TRENDnet®

User's Guide

TEG-PCBUSR

FCC Warning

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Mark Warning

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取扱説明書に従って正しい取り扱いをして下さい。

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Introduction

General Description

The 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card is a credit-card sized Fast Ethernet adapter for connecting a notebook to an IEEE 802.3 Ethernet network, IEEE 802.3u fast Ethernet and IEEE 802.3ab Gigabit Ethernet network, it's designed to work with notebooks or handheld computers that with CardBus slots. Inside its compact package, the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card holds the Gigabit Ethernet controller, network processing interface, RAM for the data buffer a, 68-pin PC Card plug and RJ-45 10/100/1000Mbps Gigabit Ethernet port. It requires no pre-installation setup -- simply insert the PC Card into the computer's 32-bit CardBus slot.

LED Indicators

1. Link/Activity (Link/ACT)
   - This indicator lights green when the RJ-45 port is connected to a Ethernet network, if the indicator blinking green will be transmissing/received data to/from the Ethernet network.
2. Link Speed Indicator (SPEED)
   - The indicator lights green when the port is connected to 1000Mbps Gigabit Ethernet Network and the indicator lights amber when the port is connected to 100Mbps Fast Ethernet Network. Otherwise, this indicator remains off when the port is connected to a 10Mbps Ethernet Network.

Summary of Features

The 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card provides the following features:

- Complies with IEEE 802.3 10BASE-T Ethernet standard
- Complies with IEEE 802.3u 100BASE-TX Fast Ethernet standard
- Complies with IEEE 802.3ab 1000BASE-T Gigabit Ethernet standard
- Complies with ANSI / IEEE 802.3 Auto-Negitiation standard
- Complies with 32-bit CardBus Standard
- Supports Crossover Detection & Auto-Correction
- Built-in Transmit/Reveive FIFO data buffer (8K/64K)
- No manual setup switches -- automatically configured by software
- Low power consumption
- Supported driver list:
  - Microsoft Windows Vista (32/64bit)
  - Microsoft Windows XP (32/64bit)
  - Microsoft Windows 2000 / ME / 98SE
  - Microsoft Network Client for DOS (NDIS 2 driver)
  - NetWare Client for DOS (ODI driver)

Card Insertion and Removal

Card Insertion

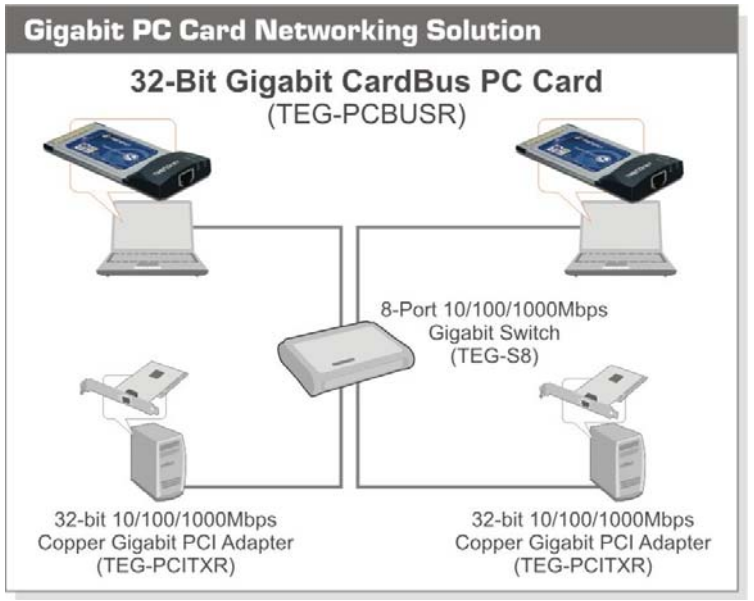
Follow these steps to install the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card:

[1] Insert the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card

Find/select an available Type II or Type III 32-bit PC Card slot on your notebook's side or rear panel. Holding the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card with the LED indicator facing up then insert to the 32-bit PC Card slot. Slide the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card all the way into the 32-bit PC Card slot until it reaches a firm stop.

[2] Connect to the Network Media

Simply plug one end of the cable (RJ-45 connector) into an available hub/switch port, and plug the other end (RJ-45 connector) into the RJ-45 port of your 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card.



Card Removal

Use the computer's PC Card Eject mechanism to unseat the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card from the computer's PC Card slot. The *PC Card* will then protrude from the PC Card slot and you can easily remove the *PC Card* by gripping its protruding end and withdrawing it from the *PC Card* receptacle.

