



## INTRODUCTION

Congratulations on your purchase of the Targus USB Mobile Port Replicator with Ethernet! It is an intelligent expansion module that easily connects to a PC or notebook via a USB port.

This user's guide describes the port replicator's features, and gives instructions for connecting various devices and installing the software.

### System Requirements

- ❖ USB V.1.1 compliant port
- ❖ Operating system: Windows 98 or Windows 2000

### Contents

In addition to this user's guide, the package contains:

- ❖ Targus USB Mobile Port Replicator with Ethernet
- ❖ 3-foot USB cable (A/B type, attached)
- ❖ AC power adapter
- ❖ Targus driver diskette

## CONNECTING THE USB PORT REPLICATOR

The USB Mobile Port Replicator with Ethernet provides two USB ports, two PS/2 ports, one RS232 serial port, one parallel port, and one RJ-45 Ethernet port. This port replicator provides easy connectivity for network, serial, PS/2, and other USB devices.

To get started, plug one end of the AC power adapter into the port replicator and the other end into a wall outlet. Do not connect any devices at this time. Once the port replicator is connected and the software installation is complete, you can connect your devices and install any supporting software drivers.

*Note: Your computer may be turned on or off when you connect the port replicator.*

Before you begin, make sure you can identify the ports on the port replicator (Figures 1 and 2).

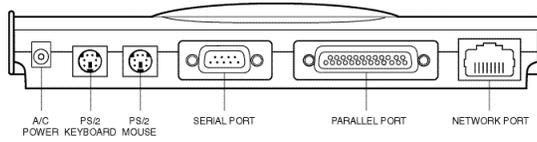


Figure 1. USB Mobile Port Replicator Ports

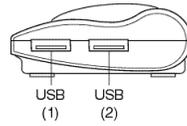


Figure 2. End of the USB Mobile Port Replicator

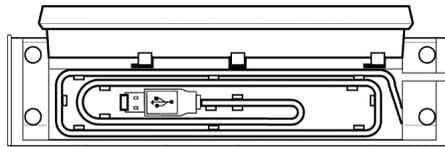


Figure 3. USB Cable Coiled in the Cable Compartment

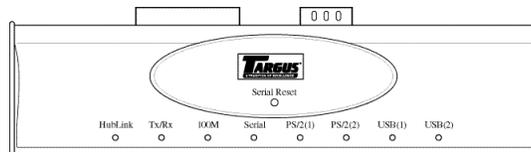


Figure 4. USB Mobile Port Replicator LED Lights

Open the USB cable compartment (Figure 3), uncoil the cable, and plug the USB connector into the USB port of your computer.

#### **LED Status Indicators**

Once you connect the port replicator to the computer and turn on the computer, the LED lights display as follows:

- ❖ The Hub Link and both USBs glow green.
- ❖ The serial (RS232) and parallel ports glow green when devices are attached.
- ❖ The PS/2 port lights flash green when a device is first connected or there is activity on the ports.
- ❖ The Tx/Rx light flash green when data is transmitted to or from the network.
- ❖ The 100M light glows green when attached to a 100 Mb hub.

*NOTE: The Ethernet port is compatible with 10 or 100 Mb networks, however, the USB connection determines the actual network speed.*

## **SOFTWARE INSTALLATION**

This section explains how to install the drivers to support each port on the port replicator. If your computer is off, turn it on now.

For the initial installation, you must install the software drivers for each port and enable them for use. Do not skip any of the following procedures.

*NOTE: The sequence in which Windows detects and installs the software drivers for each port may vary depending on the model of your computer.*

If you are running Windows 98, you may need your Windows 98 CD to complete the installation. During the installation, you may be prompted to insert the CD.

If you are running Windows 2000, you will only need the included Targus driver diskette. Also, you will see the message **Digital Signature Not Found Do You want to continue installation? Y/N** after each port is detected. Click **Y** to continue driver installation.

#### Installing USB Hub Support

The **New Hardware Detected** message box appears when your computer finds the Generic Root Hub device.

Then the **Add New Hardware Wizard** window appears.

