INTRODUCTION

This Gigabit Ethernet Mini PCI-Express Card is a high performance 10/100/1000 BASE-T Ethernet LAN controller. It provides a low cost solution for connecting to a high speed Local Area Network (LAN) with a data transfer rate up to 1000Mbps over a group of 4 twisted pair copper wires to a distance of maximum 100 meters away. The Gigabit Ethernet system is 100 and 10 times faster than the 10BASE-T and 100BASE-T system respectively, and yet it is 100% fully backward compatible with 10/100BASE-T system. Therefore, it can be easily plugged into almost any existing network.

FEATURES AND SPECIFICATION

- Complies with PCI-Express Revision 1.1
- Mini PCI-Express with transfer rate 2.5Gb/s full duplex channel
- A high performance 1000BASE-T Ethernet controller card
- Backward compatible to 10/100BASE-T networking
- 10/100/1000Mbps data rate auto negotiation operation
- Compatible to existing CAT-5 UTP cabling
- Supports jumbo frame to 9K bytes
- Fully compliant with IEEE 802.3, 802.3u, 802.3ab
- Supports full duplex flow control (IEEE 802.3x)
- Supports IEEE 802.1P Layer 2 Priority Encoding
- Supports IEEE 802.1Q VLAN tagging
- Supports IEEE 802.3az Draft 3.0 (EEE)
- Crossover Detection and Auto Correction operation
- Supports Microsoft Windows 98SE, ME, 2000, XP 32/64-bit, Server 2003 32/64-bit, Vista 32/64-bit, Server 2008 32/64-bit, Windows 7 32/64-bit, SCO Unix, Linux, FreeBSD, Novell, DOS and Mac OS X 10.4.x or above

PACKAGE CONTENTS

Please check whether the package contains the following items. If any item is missing or damaged, please contact the retailer as soon as possible:
- Gigabit Ethernet Mini PCI-Express Card - Main card x 1
- Gigabit Ethernet Mini PCI-Express Card - Daughter card x 1
- 10-pin network cable x 1
- 4-pin LED cable x 1
- User manual x 1
- Driver CD x 1

HARDWARE & SOFTWARE INSTALLATION

WARNING

Before installing and activating this controller card, please make sure you have a complete backup of your existing data from your hard drives. Manufacturer is not responsible for data loss due to abuse, misuse, or neglect. Should you have any installation problem, please contact your dealer for assistance.

Before Installation

Before the installation of the controller card, let us make the following assumptions:
1. The end users must have the basic knowledge of installing an internal device and its driver to a PC. If they are not sure about their abilities or have any queries, please call their local dealers immediately, or find somebody who are experienced and qualified for assistance.
2. The computer has been properly installed with the supported operating system.

Installing the Cards into the Computer

1. Turn off your computer and all external devices connected to it.
2. Disconnect your computer from the power sources.
3. Open the computer case. Refer to your computer user manual for more details.
4. Find an available Mini PCI-Express slot and remove the slot bracket. Save the bracket screw for later use.
5. Insert the main card to the Mini PCI-Express slot firmly and evenly. Take care not to force it into the slot. Once you have properly positioned the main card into the slot, secure it with the screw you have just saved.
6. Connect the network cable and LED cable between the main card and the daughter card. The orientation of the cable socket must be same as the headers which are shown as below:

Network header   **LED header**

The cable socket should always be inserted onto the header with the same orientation and the triangle mark on the PCB showing pin 1 of the cable and the header

7. Find an empty expansion slot on the back panel of the computer case and remove the metal bracket. Save the bracket screw for later use.
8. Place the bracket of the daughter card on the expansion slot on the back panel and secure it with the bracket screw you have just saved.
9. Connect the system to network by inserting the CAT-5 or above cable (not included in the package) into RJ45 connector on the daughter card.
10. Secure the computer case and switch on your computer.

Installing Windows Driver

1. Turn on the computer.
2. Once Windows is running, a new network controller card is detected.
3. If the Windows asks for driver for the network controller card, then insert Driver CD into the optical drive (Assume the optical drive letter is **D:**).
4. Browse to the following path (Assume the Windows OS used is Windows 7):
    D:\ Realtek\RTL8111\Windows 7
5. Execute "**setup.exe**" to install the driver.
6. Follow the on screen instructions until the driver is totally installed.

Checking the status of the installed driver:
1. Right click on the icon of **My Computer** and choose **Properties**.
2. Choose **Device Manager**.
3. Left click on the "+" sign of the **Network Adapters**.

4. The following device should be shown:
    Realtek PCIe GBE Family Controller
5. Right click on the device above and choose **Properties**.
6. Check the **Device status** in the **General** window. The following should be shown:
    This device is working properly

Installing Driver for Other Operating Systems
Please refer to the installation documents in the relevant folder on the Driver CD to install driver.
To obtain the latest drivers, please refer to the **Updating Drivers** section below.

Notice
When the device driver is properly installed, there will not be any question and exclamation mark
shown against this device. If yes, check the following:
1. The driver for the network controller card is installed straightly according to the procedure
    listed above?
2. If an older version driver is installed previously?
3. The driver for a similar product is installed?
4. In the worst case, the network controller card is defective. Please contact your local dealer or
    distributor immediately.

GETTING THE LATEST DRIVER, SOFTWARE & DOCUMENT
1. Please go to **http://www.drivers-download.com**
2. In "**Drivers Search**" section, enter the Download code (DL code): **DL-0263212** to search for
    the latest driver, software and document.

Or you can download the latest driver from Realtek website:
1. Please go to http://www.realtek.com
2. Select **"Downloads"**
3. Select **"Communications Network ICs"**
4. Select **"Network Interface Controllers"**
5. Select **"10/100/1000M Gigabit Ethernet"**
6. Select **"PCI-Express"**
7. Select **"Software"**
8. The final page shows all the available software for RTL8111x
9. Select and download your desired operating system driver