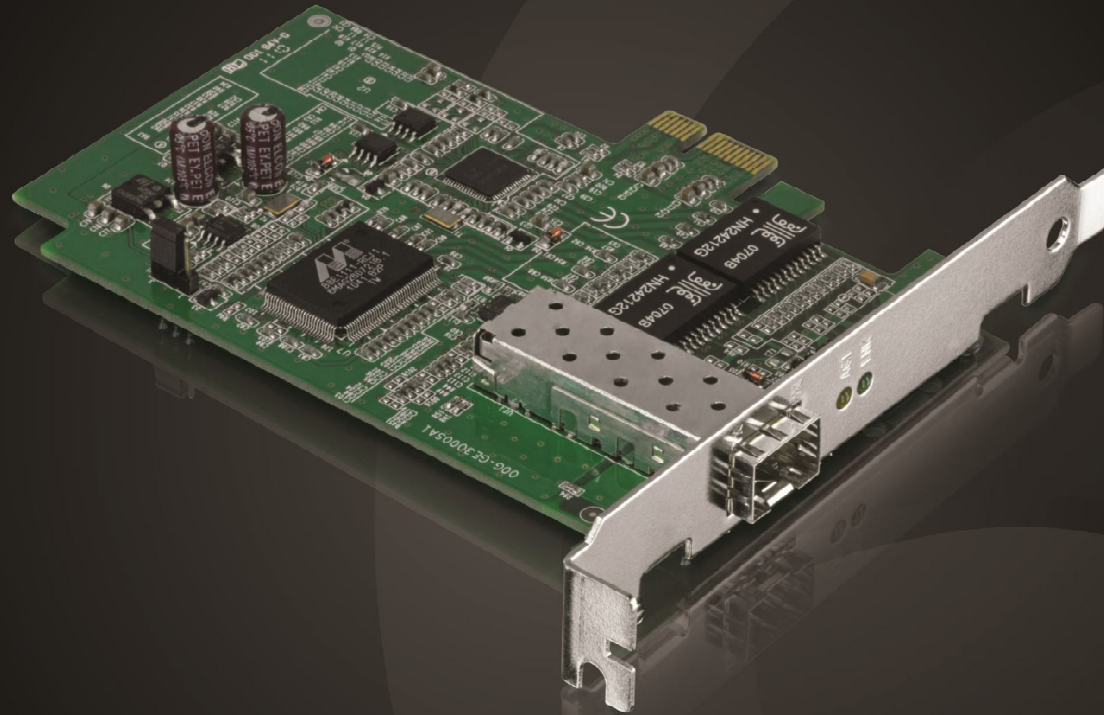


User's Guide



TRENDNET<sup>®</sup>



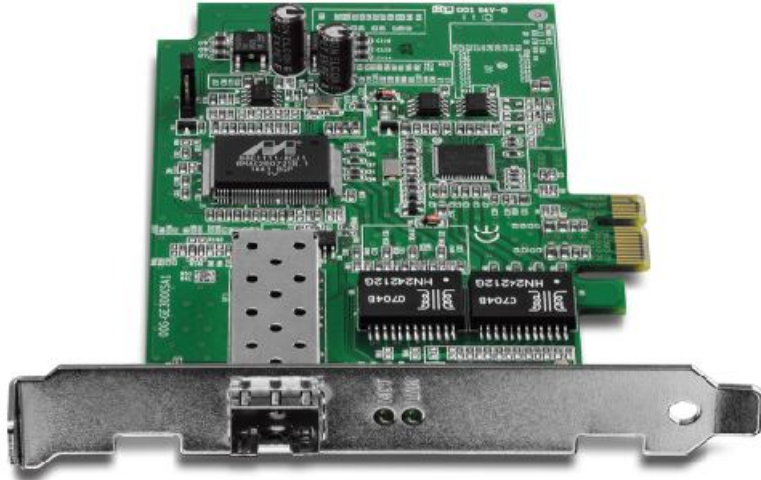
SFP PCIe Adapter

TEG-ECSFP

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## Product Overview



## Package Contents

- 1 x TEG-ECSFP
- Quick Installation Guide
- CD-ROM (Driver & User's Guide)

## Features

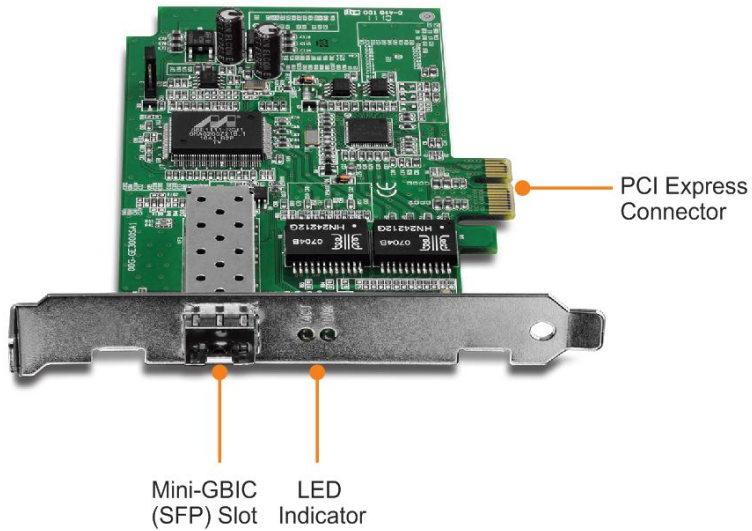
The SFP PCIe Adapter, model TEG-ECSFP, is a Gigabit fiber network adapter which is compatible with standard SFP modules and PCI Express slots.

Full-Duplex technology generates data rates of up to 2 Gbps over a motherboard's high-speed PCI Express Bus architecture. Jumbo Frame support further optimizes throughput performance.