- 1 Click **Next**.
- 2 When the message, **What would you like Windows to do?** appears, select **Search for the best driver for your device**, and click **Next**.
- 3 Insert the Targus driver diskette.
- 4 Click **Next**.  
The system locates the correct software driver.
- 5 Click **Next** to install the driver.
- 6 When the installation complete message appears, click **Finish**.

*NOTE: This installation process repeats once before installing the other drivers.*

#### Installing the Ethernet Port Driver

The **Found New Hardware Please wait...** message box appears when your computer finds the PA090 Ethernet.

- 1 Insert the Targus driver diskette (if not already inserted) and select **Floppy disk drives**.
- 2 Click **OK** to search for the driver.
- 3 When the driver is found, click **Next**.
- 4 When the installation complete message appears, click **Finish**.  
Your computer prompts you to reboot.
- 5 Click **Yes**.

*NOTE: After installing the Ethernet Port Driver, you must reboot to continue the installation process.*

After rebooting, any device driver that requires installation is automatically detected and the Add New Hardware Wizard window appears to complete the installation process.

#### **Installing the Serial Port Driver**

The **New Hardware Detected** message box appears, when your computer finds the PA090 Serial Converter.

Then the **Add New Hardware Wizard** window appears.

- 1 Click **Next**.
- 2 When the message, **What would you like Windows to do?** appears, select **Search for the best driver for your device**, and click **Next**.
- 3 Insert the Targus driver diskette and select **Floppy disk drives**.
- 4 Click **Next**.

The system locates the correct software driver.

- 5 Click **Next** to install the driver.
- 6 When the installation complete message appears, click **Finish**.

#### **Installing the Parallel Port Driver**

The **Found New Hardware Please wait...** message box appears when your computer finds the PA090 Parallel Interface Controller.

- 1 Insert the Targus driver diskette (if not already inserted) and select **Floppy disk drives**.
- 2 Click **Next** to search for the software driver.
- 3 When the driver is found, click **Next**.
- 4 When the installation complete message appears, click **Finish**.

*NOTE: Before connecting a printer to the port replicator, install the printer's software driver to avoid printing unknown formats or characters.*

### Installing the PS/2 Port Drivers

Each PS/2 port installs a separate port driver. The following steps repeat until all PS/2 ports are configured.

The **New Hardware Detected** message box appears when your computer finds the USB-PS/2 Converter.

Then the **Add New Hardware Wizard** window appears and installs the supporting driver as a USB Human Interface Device.

- 1 When the message, **What would you like Windows to do?** appears, select **Search for the best driver for your device**, and click **Next**.

The system locates the correct software driver.

- 2 Click **Next** to install the driver.

- 3 When the installation complete message appears, click **Finish**.

Congratulations! You have installed the Targus USB Mobile Port Replicator with Ethernet. The new ports available to you are: two USB, two PS/2, one serial, one parallel, and one RJ-45 Ethernet port. They are numbered sequentially following the existing ports in your computer.

*Note: The Targus USB Mobile Port Replicator with Ethernet supports hot Plug N Play (connecting and disconnecting the network cable while the computer is on and connected to a network) if the notebook is still powered on when you disconnect the USB cable. When you reconnect the cable, the notebook will be automatically reconnected to the network.*

## CONNECTING DEVICES TO THE PORT REPLICATOR

When connecting a new device to any port on the port replicator, the corresponding software drivers must be installed. Consider the following guidelines when preparing to connect new devices:

- If your operating system is Windows 98, you will be prompted by a series of screens beginning with **Add New Hardware Wizard**. You may need your Windows 98 CD to complete the installation of the necessary device driver.
- If your operating system is Windows 2000, the device driver will install automatically.
- With either operating system, you must run the **Setup** or **Install** that was included with your device.
- To load any device-specific software, assign the device to a port as follows:

parallel printer	PB1284-1 (USB port)
serial mouse or modem	serial USB (COMx) where x is the number of the COM port
PS/2 mouse or keyboard	no port name required; the device will be converted to emulate a USB mouse or keyboard.

### Installing a Serial Mouse

After connecting a standard serial mouse to the serial port on the port replicator, press the **Reset** button until the Link LED flashes (about 5 seconds). Pressing the Reset button resets the serial port. Do this each time you restart your notebook computer and whenever connecting a serial device.