Driver Installation

Before you connect the 32-bit CardBus 10/100/1000Mbps Gigabit Ethernet PC Card to the network, you have to install the network driver first. The driver for each networking operating system is under a separate directory. A ***HELPME.COM*** file under root directory lists the information and detailed installation procedure of all the available drivers.

Card insertion as described in Chapter ***"Card Insertion and Removal"*** must be completed before you proceed with software installation.

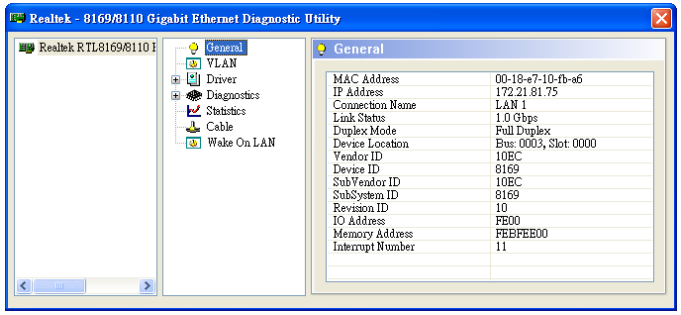
Diagnostic Utility for Windows

This section will lead you to install the utility of the Gigabit LAN PC Card.

Windows Utility Installation

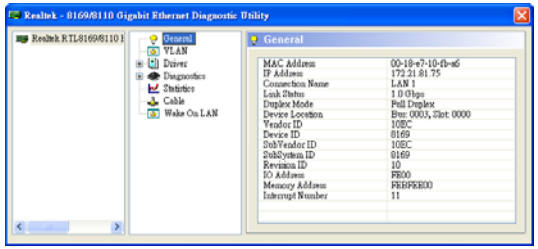
Insert the Driver & User's Guide CD-ROM to CD-Rom driver then install the software manually, go to your Windows Start menu and choose Run, type "D:\ Install98Se.exe" for Windows 98SE and Windows Me or "D:\ Install2kxp.exe" for Windows 2000 and XP in the dialog box and click OK, the install wizard will begin installing the software. Follow the install wizard instructions to complete the installation.

After installation process completed successfully, the program will launch automatically and add an icon  in system tray (task area) for Windows 2000 and XP. Besides, the default value of start up launch is enabled. As to Windows 98SE and ME, it needs to reboot the system to complete the installation process. The user can configure the settings using the Diagnostic Utility; double-click the utility icon that appears in the taskbar.



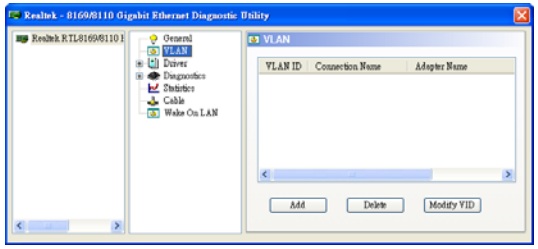
Configuration the PC Card

General



This section displays general information about the selected network adapter.

VLAN



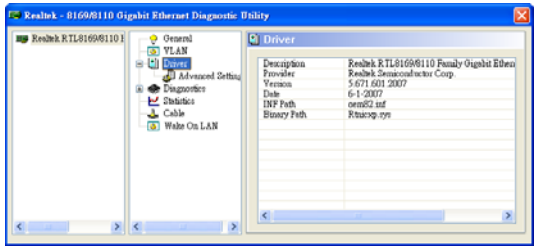
This section shows information about VLANs on current selected RTL8169/8110 or RTL8168 network adapter. User can add or remove VLAN here. Besides, user can change the VLAN ID of existing VLAN.

Add: Click the ***Add*** button to specify the VLAN ID to this adapter.

Delete: Select existed VLAN ID setting and click the ***Delete*** button to delete the VLAN ID setting.

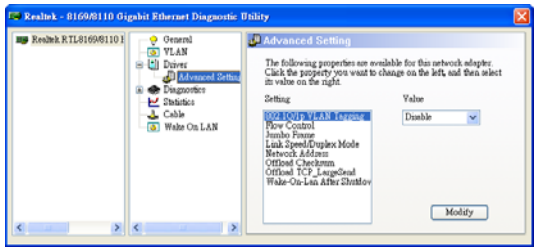
Modify VID: Select existed VLAN ID setting and click the ***Modify VID*** button to change the VID setting.

