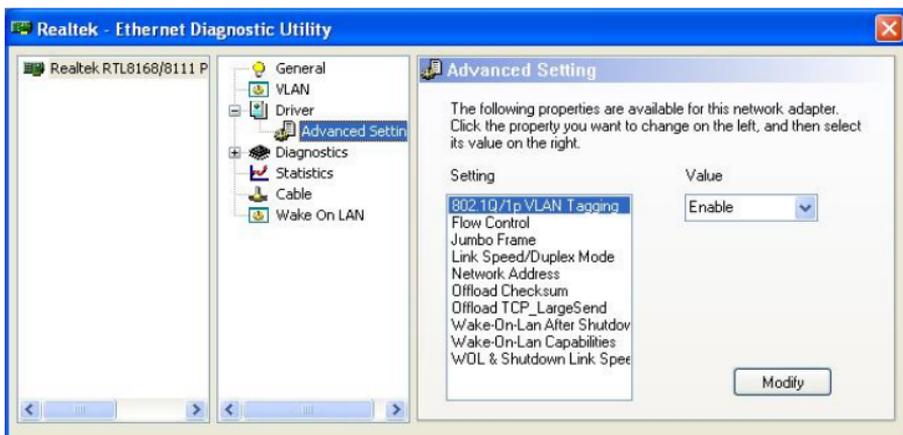
Driver

This page displays driver information of the selected network adapter.



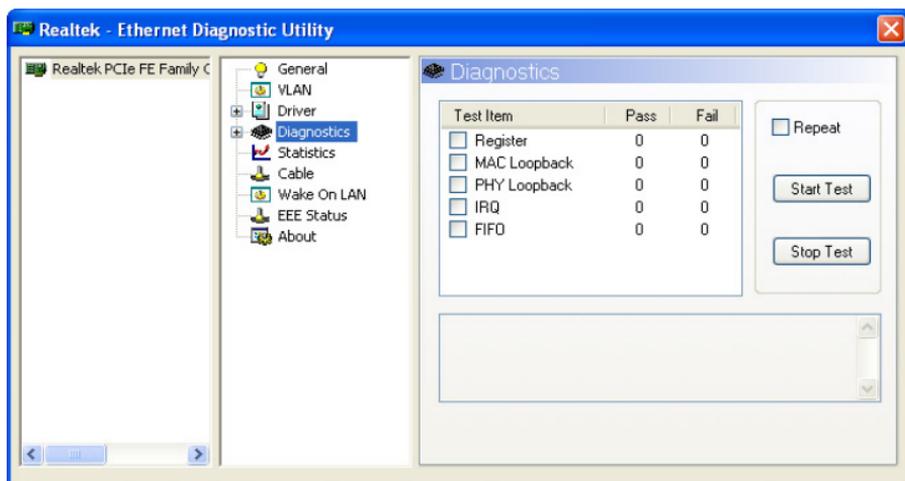
Advanced Setting

This page displays working parameters for this network adapter. User can modify these parameters here. For Windows 98SE and ME, it needs to reboot to change the parameters.



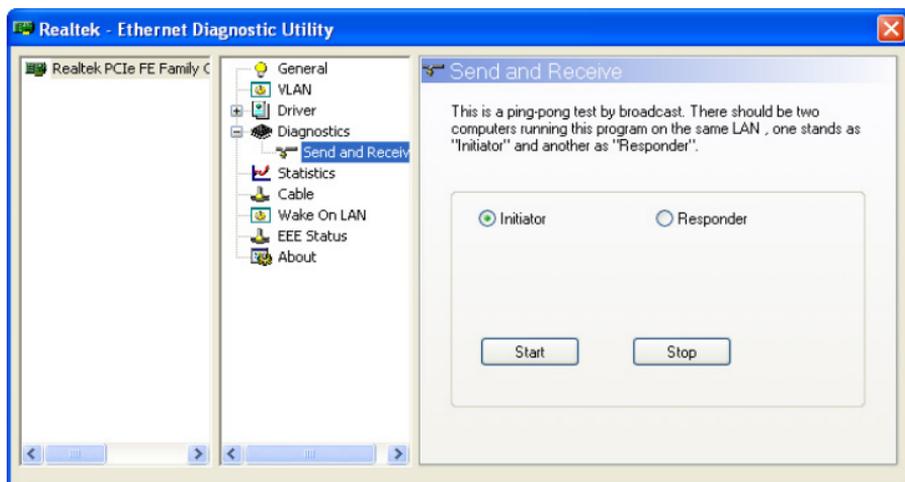
Diagnostics

This page performs hardware tests on selected network adapter.