Supports SNMP v1, Pre-Boot Execution Environment (PXE) 2.1, VLAN tagging, and Layer 2 Priority Tagging. Optimizes power consumption with advanced Configuration Power Management Interface 2.0 (ACPI) technology. Diagnostic LEDs help with network troubleshooting. Compatible with Microsoft Windows 8, Windows 7, Windows Server 2008, and Linux operating systems.

- 1000-Base SFP slot compatible with standard SFP modules
- Data rates of up to 2 Gbps over a high performance PCI Express architecture
- Supports SNMP v1, PXE, VLAN Tagging, and Layer 2 Priority Tagging
- Energy savings with ACPI 2.0 functionality
- Compatible with Windows 8, Windows 7, Windows Server 2008 and Linux operating systems

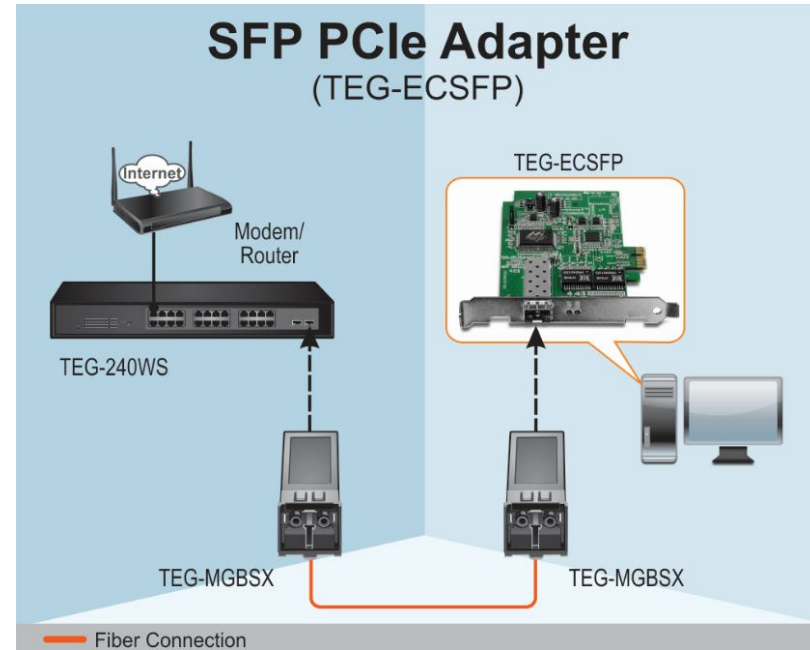
**Product Hardware Features**



- **PCIe Connector:** Connect the PCIe connector into computer's PCIe slot.
- **Mini-GBIC (SFP) Slot:** Connect mini-GBIC module into the mini-GBIC (SFP) slot.
- **LED Indicators**

LEDs	Status	Indication
LNK (Link)	Steady (green)	A valid network connection established.
	Off	No network connection.
ACT (Activity)	Blinking (amber)	Transmitting or receiving data.
	Off	No activity.

**Application Diagram**



## Installation - Hardware

### Adapter

1. Power off the computer.
2. Remove any metal object from your hand and wrists to prevent shocks
3. Remove the cover from your computer's tower
4. Locate an empty PCI Express slot and remove the corresponding back plate. Save the screws for use in step 6.
5. Carefully insert the PCI Express adapter into the slot and ensure the adapter is firmly seated in the slot.
6. Secure the PCI Express adapter with the screws that you saved in step 4.
7. Replace the PC cover

### Fiber Cable

This section describes how to connect the TEG-ECSFP to a 1000Mbps fiber-based Ethernet Network, which contributes to its optimal performance.

Please ensure that you installed the TEG-ECSFP into the computer before installing the driver.

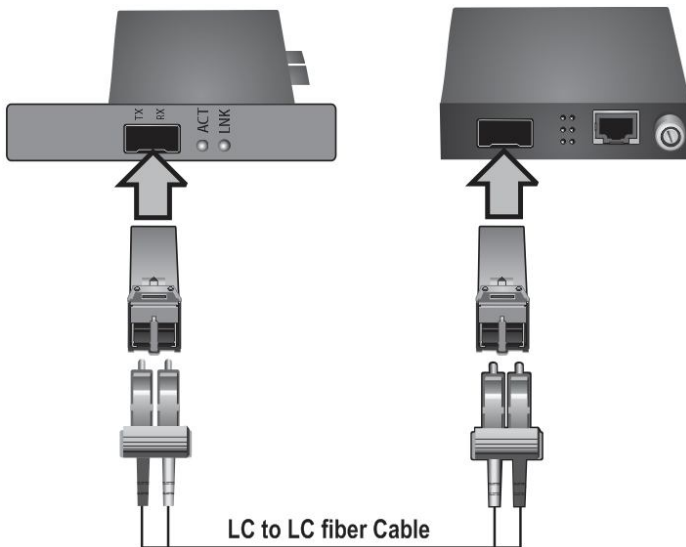
1. Remove the protective rubber covers from the TEG-ECSFP.
2. Insert a mini-GBIC module into the TEG-ECSFP and another mini-GBIC module into the fiber Network (see next page for Network illustration). The TEG-ECSFP does not support 10/100 Mbps fiber modules. The mini-GBIC module has to be Gigabit.
3. Prepare a LC type of fiber cable for the mini-GBIC modules. Connect one end of fiber cable to mini-GBIC module and connect the other end of the fiber cable into another mini-GBIC module.\*

