

10/100 NIC + USB 2.0 + 1394a 7 Port PCI Host

1. Introduction

This PCI Host Adapter is a PCI controller board which can upgrade your desktop computer to have Fast Ethernet (10 Mbps, 100 Mbps), three 1394 (FireWire) ports and three USB2.0 / USB1.1 ports.

The board supports a 32-bit 66 MHz PCI bus revision 2.2, 1394 transfer rate of 400 Mb/s, USB transfer rate of 1.5Mb/s, 12Mb/s, 480Mb/s and Ethernet 10/100Base-T.

It comes with drivers for Windows.

1.1. Features

1.1.1. PCI Interface

- Compliant with PCI Specification, revision 2.2.
- 32 bit, 33/66MHz fully compliant PCI host interface.
- Integrated PCI DMA engines.

1.1.2. 100Base-T Fast Ethernet

- RJ-45 Connector for 10 Mb/s and 100 Mb/s operation.
- LED indicates for various network activity.
- Supports Wake-On-LAN.
- Supports 10 Mb/s and 100 Mb/s N-way Auto-negotiation operation.
- Includes a programmable, PCI burst size and early Tx/Rx threshold.
- Contains two large (2Kbyte) independent receive and transmit FIFOs.
- Supports loopback capability.
- Half/Full duplex capability.
- Supports Full Duplex Flow Control (IEEE 802.3x).

1.1.3. USB Interface

- Provides three USB2.0 / USB1.1 ports (2 External + 1 Internal).
- Compliant with Universal Serial Bus Specification Revision 2.0 (Data Rate 1.5/12/480 Mbps).
- Compliant with Open Host Controller Interface Specification for USB Rev 1.0a.

- Compliant with Enhanced Host Controller Interface Specification for USB Rev 0.95, All USB ports can handle high-speed (480 Mbps), full-speed (12 Mbps), and low-speed (1.5 Mbps) transaction.

1.1.4. 1394 (FireWire) Interface

- On Board Power connector to have power supply beyond PCI Bus.
- Provides three 1394 ports at 100/200/400 Mbps, 1 External 4Pin + 1 External 6Pin + 1 Internal 6Pin.
- Special 1 External 4Pin IEEE 1394 Receptacle for Camcorder/Camera use.
- Compliant with 1394 Open Host Controller Interface specification release 1.1 and IEEE Std 1394a-2000.
- Built-in FIFOs for isochronous transmit (2048 bytes), asynchronous transmit (2048 bytes), and receive (3072 bytes).
- 32-bit CRC generation and checking for receive/transmit packets.

1.2. Package Contents

- 10/100 NIC + USB 2.0 + 1394a 7 Port PCI Host
- This User's Manual
- Driver Diskette

2. Software Installation

2.1. Windows 2000 installation

1. Power off the system. Insert Combo Card into an available PCI slot. Power up the system.
2. During OS boot up, Windows will display the '**Found New Hardware Wizard**'. '**Universal Serial Bus (USB) controller**', Click '**Next**'.
3. Select '**Search for a suitable driver for my device (Recommended)**' and Click '**Next**'.
4. Under '**Optional search locations**' insure that '**Floppy disk drives**' is only checked.
5. Insert the diskette Driver into A: and click '**Next**'.
6. When the wizard indicates that it found a driver for the device click '**Next**'. Then click '**Finish**'.

2.2. Windows XP installation

1. Power off the system. Insert Combo Card into an available PCI slot. Power up the system.
2. During OS boot up, Windows will display the '**Found New Hardware Wizard**'. Universal Serial Bus (USB) controller.
3. Select '**install the software automatically (Recommended)**' and insert diskette driver into Floppy disk drives. And Click '**Next**'. Then click '**Continue Anyway**'.
4. The wizard will now copy the required files to the system and start the Driver. After starting the driver the wizard will display a completion Dialog, click '**Finish**' to exit the wizard.

2.3. Verifying The installation under Windows 2000 and XP

Follow the instructions in this section to verify that the controller was installed correctly.

1. Right click on '**My Computer**' icon, select '**Properties**', left click on '**Hardware**' tab, and then on '**Device Manager**' button.
2. Double click on '**system devices**', then double click '**PCI standard PCI-to-PCI bridge**'. If there is no yellow '!' or '?' in front of '**PCI standard PCI-to-PCI bridge**' the driver has started correctly.
3. Double click on '**IEEE 1394 Bus host controllers**' If there is no yellow '!' or '?' in front of '**OHCI Compliant IEEE 1394 Host Controller**' the driver has started correctly.
4. Double click '**Universal Serial Bus Controllers**', If there is no yellow '!' or '?' in front of
 - NEC PCI to USB Enhanced Host Controller**
 - NEC PCI to USB Open Host controller**
 - NEC PCI to USB Open Host controller**
 - USB Root Hub**
 - USB Root Hub**the driver has started correctly.
5. Double click on '**Network adapter**', If there is no yellow '!' or '?' in front of '**Realtek RTL8139(A) PCI Fast Ethernet adapter #3**' the driver has started correctly.
6. To view information about the devices attached to the controller, right click the '**Devices**' and select Properties from the context menu, then select the

tab labeled **'General'**.