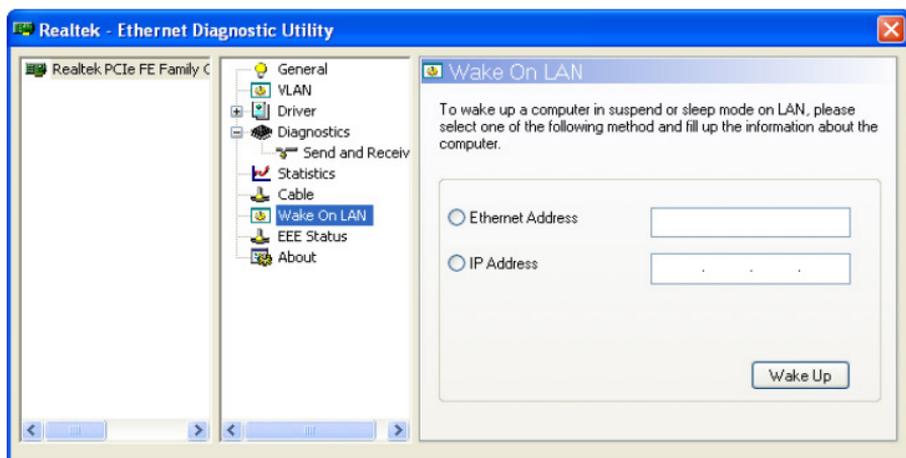
Send and Receive

Two PCs with adapters in the same LAN can perform send & receive experiment with broadcast packet here.



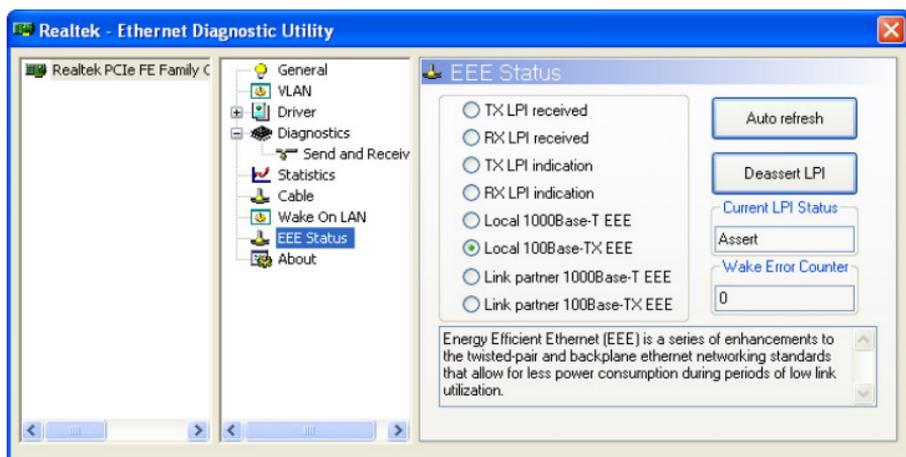
Wake On LAN

This page provides two ways for user to wake up a PC in standby or hibernate mode via selected network adapter. A computer can be waked up only if related configurations in BIOS and the network adapter are enabled.



EEE Status

This page shows information about EEE status. User can change the current LP status to minimize system power consumption.



Specifications

Applicable Standards	100Base-FX: IEEE802.3u 100Base-FX
Speed	100Base-FX: 200Mbps full-duplex, 100Mbps half-duplex
Performance	148,810pps for 100Mbps
Cable	50 or 62/125 μ m multi-mode fiber-optic cable, up to 2 km, wavelength 850nm 9 or 10/125 μ m single-mode fiber-optic cable, up to 50 km, wavelength 1310nm 9 or 10/125 μ m single-mode fiber-optic cable, up to 40 km, wavelength 1310/1550nm
LED Indicators	LNK/ACT (Activity/Link) SPD(Speed)
Dimensions	56.2mm (L) x 105mm (D) (2.25" (L) x 4.2" (D))
Net Weight	40g (0.09b.) approx.
Power Consumption	1.7W Max.
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-10°C to 70°C (14°F to 158°F)
Humidity	5%-95% non-condensing
Emissions	FCC part 15 Class B, CE Mark Class B