English Version 1.1

June 14, 2006





# Revision History

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May 25, 2006	1.0	All	Initial release by jhkim
Tupo 14 2006	1 1	3	Modified supported hardware
June 14, 2006	1.1	All	Style / font fix

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# **COM Port Redirector**

# 1. Redirector Introduction

Redirector is a network COM port driver, enabling serial ports of device servers to operate the same way as the local COM ports of PC.

Upto 255 COM ports can be registered in one PC if Redirector is used.

### 1) Supported Hardware

- Portbase Series
- WiComm-2
- Eddy Series
- Weddy Series

#### 2) Supported Operating Systems

- COM Port Redirector for Windows 98/ME
- COM Port Redirector for Windows 2000/XP/2003

#### 3) System Requirements

PC system requirement for running Redirector is as follows.

- CPU : Pentium 100 MHz or higher
- Memory : 16 Mb or more
- CD-ROM : Faster than 4X
- Network : 10M Ethernet or higher



# 2. Installing Redirector

Before installing Redirector, operation environment setting needs to be done for the device server.

## 1) Installing under Windows 98/ME

- 1) Insert the device server's CD into the PC to install Redirector in.
- 2) Upon insertion, the setup program will auto-start. Select "English".
- On the option screen, select "Install Redirector (WIN98/ME)". Then Redirector installer will be started automatically.

COM Port Redirector - InstallShield Wizard					
COM Port Redirector - Install	Shield Wrzard Welcome to the InstallShield Wizard for COM Port Redirector The InstallShield® Wizard will install COM Port Redirector on your computer. To continue, click Next.	×			
	< Back Next > Cancel				

4) Follow the instructions from the installer. When Redirector is run after installation, Redirector Manager icon will appear in the system tray.





# 2) Installing under Windows 2000/XP

- 1) Insert the device server's CD into the PC to install Redirector in.
- 2) Upon insertion, the setup program will auto-start. Select "English".
- If you select "Install Redirector for WIN2K/XP", the Install Wizard for COM Port Redirector will appear on the screen automatically.



4) Click "Next"



COM Por	t Redirector - InstallSh	ield Wizard		
<b>Choose E</b> Select fo	Destination Location Ilder where setup will install files.			X
	Install COM Port Redirector to: C:\\COM Port Redirector			Change
InstallShield -		< <u>B</u> ack	Next >	Cancel

5) Choose destination location and click "Next".

COM Port Redirector - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	(and and
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
InstallShield	_
< <u>B</u> ack Install Cancel	)

6) Click "Install" to begin the installation.



COM Port Redirector - InstallShield Wizard					
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed COM Port Redirector. Click Finish to exit the wizard.				
	< Back Finish Cancel				

7) When the installation is complete, you can either add virtual COM ports right away or later. If you want to add ports right away, check the option "I'd like to add virtual COM ports on my computer now" and click "Finish". Then the port installer will start.



8) When the Install Wizard runs, click "Next"



SystemBase Redirector - Install Wizard						
Choose number of COM ports Select the number of COM ports to be installed in your computer.						
Port Number(1~32) 8 IP adress 192.168.0.244 Port 4001 Data Encryption						
< <u>B</u> ack <u>N</u> ext > Cancel						

9) Select how many COM ports you'd like to install and insert the IP address of the device server that virtual ports will be connected to. Finally, assign the port number that the first COM port will connect to, and click "Next". When multiple ports are installed, port numbers are assigned following the first port. Available port numbers are between 4001 and 4032, and port numbers can be modified after the installation as well. Using the Install Wizard, up to 32 COM ports can be installed at once.

Found New Hardware Wizard					
	Welcome to the Found New Hardware Wizard This wizard helps you install software for: Virtual Communications Port				
	If your hardware came with an installation CD or floppy disk, insert it now.				
	What do you want the wizard to do?				
	<ul> <li>Install the software automatically (Recommended)</li> <li>Install from a list or specific location (Advanced)</li> </ul>				
Click Next to continue.					
	< <u>B</u> ack <u>N</u> ext > Cancel				



 Windows XP or Windows 2003 Server Edition asks for the location of the driver while installing. Windows 2000 skips this process and installs automatically, so skip to step 14).

Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
✓ Include this location in the search:
h Files₩SystemBase Portbase₩CDM Port Redirector ✔ Browse
O Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back Next > Cancel

- 11) Select "Search for the best driver in these locations." and check "Include this location in the search:" Click "Browse" to assign the location of your COM Port Redirector. The default location is "C:\Program Files\SystemBase Portbase\COM Port Redirector". Click "Next".
- 12) Warning on the Windows compatibility test might be displayed. Just click "Continue" for installation. Your system will not be affected by any means.





13) Click "Finish" to complete port installation, and this process will repeat until all ports are installed.

Found New Hardware Wizard								
Installation Result Virtual ports of redirector are created								
	COM ports a	are mapped as follows						
	СОМ	IP Address	Port	Encryption				
	COM3	192.168.0.244	4001					
				< <u>B</u> ac	k <u>N</u> ext≻	Cancel		

14) After the installation of the last port, the Installation Result window is displayed.Installation process is completed when you click "Next".

The Installation Result window shows the list of installed COM ports and the IP address and port number of the device server.