Driver



This section displays driver information of the selected network adapter.

Advanced Setting



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

Modify: Select the working parameter setting which you want to modify, then click ***Modify*** button to change the working parameter setting.

802.1Q/1p VLAN Tagging

The 802.1Q/1p VLAN Tagging allows user to improve the network security by dividing the network into small domains.

To configure this setting, select Disable or Enable from the drop-down menu, and click ***Modify*** button to confirm.

Flow Control

The Flow Control allows user to minimize possible data loss during transmission on the network.

To configure this setting, select Disable or Enable from the drop-down menu, and click ***Modify*** button to confirm.

Jumbo Frame

The Jumbo Frame allows user to set the transmit packet data size.

To adjust the value, select a data size from the drop-down menu. Sizes are available from 2KB MTU to 7KB MTU. Select Disable if you want to disable the setting. Click ***Modify*** button to confirm.

Link Speed/ Duplex Mode

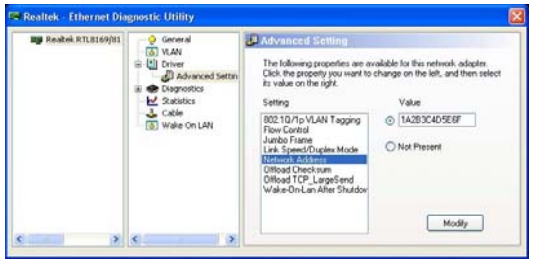
The Link Speed/ Duplex Mode allow user to optimize the connection speed for data transmission.

To configure this setting, select a combination of link speed and duplex mode from the drop-down menu, or

choose Auto Negotiation to enable the device to automatically select the best transmission speed. Click ***Modify*** button to confirm.

This network adapter supports link speed ranging from 10Mbps to 1000Mbps and both full-duplex and half-duplex modes.

Network Address



The Network Address allows user to change the physical address of your adapter.

To set up a physical address, type any new address in the value field and click ***Modify*** button to save your MAC address. This figure displays a modified network address “1A2B3C4D5E6F”.

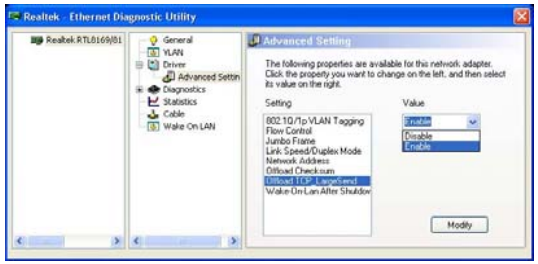
To power off the network adapter, select Not Present and click ***Modify*** button to confirm.

Offload Checksum

The Offload Checksum allows user to decrease CPU utilization by offloading the task of CPU to the network adapter.

To configure this setting, select a value from the drop-down menu and click ***Modify*** button to confirm. You can modify the value to Rx Checksum, Tx Checksum, Tx/ Rx Checksum, or Disable.

Offload TCP_LargeSend

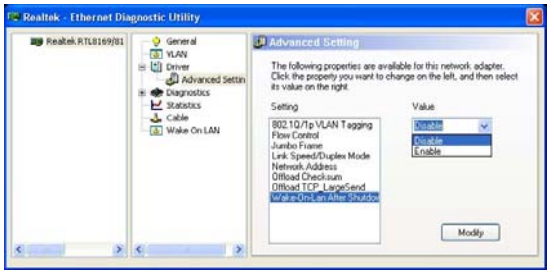


The Offload TCP_LargeSend allows user to reduce CPU workload by dividing large buffers into small ones.

To configure this setting, select Disable or Enable from

the drop-down menu, and click ***Modify*** button to confirm.

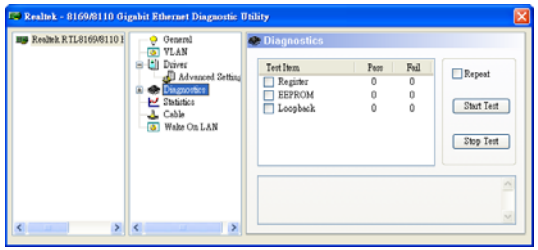
Wake-On-Lan After Shutdown



The Wake-On-Lan after Shutdown allows user to remotely power on and manage your computer.