#### Note:

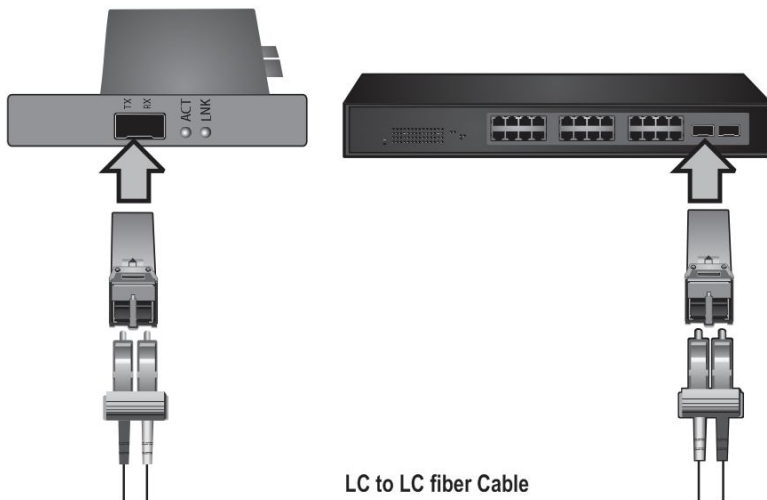
The fiber cable comes with a pair. Some of them may mark as Transmitter (TX) and Receiver (RX), some of them may be color coded or have letters on each end. Make sure that you have one end (TX) of the fiber cable connects to the TX port of the TEG-ECSFP and have the other end of the (TX) connects to the fiber's network device's RX port as example showed below.

The LC type of fiber cable is for TEG-ECSFP to mini-GBIC usage. If you have other type of fiber network in your network, you might seek suitable cable for your usage, for example, LC to LC or LC to SC.

TEG-ECSFP -> mini-GBIC Module -> Fiber Converter



TEG-ECSFP -> mini-GBIC -> Switch with mini-GBIC Slot



4. Turn on the computer
5. Windows will automatic install the driver.
6. Check the LNK (link) LED on the TEG-ECSFP. The LNK LED will be steady on to indicate the Network connection is established.

## 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. The table listed below shows the type of cables that connects to TEG-ECSFP, depending on what mini-GBIC module that you use with the TEG-ECSFP. You may also choose the proper fiber cable that suitable for your network usage.

Connector Type on Fiber Adapter	Wavelength of 1300nm Fiber Optic required	Maximum Distance (* full-duplex)
LC	Multi-mode, 50/125 $\mu\text{m}$	550m (TEG-MGBSX)
LC	Multi-mode, 62.5/125 $\mu\text{m}$	220 m (TEG-MGBSX)
LC	Single-mode, 9/125 $\mu\text{m}$	10 Km (TEG-MGBS10) 40 Km (TEG-MGBS40) 80 km (TEG-MGBS80)

### <Note>

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

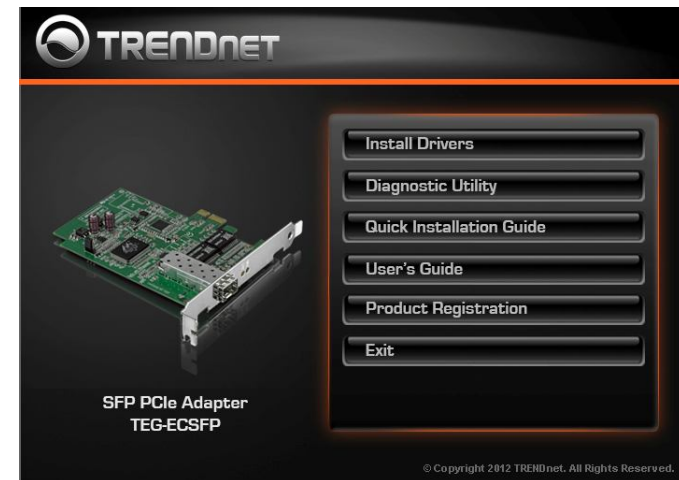
## Installation - Software

### Driver

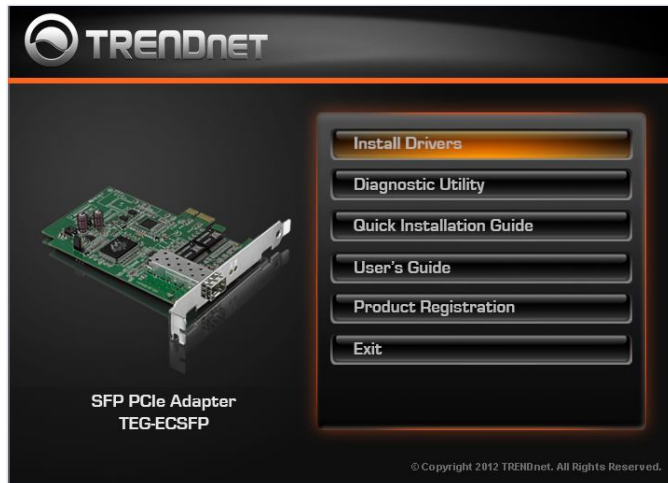
#### Windows 8 / 7 / Vista / 2008 Server

The CD-ROM includes the latest drivers for TEG-ECSFP. It is highly recommend that you install the drivers from the CD-ROM.

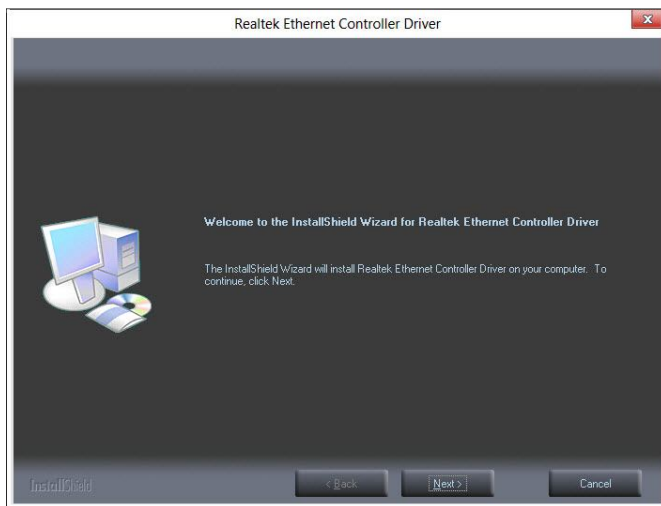
1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program.