### Installing a Serial Modem

Follow your modem installation instructions to add this device to your port replicator. When prompted to select the port, choose the **Serial USB (COMx)**, where x is the COM port number assigned by your operating system.

#### **Installing a Parallel Printer - First-Time Installation**

Follow the installation instructions that come with your printer. When prompted to select a port, choose **PB1284-1 (USB port)**. If this port does not appear in the list, choose the LPT1 port, complete the manufacturer's setup for your printer, and follow the instructions below for Printer Reconfiguration.

#### **Printer Reconfiguration**

Follow these instructions only if you are reconfiguring your printer from the LPT1 port to the port replicator's parallel port. Unplug the printer cable from your notebook, and plug it into the port replicator parallel port. Select **Start, Settings, Printers**. Right-click the printer device you are reassigning, and select **Properties**. In the **Printer Properties** window, select **Details** or **Connection for the Printer**. (Section titles vary, so check your printer's user manual for specific instructions.) Change the setting to **PB1284-1 (USB port)** to redirect printing to the port replicator.

#### **Installing a PS/2 Mouse or Keyboard**

Plug the PS/2 mouse or keyboard into a PS/2 port on the port replicator. Once the device is connected, it will be detected automatically as a USB mouse or keyboard.

#### **Installing Additional USB Devices**

To install any USB device, plug it into a USB port on the port replicator. Follow the installation instructions provided with your USB device.

#### **Connecting to a Network**

The steps to follow to connect your computer to a network depends on the type of network you are using. If in doubt, see your network system administrator.

### **HOT PLUG N PLAY SPECIAL NOTES**

#### **Global Suspend the Notebook Computer**

When your notebook computer is in suspend mode, the port replicator will also enter suspend mode to avoid power consumption. When your notebook computer wakes up, the port replicator wakes up automatically.

### Using the Reset Button

The Reset button is used in conjunction with the serial port on the port replicator. Whenever changing the serial devices connected to the serial port, press and hold the Reset button until the Hub Link LED light blinks so that the new device will be detected. Every time your notebook computer is powered on, press and hold the Reset button until the Hub Link LED light blinks (about 5 seconds).

### **PRODUCT LIMITATIONS**

Your port replicator is splitting a single connection among a variety of devices and connections. Because of this, some devices that need a large amount of bandwidth will consume all of the available resources and can cause performance issues with the other devices attached.

We recommend the following guidelines:

- Do not run multiple high speed devices at the same time, such as a digital camera and scanner.
- If speed degradation does occur, close one or more USB applications to improve device performance.
- There may be some temporary halting of some devices when a high data transfer is occurring. For example, the USB or PS/2 mouse may respond slowly while a graphic print job is printing or if you are experiencing heavy network traffic.

The parallel port is only compatible with printers and will only support enhanced bi-directional printer features, such as your printer status.

An older mouse may not work with the port replicator because the driver cannot find the serial port without a direct connection to the computer.

A PS/2 mouse attached to the port replicator is configured by the operating system as a USB HID mouse. If the driver continues to look for the mouse on the PS/2 port, enhanced features may not be available and your mouse will function as a standard, two-button mouse.

## TROUBLESHOOTING

Perform these self-tests before calling technical support.

### Device not Recognized

- 1 If a device attached to the port replicator is not recognized, press and hold the **Reset** button until the lights flash. Verify that the device is now recognized. If not, proceed to step 2.
- 2 Detach all cables from the port replicator, including the network cable. Plug in the AC adapter. Connect the power cable to the power input jack. Plug in each device, one at a time. Verify that each device is recognized before plugging in the next one.
- 3 If a PS/2 or USB device is not recognized, plug it into a different port on the port replicator. If the device is still not recognized, try plugging it into the USB port on your notebook computer.

### Verifying Devices are Installed Correctly

- 1 Move the cursor to **My computer** and click the right mouse button.
- 2 Click **Properties** to display the System Properties window.
- 3 Click **Device Manager** and select ports **COM** and **LPT**.

The new path, **Serial on USB [COM 2]**, appears in the window.