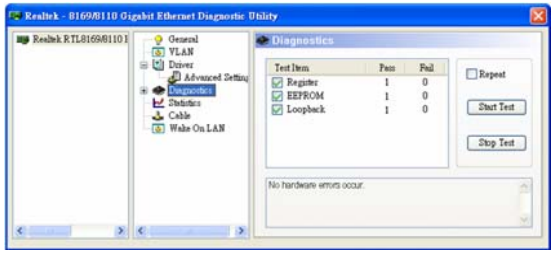
To configure this setting, select Disable or Enable from the drop-down menu and click ***Modify*** button to confirm.

Diagnostic



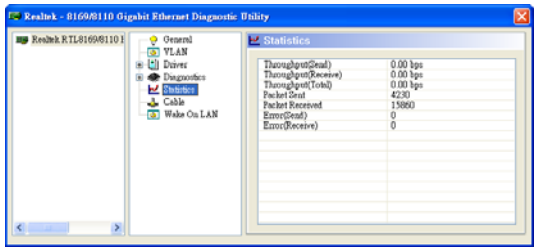
This section provides user to diagnostic the Register, EEPROM, Loopback of adapter yourself, checked the test items then click ***Start Test*** button to start the diagnostic process. If got the ***Fail*** record, please contact your vendor.

The section shows you the result of a single test run.



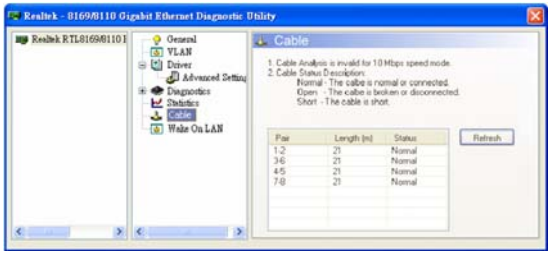
User can check the “Repeat” option then it will continue test until user press the “Stop Test”.

Statistics



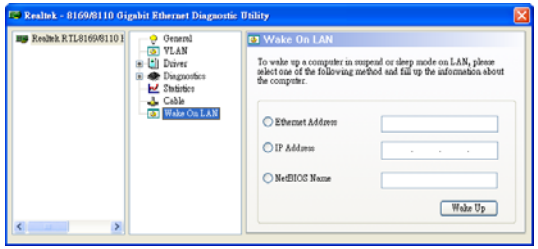
This section displays the real-time statistic information of the selected network adapter’s Throughput, Packet, and Error statistics.

Cable



This section displays the cable connection information of the selected network adapter. It shows the length and status of the Cable connecting between two Gigabit Ethernet Adapters.

Wake On LAN



This section allows user to wake up remote computer by Ethernet Address, IP Address or NetBIOS Name through selected network adapter.

To Wake up a remote computer that is in Standby, Hibernate or Shutdown mode, user can choose three methods to do it. Choose “Ethernet Address” and key in the Ethernet Address (e.g. key in Ethernet Address: 123456ABCDEF). Or choose “IP Address” and key in the IP Address (e.g. key in IP Address: 192.168.10.10). Otherwise choose “NetBIOS Name” and key in the NetBIOS Name (e.g. key in NetBIOS Name: PC1).

Technical Specifications

General	
Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet ANSI/IEEE Auto-Negotiation 32-bit CardBus PC Card
Protocol	CSMA/CD
Data Transfer Rate	Ethernet: 10Mbps (half-duplex) 20Mbps(full-duplex) Fast Ethernet: 100Mbps (half-duplex) 200Mbps (full-duplex) Gigabit Ethernet: 2000Mbps (full-duplex)
Network Cables	10BASE-T: 2-Pair UTP/STP Cat. 3,4,5 100BASE-TX: 2-Pair UTP/STP Cat. 5 1000BASE-T: 4-pair UTP/STP Cat. 5e, 6
Physical and Environmental	
Temperature	Operating: 0° ~ 40° C, Storage: -10° ~ 70° C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
EMI:	FCC Class B, CE Mark B, VCCI-B

Limited Warranty

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-PCBUSR – 5 Years Warranty

If a product does not operate as warranted above during the applicable warranty period, TRENDnet shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product. All products that are replaced will become the property of TRENDnet. Replacement products may be new or reconditioned.

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.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product by any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet office within the applicable warranty period for a Return Material Authorization (RMA) number, accompanied by a copy of the dated proof of the purchase. Products returned to TRENDnet must be pre-authorized by TRENDnet with RMA number marked on the outside of the package, and sent prepaid, insured and packaged appropriately for safe shipment.

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

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Product Warranty Registration

Please take a moment to register your product online.
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