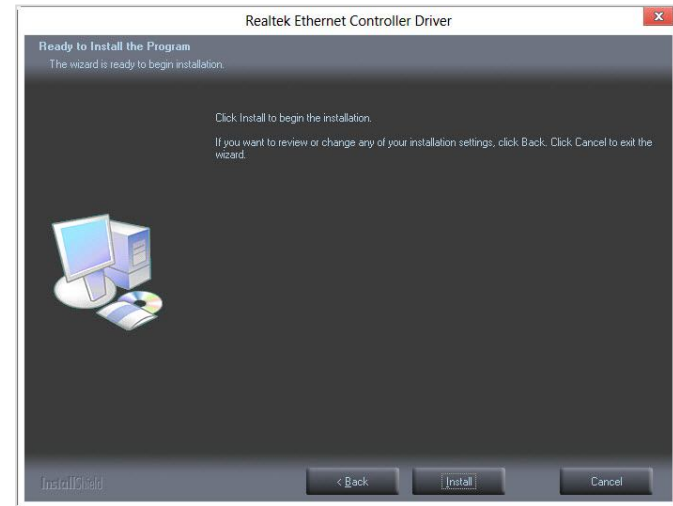
2. Click **Install Drivers**



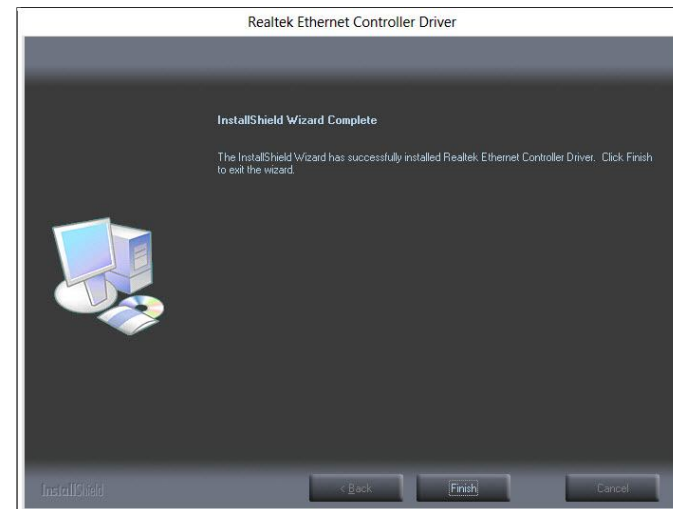
3. Click **Next**



4. Click **Next**



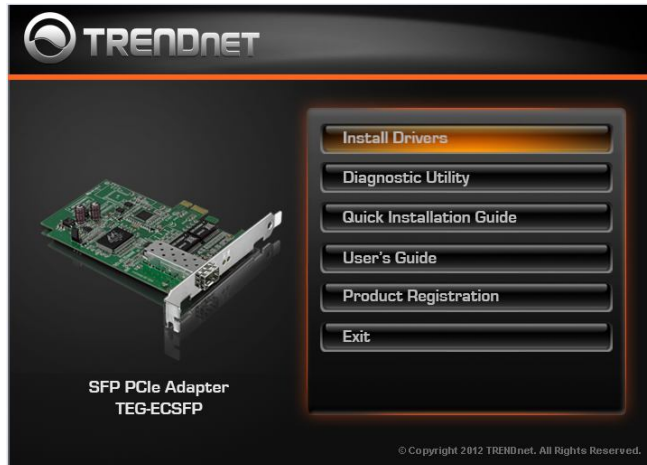
5. Click **Finish**



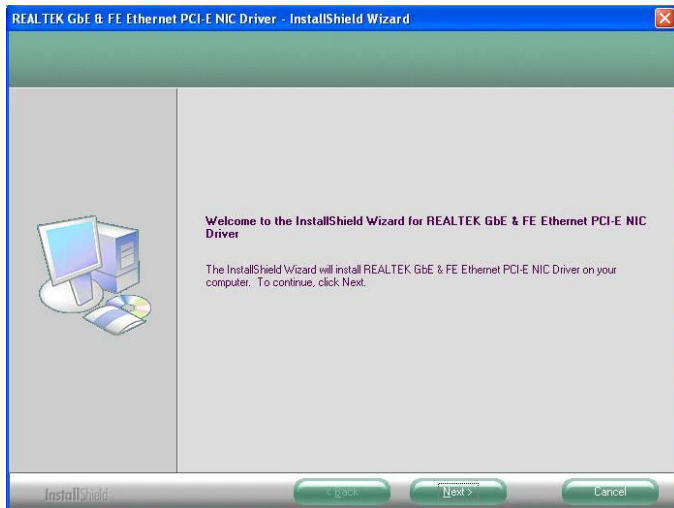


Windows Server 2003 / XP

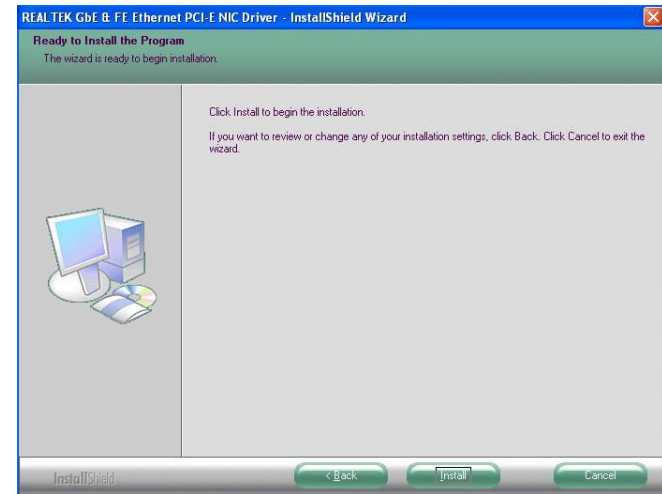
1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program then click **Install Drivers**