2.4. Windows 98SE installation

1. Power off the system. Insert Combo Card into an available PCI slot. Power up the system.
2. During the system boot up, the Hardware Wizard will display that it found a **'PCI standard PCI-to-PCI bridge'**, click **'Next'**. Select **'Search for the best driver for your device [Recommended]'** and click **'Next'**.
3. Select **'Floppy disk drives'** and click **'Next'**, click **'Next'**, then click **'Finish'**.
4. The Hardware wizard will display that it found **'NEC USB Open Host Controller'**, click **'Next'**.
5. Select **'Search for the best driver for your device (Recommended)'** and click **'Next'**.
6. Select **'Floppy disk drives'**. and insert diskette driver into Floppy drive, and click **'Next'**.
7. Select **'The Updated driver (Recommended)'**, NEC USB Open Host Controller, and click **'Next'**.
8. If display **'insert Disk'** (please insert the disk labeled windows 98 second Edition CD-ROM) and click OK, Then click **'Finish'**.
9. The Hardware wizard will display that it found **'NEC USB Open Host Controller'**, and click **'Next'**. Select **'Search for the best driver for your device(Recommended)'**. click **'Next'** ,Select **'Floppy disk drives'** click **'Next'** Select **'The Updated driver (Recommended)'** NEC USB Open Host Controller, and click **'Next'**, click **'Next'** if display **'insert Disk'**(please insert the disk labeled windows 98 second Edition CD-ROM) and click OK, Then click **'Finish'**.
10. The Hardware wizard will display that it found **'PCI Universal serial Bus'**, and click **'Next'**. Select **'Search for the best driver for your device (Recommended)'**. click **'Next'**, Select **'Floppy disk drives'** and click **'Next'** Select **'The Updated driver (Recommended)'** NEC PCI To USB Enhanced Host Controller click **'Next'**, and click **'Next'**, then click **'Finish'**.
11. The Hardware wizard will display that it found **'PCI OHCI Compliant IEEE 1394 Host Controller'**, click **'Next'** and select **'Search for the best driver for your device (Recommended)'**. Click **'Next'**, Select **'Floppy disk drives'** and click **'Next'**, click **'Next'**, then click **'Finish'**.
12. The Hardware wizard will display that it found **'PCI Ethernet Controller'**, click **'Next'** , select **'Search for the best driver for your device (Recommended)'**, click **'Next'** ,Select **'Floppy disk drives'** click **'Next'**, and click **'Next'**, click

'Finish'.

13. When install driver finish, please remove driver diskette and windows 98 Second Edition CD-ROM, and click **'YES'** to restart your computer.

2.5. Windows ME installation

1. Power off the system. Insert Combo Card into an available PCI slot. Power up the system.
2. During the system boot up, the Hardware Wizard will display that it found **'PCI standard PCI-to-PCI bridge'**, select **'Automatic search for a better driver (Recommended)'**, click **'Next'**, and then click **'Finish'**.
3. The Hardware wizard will display that it found **'PCI OHCI Compliant IEEE 1394 Host Controller'**, select **'Automatic search for a better driver (Recommended)'**, click **'Next'**, and then click **'Finish'**.
4. The Hardware wizard will display that it found **'PCI Universal Serial Bus'**, Select **'Automatic search for a better driver (Recommended)'**, insert diskette driver into Floppy drives, click **'Next'**, and then click **'Finish'**.
5. The Hardware wizard will display that it found **'PCI Ethernet controller'** and Automatic installing **'Realtek RTL8139(A) PCI Fast Ethernet Adapter'** driver into your computer, when driver install Finish please remove the driver diskette and restart your computer.

2.6. Verifying The installation under Windows 98SE and ME

Follow the instructions in this section to verify that the controller was installed correctly.

1. Right click on **'My Computer'** icon, select **'Properties'**, left click on **'Device Manager'** tab.
2. Double click on **'system devices'**, then double click **'PCI standard PCI-to-PCI bridge'** . If there is no yellow **'!** or **'?'** in front of **'PCI standard PCI-to-PCI bridge'** the driver has started correctly.
3. Double click on **'1394 Bus controllers'** If there is no yellow **'!** or **'?'** in front of **'PCI OHCI Compliant IEEE 1394 Host Controller'** the driver has started correctly.
4. Double click **'Universal Serial Bus Controllers'**, If there is no yellow **'!** or **'?'** in front of
NEC PCI to USB Enhanced Host Controller
NEC PCI to USB Open Host controller (E13+)

NEC PCI to USB Open Host controller (E13+)

USB Root Hub

USB Root Hub

the driver has started correctly.

5. Double click on '**Network adapter**', If there is no yellow '!' or '?' in front of '**Realtek RTL8139(A) PCI Fast Ethernet adapter #3**' the driver has started correctly.
6. To view information about the devices attached to the controller, right click the '**Devices**' and select Properties from the context menu, then select the tab labeled '**General**'.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must