

## OVERVIEW

Universal Serial Bus (USB) technology has emerged in response to the increasing number of external peripheral devices (printers, scanners, modems, digital cameras, removable drives, etc.), that are being connected to the latest generation of computers. Not only is it significantly faster for data transfer, but it does not require the installation of expansion cards or the use of IRQs, so many devices can be easily connected, and IRQ conflict problems are eliminated.

Since many older computers don't have USB connectors on board and most new computers come with only one or two USB ports, multi-port solutions have been developed to handle all the USB peripherals users may want to connect up.

The IC-250U 5 Port USB PCI Card is a unique and elegant implementation of the USB Hub principle. Instead of taking up space on the desktop as a separate unit, it plugs into a PCI slot on the computer's mainboard. In this way, the IC-250U neatly and efficiently provides five USB ports to computers that have no USB ports, or adds five USB ports to computers that already do.

Four of the ports are external. They are for connecting traditional external USB peripherals. The internal port is provided specifically for connecting the new breed of internal USB devices, such as removable media drives, CD-ROM and DVD drives, Floppy and Hard Disk drives, etc.

The IC-250U 5 Port USB PCI Card complies with the USB 2.0 standard. This represents the second USB generation, and provides transfer rates of up to 480 Mbps.\* It is faster, more efficient, and more capable than its predecessor (USB 1.1), yet is fully backward compatible, so prior user investment in USB 1.1 peripherals is not lost.

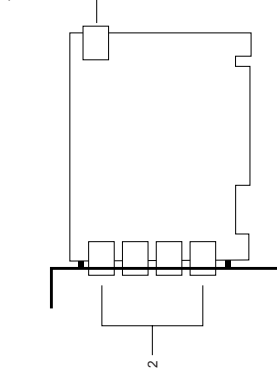
## FEATURES

- USB 2.0 Certified
- Transfer speeds of up to 480Mbps\*
- Supports all USB devices - backward compatible with USB 1.1
- Provides 5 USB ports (4 external, 1 internal) to non-USB systems; adds 5 USB ports to existing USB systems
- Installs into the back of the computer; saves space; allows for a neat and tidy work environment; no cable mess on the desktop

## SYSTEM REQUIREMENTS

- Windows XP; Windows 2000; Windows ME Win98 SE
- An empty PCI slot on the system

## COMPONENTS



### 1. Internal Port

### 2. External Ports

Cables from USB peripherals can plug into any available port.

## INSTALLING THE CARD

1. Make sure that the power to your system is Off, then open the computer case according to the instructions that came with its User Manual.
2. Install the hub card in the computer's expansion card area in the same way you would install any other expansion card. See your computer's User Manual for details, if necessary.
3. Close the computer case and power up your system.

## WINDOWS DRIVER INSTALLATION

### Windows XP:

Windows XP has native USB driver support. If USB 2.0 drivers aren't already installed in your computer, get them by clicking the **Start** button, and then selecting **Windows Update**.

### Systems prior to XP:

1. When Windows boots up, it detects the IC-250U's presence and the New Hardware Wizard appears. Click **Cancel** to close the New Hardware Wizard.
2. Insert the driver disk that came with your product into your CD drive and wait for autorun to display its contents.
3. Open the folder for *USB 2.0 Host Controller Driver (NEC)*; open the folder for the IC-250U; open the folder for your version of Windows.
4. Double Click the driver icon. The drivers are now copied to your system.
5. After the drivers have been copied to your hard disk, a dialog box appears confirming that the installation has finished. Click **Finish** to reboot your computer and complete the installation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Subpart J of Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

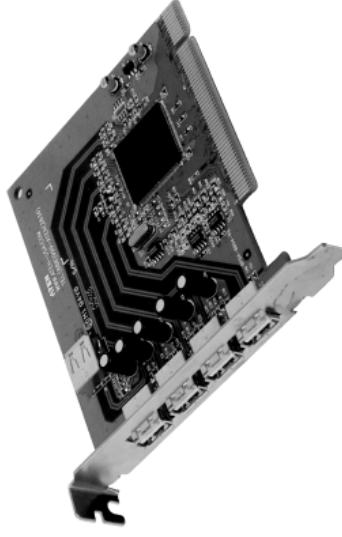
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.





# USB HOST CONTROLLER

USB 2.0



## TROUBLESHOOTING

Problem	Cause	Action
Erratic Operation	Static electricity may cause the unit to operate erratically.	Unplug the USB cables from the computer's USB ports, then reinsert them.

## SPECIFICATIONS

Function	Specification	
Ports	Internal	1
	External	4
Power Mode	Self Powered	
Output Voltage (per port)	+5V DC	
Output Current (per port)	500mA (max.)	
OS Support	Windows XP; Windows 2000; Windows Me; Windows 98SE	
Operating Temperature	5 ~ 40° C	
Storage Temperature	-20 ~ 60° C	
Humidity	0 ~ 80% RH	

### To check that the driver was correctly installed:

1. Navigate down through the following folders: *My Computer, Control Panel, System*.
2. Select the **Device Manager** tab.
3. Click the **Plus** sign in front of Universal serial bus controller.

If the driver was installed correctly, the following entries should appear:

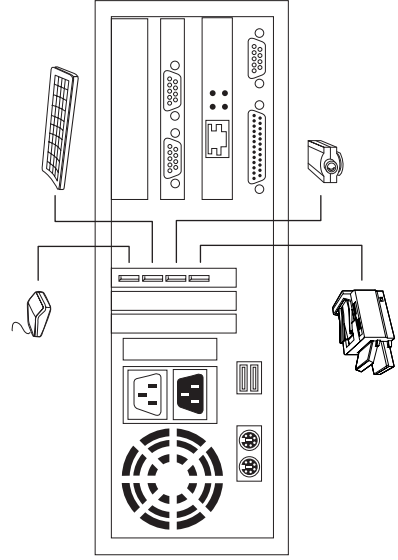
- NEC PCI to USB Open Host Controller
- NEC PCI to USB Open Host Controller
- USB 2.0 PCI to USB Enhanced Hub Device
- USB Root Hub
- USB Root Hub
- USB 2.0 Root Hub Device

**Note:** 1. The wording may vary slightly, depending on your version of Windows.

2. If you install a USB 1.1 peripheral, the entry for its driver on the Device Manager page will have an exclamation point in front of it (indicating a problem). This is simply because the peripheral isn't 2.0, and can be safely disregarded. The peripheral will function normally.

## CONNECTING PERIPHERALS

Plug the A connector end of the peripheral's USB cable into any available port. The internal port is specifically provided for use with internally mounted USB peripherals such as CD-ROM and DVD drives, hard and floppy disk drives, removable media drives, etc.



## LIMITED WARRANTY

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.

## USER MANUAL

# IC-250U

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

This package contains:

- 1 IC-250U Five Port USB PCI Card
- 1 Driver CD
- 1 User Manual

If anything is damaged or missing, contact your dealer.

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Manual Part No. PAPE-1189-200  
Printed in Taiwan 08/2003

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