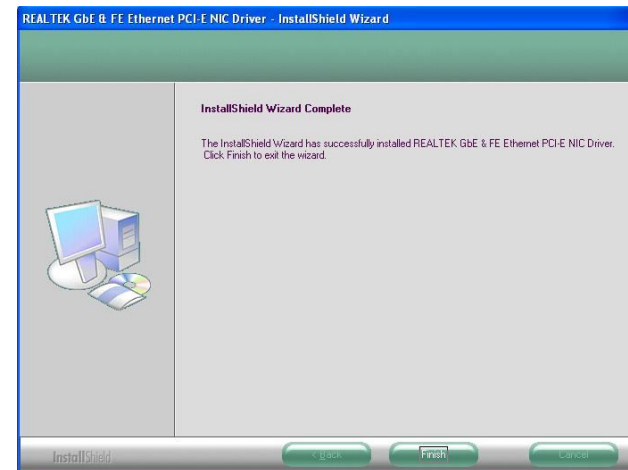
2. Click **Next**



3. Click **Install**



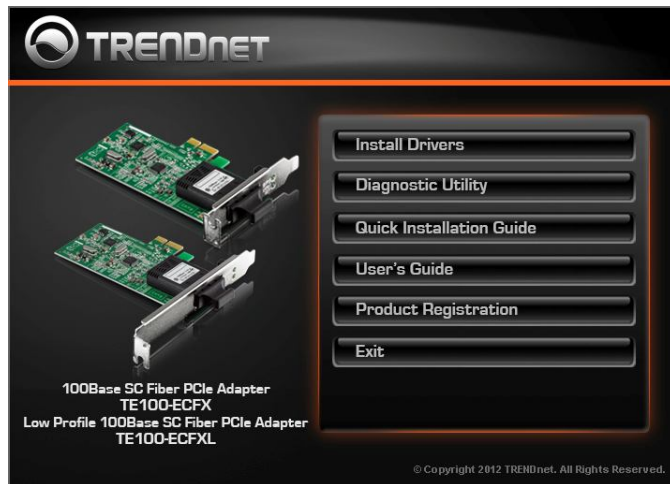
4. Click **Finish**



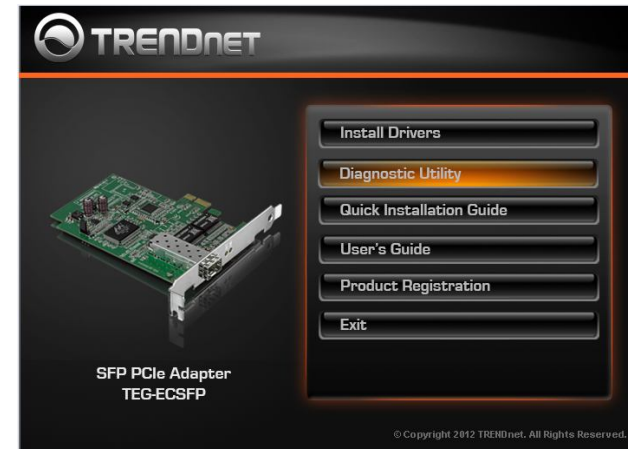
## Diagnostic Utility

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.

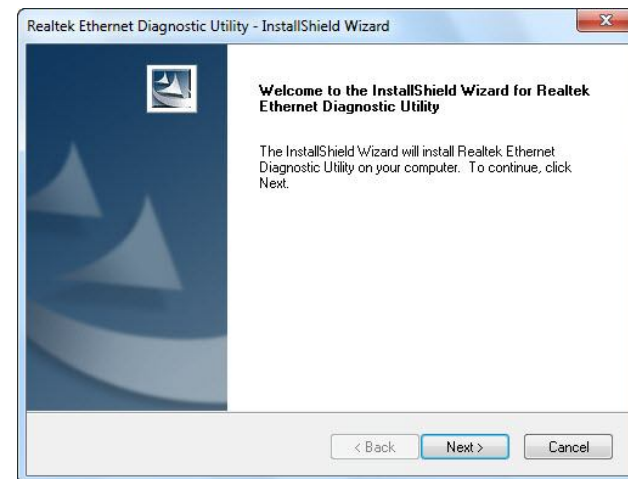
1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program.



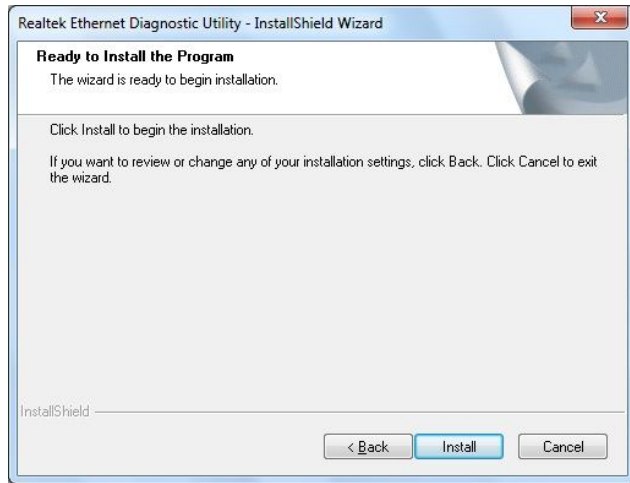
2. Click **Diagnostic Utility**



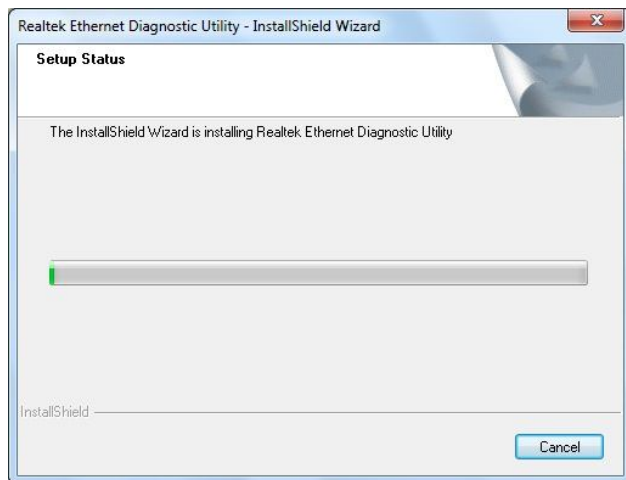
3. Click **Next**.