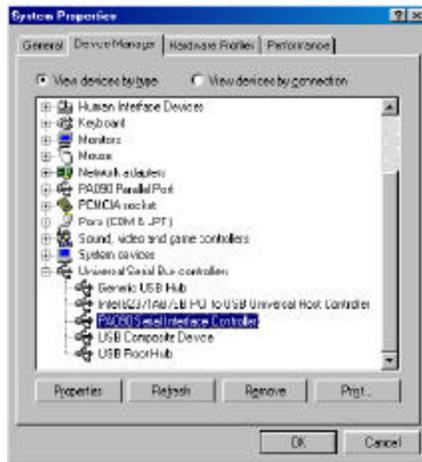


Figure 5. Serial on USB [COM2]

Within that same window, you will have a **PA090 Parallel Interface** device. Look under **Universal Serial Bus controllers** to see the other devices now installed for the port replicator.

#### Verifying Network Connection

Click to expand the Network Adapters and **PA090 Ethernet** appears.

### Modem Connection

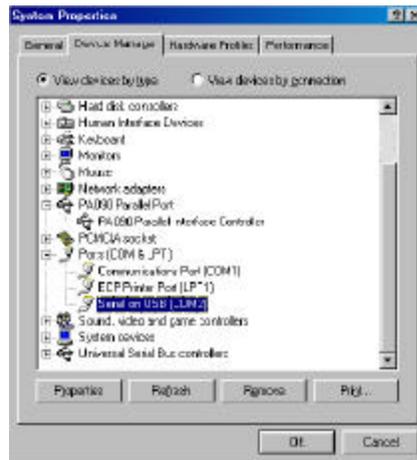


Figure 6. Serial Interface Controller

- 1 When attaching a modem to the serial (RS232) port, verify that the port assigned to your modem is **Serial USB (COMx)**, where x is the number of the COM port.
- 2 If Windows does not autodetect your modem on **Serial USB (COMx)**, rerun the Hardware Wizard.
- 3 Choose **Select from a list** instead of autodetect, then select **Serial USB (COMx)** as the COM port.

### Printer

The parallel port is designed to support parallel printers. Data storage devices must be connected directly to the parallel port on your notebook computer.

- 1 If your printer is not recognized, click **Start**, select **Settings**, then select **Printers**.
- 2 Highlight your printer, right-click the mouse button, and select **Properties**.
- 3 If the assigned port is LPT1, change it to **PB1284-1** (USB port).

For a first-time printer installation:

- 1 Select the port **PB1284-1** (USB port). If this port does not appear in the list, choose **LPT1** and proceed with your installation.
- 2 Once completed, set your printer port to **PB1284-1** (USB port).

### Mouse

If your mouse is attached to the serial port, the enhanced features (e.g. screen scrolling) may not be available. The mouse will function as a standard, two-button serial mouse.

If your mouse is attached to the PS/2 port, and the enhanced features are not working, you may need to disable the built-in mouse drivers on your computer. Please refer to the user manual provided with your device for instructions.

## **FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT**

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 accept any interference received, including interference that may cause undesired operation.

## **TECHNICAL SUPPORT**

In the unlikely event that you encounter problems with your Targus USB Mobile Port Replicator with Ethernet, contact our technical support team at:

E-mail: [TechSupport@targus.com](mailto:TechSupport@targus.com)

Web site: [www.targus.com](http://www.targus.com)

Our knowledgeable staff is available to answer your technical questions Monday through Friday, 8:00 A.M. until 8:00 P.M. Eastern time.

Telephone: 800-283-6325 (Toll Free)

## **WARRANTY**

Targus warrants this product to be free from defects in material and workmanship for one year. If your Targus accessory is found to be defective within that time, Targus will repair or replace it. This warranty does not cover damage from everyday wear and tear, or from transportation by a common carrier.

Under no conditions is Targus liable for loss of, or damage to, a computer; nor loss of, or damage to, programs, records, or data; nor any consequential or incidental damages, even if Targus has been informed of their possibility.

Warranty registration at:

[http://www.targus.com/product\\_registration.asp](http://www.targus.com/product_registration.asp)

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