PCIe Dual Port Gigabit Server Adapter

User Manual

Ver. 2.01

Contents:

Chapter 1: Introduction

1.1 Product Introduction

This card is a high-performance PCI Express Ethernet adapter that delivers up to 1000 MB/s Ethernet over twisted-pair category 5 or better cabling. It offers two ports on a single PCI Express adapter, allowing customers to save valuable I/O slots for other uses. It is based upon the high performance Intel I350 chipset and offers a four lane (x4) PCI Express bus.

This card includes support for Wake-on-LAN (WOL). Additionally, it ships with support for Jumbo Frames, Network Fault Tolerance, Load Balancing, and various offload capabilities such as Segmentation Offload and Large Send Offload (LSO) that offer further network throughput improvements.

1.2 Features

- Two 10/100/1000Mbps compatible RJ-45 Ethernet ports
- Designed to meet PCI Express Specification Revision 2.1

- Four lane (x4) PCI Express compatible with x4, x8 and x16 PCI Express slots
- Fully Compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3ad (link aggregation), IEEE 1588 (time sync) / 802.1AS, IEEE 802.1q (VLAN tagging)
- 10/100/1000M data auto-negotiation
- Load balancing on multiple CPUs
- Receive Side Scaling (RSS)
- UDP, TCP and IP checksum offloads
- UDP and TCP Transmit Segmentation Offloading (TSO)
- Interrupt throttling control
- Support for most network operating system (NOS)
- Intel PROSet Utility for Microsoft Device Manager
- Advanced cable diagnostics
- Teaming support
- Multiple teams
- Jumbo Frame support
- Support Wake On Lan (WOL) power management
- Feature full duplex mode that doubles the network connections speed

1.3 System Requirements

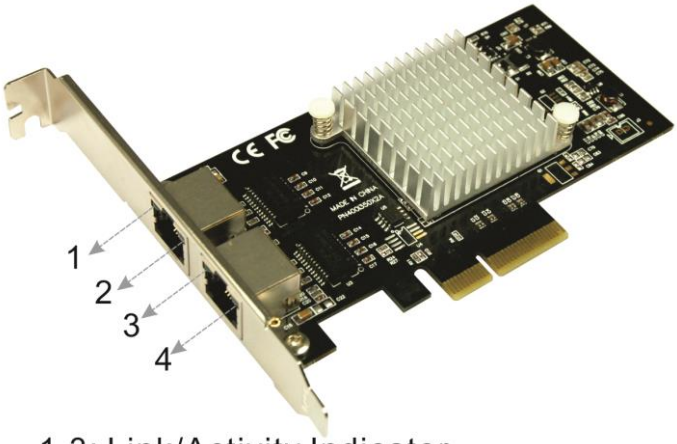
- Windows® XP/Server 2003/Vista/Server 2008/7/Server 2008 R2/8/Server 2012/8.1/Server 2012 R2 (32/64 bit)/10（32/64bit）; Linux 2.4.x or later
- PCI Express x4, x8 or x16 slots

1.4 Package Contents

- 1 x PCIe Dual Port Gigabit Server Adapter
- 1 x Driver CD
- 1 x User Manual

Chapter 2: Getting Started

2.1 Hardware Layout



Link/Activity Indicator:

- When the LED is off, there is no link between the Gigabit Ethernet PCIe card and the network
- When the LED is on, a link is established, but there is no traffic on the network
- When the LED is flashing, there is traffic on the network to

which the Gigabit Ethernet PCIe card is connected

Link Speed Indicator:

- When the LED is lit orange, a 1000BaseT link is established
- When the LED is lit green, a 100BaseT link is established
- When the LED is off, a 10BaseT link is established

2.2 Hardware Installation

1. Turn off the power to your computer.
2. Unplug the power cord and remove your computer's cover.
3. Remove the slot bracket from an available PCIe slot.
4. To install the card, carefully align the card's bus connector with the selected PCIe slot on the motherboard. Push the board down firmly.
5. Replace the slot bracket's holding screw to secure the card.
6. Replace the computer cover and reconnect the power cord.

2.3 Driver Installation

The following section shows you how to install PCIe Dual Port Gigabit Server Adapter driver on different operating systems.

2.3.1 Installation for Windows

Insert the provided CD into your disk drive. The CD-ROM will start automatically. The following screen will show up and please click **"Install Driver"**.

*Note: Actual image may vary

Note: If the install program doesn't run automatically, please locate and double-click on the **Autorun.exe** file in the CD to launch the install program.

Please click **"PCIe Intel"** to start the installation.

Follow the instructions on screen to install the driver.

2.3.2 Installation for Linux

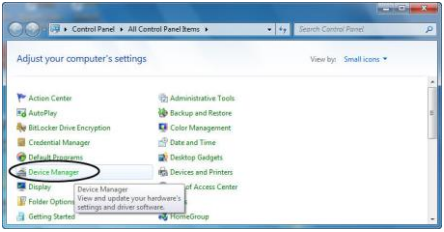
1. Insert the provided CD into your CD-ROM drive.
2. Extract the compressed driver source file to a certain directory by the following command: (Please copy the driver file "igb-5.3.5.18.tar.gz" from the CD folder ".\ Driver\Intel\PRO1000\LINUX" to a certain folder on hard drive)
   # tar zxf igb-<x.x.x>.tar.gz
3. Change to the driver src directory, where <x.x.x> is the version number for the driver tar:
   # cd igb-<x.x.x>/src/
4. Compile the driver module:
   # make install

2.4 Verifying the installation

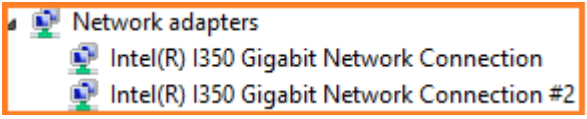
2.4.1 Verifying for Windows

1. Click on the **"Device Manager"** tab in the Windows Control Panel.

Start > Control Panel > Device Manager



2. Entry **"Network adapters"** item, and you can read **"Intel(R) I350 Gigabit Network Connection"** in the Device Manager.



2.4.2 Verifying for Linux

1. You can check whether the driver is loading by using following

commands:

lsmod | grep igb

ifconfig –a

If there is a device name, ethX, shown on the monitor, the linux driver is load. Then, you can use the following command to activate the ethX.

ifconfig ethX up, where X=0,1,2,…

Chapter 3: Troubleshooting Tips

- The computer can NOT detect the PCIe Dual Port Gigabit Server Adapter
  1. Make sure that the PCI Express card is correctly plugged into the PCI Express slot; if not, turn off the computer and plug it again.
  2. If the PCI Express card is plugged in correctly, see if the golden connectors on the card are clean; if not, clean the connector surface.
  3. If still NOT, please change another PCI Express slot on your

motherboard.

4. Please upgrade your motherboard BIOS to the latest version. If it still not work, contact your motherboard vendor asking the advanced supporting for BIOS updated.
5. The board itself might be defective. You can try another motherboard testing PCIe Dual Port Gigabit Server Adapter working or not.

- Computer failed to start after inserting the PCIe Dual Port Gigabit Server Adapter

Turn off the computer, remove the PCIe Dual Port Gigabit Server Adapter, and try to restart the computer. If the computer starts successfully, it means that the card has not been inserted into the PCI Express slot correctly. Please clean golden figure by rubber firstly, then change another PCI Express slot.