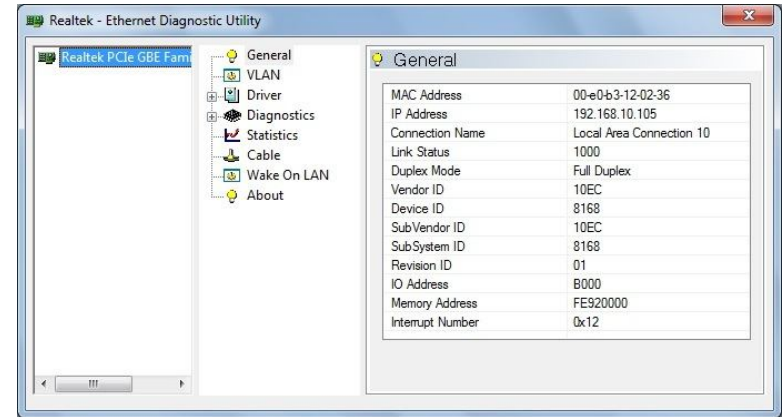
4. Click **Install**.



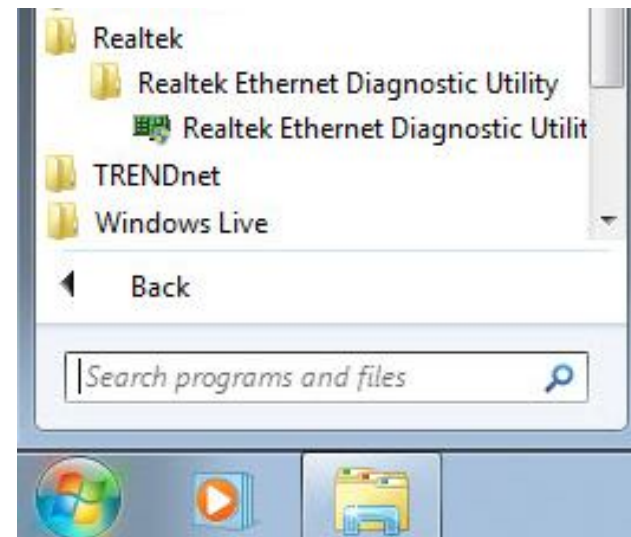
5. Wait while the Diagnostic Utility installs on your computer.



6. The diagnostic utility will automatically pop up after the installation has finished.



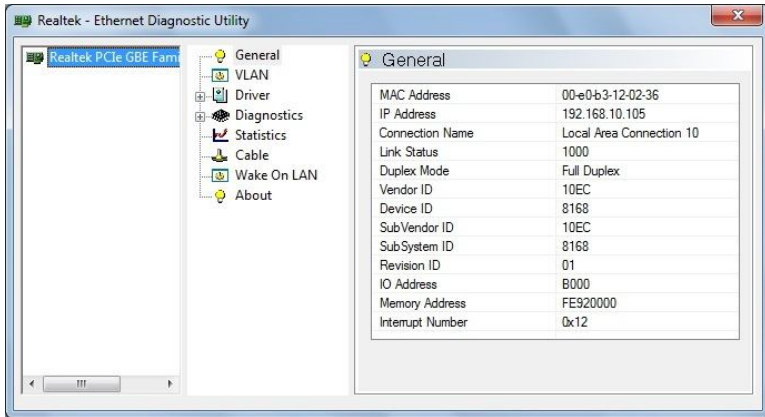
7. You can go to **Programs → Realtek → Realtek Ethernet Diagnostic Utility** to launch the Diagnostics Utility manually.



## Configuration of Diagnostic Utility

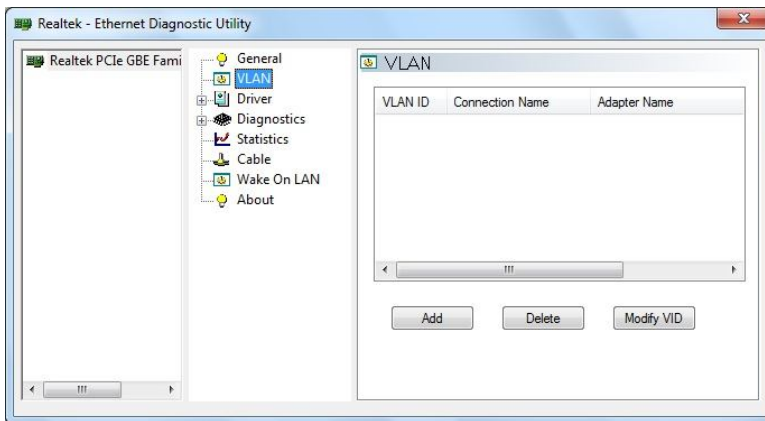
### General

This page displays general information about the selected network adapter.



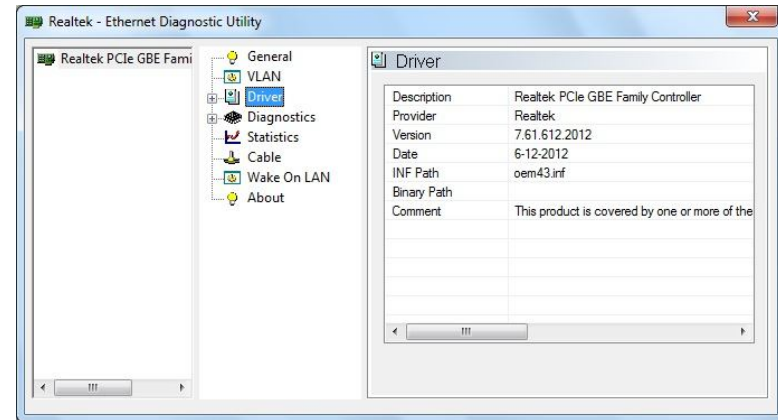
### VLAN

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



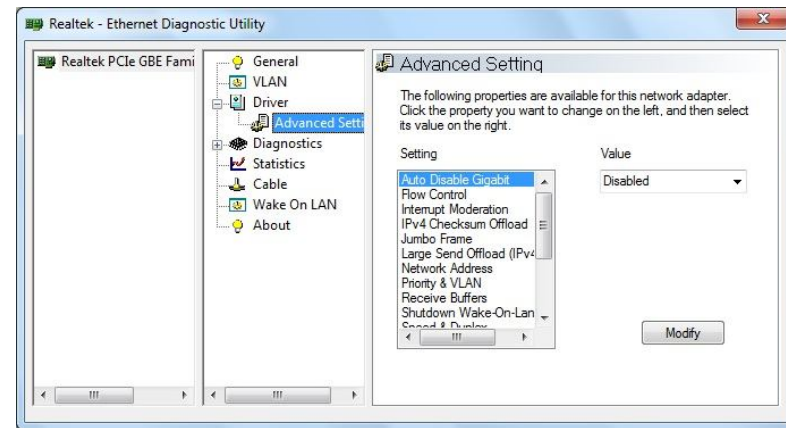
### Driver

This page displays driver information of the selected network adapter.



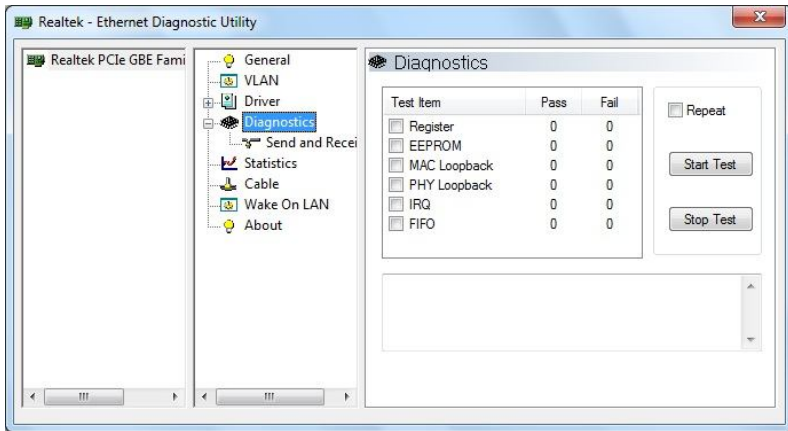
### Driver -> Advanced Setting

This page displays working parameters for this network adapter. User can modify these parameters here.



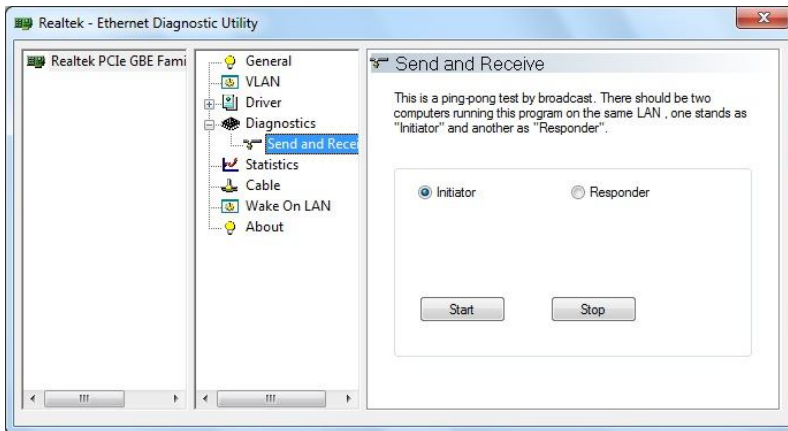
**Diagnostics**

This page performs hardware tests on the selected network adapter.



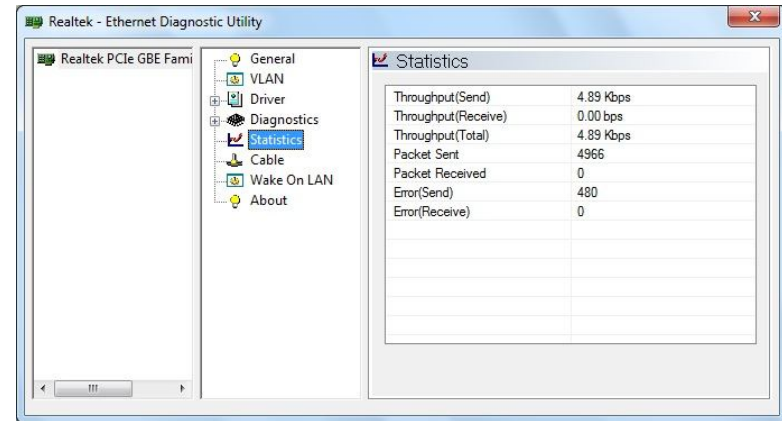
**Diagnostic -> Send and Receive**

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



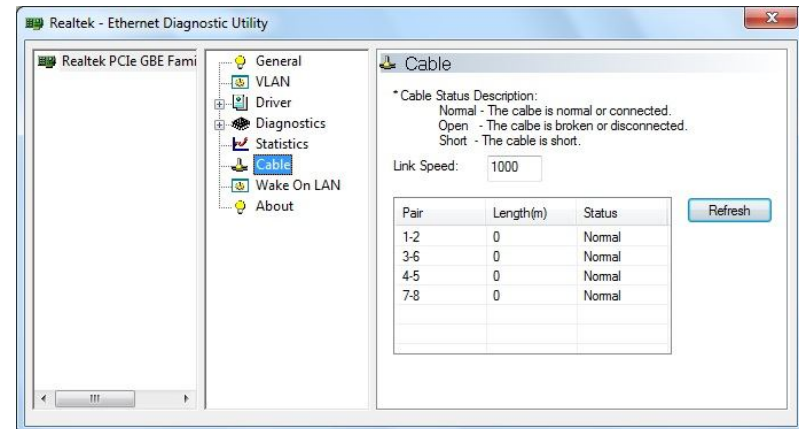
**Statistics**

This page show statistics of the selected network adapter, including throughput, number of good packet sent / received, and number of error packet sent / received.



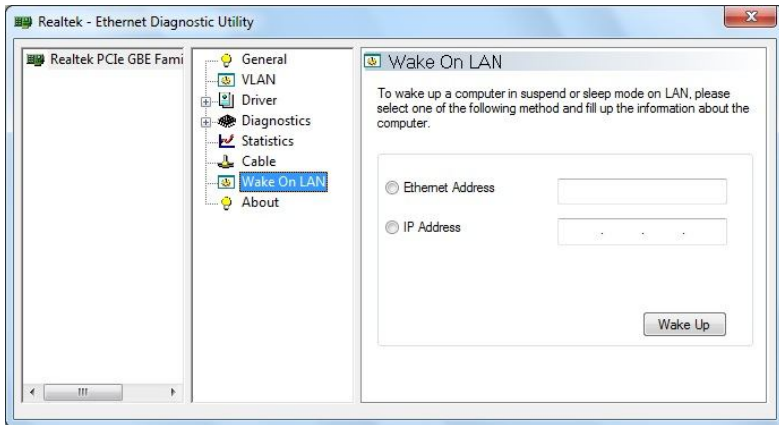
**Cable**

This page estimates the length of the network (RJ-45) cable that is connected to the network adapter. This feature is not supported on TEG-ECSFP.



**Wake On LAN**

This page provides two ways for the user to wake up a computer in standby or hibernate mode via the selected network adapter. A computer can be waked up only if related configurations in BIOS and the network adapter are enabled. This feature is not supported on TEG-ECSFP.



**Technical Specifications**

Hardware	
Standards	IEEE 802.3z 1000Base-SX / LX IEEE 802.3x, IEEE 802.1Q, IEEE 802.1p
Network Media	1000Base-SX : Multi-mode fiber optic cable 50/125 μm, up to 550 m Multi-mode fiber optic cable 62.5/125 μm, up to 220 m 1000Base-LX : Single-mode fiber optic cable 9/125 μm, up to 80 km (TEG-MGBS80)
Protocol	SNMP v1
Interface	PCI Express, Mini-GBIC slot
Power Consumption	2.3 watts (max.)
Diagnostic LED	Link, Activity
Supported OS	Windows 8 (32/64-bit), 7 (32/64-bit), Vista (32/64-bit), XP (32/64-bit), Windows 2003, 2008 Linux Kernel 2.4.x / 2.6.x
Jumbo Frames	Up to 7 KBytes
Data Rate	2000 Mbps (full-duplex)
Dimension	117 x 124 x 85 mm (4.6 x 4.9 x 3.3 in.)
Weight	65 g (2.4 oz)
Temperature	Operating: 0°C ~ 45°C (32°F ~ 113°F) Storage: -10°C ~ 70°C (14°F ~ 158°F)
Humidity	Max. 95% (non-condensing)
Certifications	CE, FCC

## Troubleshooting

### 1. Windows does not recognize my new hardware. What should I do?

First, verify if your computer meets the system requirement on **Technical Specification** section.

Second, access your device manager to make sure the adapter is installed properly.

- To access the device manager on Windows 8/7/ Vista, right-click Computer, click Properties and then click Device Manager.
- To access the device manager on Windows XP, right-click My Computer, click Properties, click the Hardware tab, and then click Device Manager

Third, if the device manager fails to recognize the presence of a new network adapter, verify that the network adapter is firmly seated in the PCIe slot.

### 2. Windows recognizes my new hardware, but I'm unable to connect to my Network. What should I do?

- Make sure that the network device that is connected to the TEG-ECSFP is Gigabit.
- There might be a problem with the fiber cable connection. Make sure that you have the fiber cable connected correctly as describe on the **Fiber Cable** section.
- Another possible problem may be that the network device such as Fiber Converter is not functioning properly. Please confirm the power for the devices are connected and functioning properly.

### 3. Windows has automatically installed drivers, why do I need to install the drivers from the CD-ROM?

Windows has built-in drivers. However, the CD-ROM has the latest drivers.

### 4. What is the maximum distance that is supported by the adapter?

#### **Multi-Mode Fiber Optic Cable**

50/125  $\mu\text{m}$  up to 550 m

62.5/125  $\mu\text{m}$  up to 220 m

#### **Single- Mode fiber optic cable**

9/125  $\mu\text{m}$  up to 80 m

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TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

### TEG-ECSFP – 3 Years Limited Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of-purchase for their return policies.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

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V1.0R / 10.05.2012



## Product Warranty Registration

Please take a moment to register your product online.  
Go to TRENDnet's website at <http://www.trendnet.com/register>

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