- → If you want to install additional COM ports later on, you need to run the installation wizard again. Run 'Start' → 'All Programs' → 'SystemBase Portbase' → 'COM Port Redirector' → 'Add or Remove Ports'. When the wizard detects existing ports installed, the following screen shows up.
- → When you select "Remove" option, all virtual ports will be removed. Be careful when selecting this option.

SystemBase Redirector - Install Wizard				
Choose Install Option Install or remove device driver.				
Add Ports     Install virtual serial port device driver.     Install virtual serial port device driver.     Remove     Remove virtual serial port device driver from your computer.				
< <u>B</u> ack <u>N</u> ext > Cancel				

Choose "Add Ports" if you want to install additional COM ports. The remaining steps are identical to installing new ports.





# 3. Using Redirector

With COM Port Redirector, you can use serial ports in the device server from the remote site as if they belong to your own PC. These ports operate just like COMx console ports in your PC.

The following figure describes how the communication between the PC with Redirector installed and the serial devices attached to the device server is done via network.





### 1) Using Redirector in Windows 98/ME

1) Configure Redirector



To run the Redirector Manager, double-click the Redirector Manager icon from the system tray, or select Start  $\rightarrow$  Program  $\rightarrow$  SystemBase Portbase $\rightarrow$  Redirector.

ą	SystemBa	ase Redirector Manag	er v1,1			<u>_   ×</u>
	COM ID	IP Address	Port No	Name	Status	<u>S</u> tart
						Stop
						<u>A</u> dd
						<u>R</u> emove
						<u>P</u> roperties
						E <u>x</u> it

- 2) Register COM ports.
  - When you click "Add" from the main menu, general information about the COM ports to install will be displayed

Port Properties	×
General Information	ОК
IP Address :	
<u>P</u> ort No. :	<u>A</u> dd to list
Description :	Clear

Enter the COM Port ID(COMx), IP address of the device server, Port Number (1 to the maximum number of ports), and the description or the port name (16 bytes maximum).



- Multiple IP addresses and port numbers can be registered to one COM port.
- When all the information is provided, you can click "OK" to add a new port, shown in the next figure.

SystemBa	ase Redirector Manag	er v1,1			
COM ID	IP Address	Port No	Name	Status	Start
СОМЗ	203.240.173.130	1	Unit 01		
	203.240.173.130	2	Unit 02		Stop
	203.240.173.130	3	Unit 03		
	203.240.173.130	4	Unit 04		Add
	203.240.173.130	5	Unit 05		Aud
	203.240.173.130	6	Unit 06		<u>R</u> emove
COM4	203.240.173.130	7	Unit 07		
	203.240.173.130	8	Unit 08		Properties
COM5	203.240.173.131	9	Unit 09		
	203.240.173.131	10	Unit 10		Exit

- Nothing is displayed under the Status tab if the Redirector service did not start for each port.
- By repeating the steps shown above, multiple serial ports can be registered as a candidate for connecting to one COM port.
- If you like to remove a port, click on the port to remove and click "Remove".
- 3) Starting / Stopping the Service

From the Redirector Manager main screen, select ports to start Redirector service.

- Selected ports will be highlighted.
- Click one more time to unselect any selected port.
- Only one serial port for each COM port can be selected.
- After selecting all the ports desired, click "Start" to activate the Redirector service.
- Certain information will be displayed for Status tab once the service is activated for ports.
- The list of conditions to be displayed for Status tab is as follows.



Ready :	Virtual serial port is set by Redirector on the PC, and is waiting.
Connecting :	The connection between the device server and the virtual serial
	port set by Redirector on the PC is on processing.
Connected :	The connection between the device server and the virtual serial
	port set by Redirector on the PC is established.
Disconnected :	The connection between the device server and the serial port in
	the PC is lost.
COM Opened :	Device server doesn't operate even though the serial port in the
	PC is open.
Reconnecting :	The virtual serial port set by Redirector on the PC is reconnecting
	to the device server.
	(If any kind of unexpected error causes disconnection,
	reconnection is attempted to a certain port and a port number at
	constant intervals.)
Switching :	Multiple IPs are assigned to one port and IP changes real-time.

- Upon selecting a port and clicking "Stop", the Redirector service for that port is terminated.
- Once the service is terminated, Status tab for that port will be empty.
- Information such as the COM port number, IP address and Port number is shown when the service is performed. Once the service is terminated, this information automatically disappears from the screen.
- The service for one COM port can be started by either the "Start" button or the application program which handles Redirector actions. Regardless of the service-activating source, it is always the last action performed that achieves the higher priority.
- If you click "Exit", all the Redirector services for all ports are over, system tray icon disappears, and Redirector quits.
- If any COM port is on service when the "Exit" button is pressed, message box

indicating that the port is in use pops up and the service is not terminated.

If Redirector is restarted, the Redirector service may either be resumed automatically or not. This is determined by the previous configuration (the Tray icon configuration).



#### 2) Using Redirector in Windows 2000/XP

- If Redirector is not installed in your system, install Redirector. (Refer to <u>2.Installing</u> <u>Redirector</u> for more information)
- 2) If Redirector is installed in Windows 2000/XP, virtual driver is loaded on the system automatically when the PC boots.
- 3) With the configuration program, you can identify that virtual COM ports are created. Alternatively, you can also check "Ports (COM and LPT)" in Device Manager. (To open the Device Manager, select Start → Setting → Control Panel → System → Hardware → Device Manager)
- Run the configuration program by selecting Start → All Programs → SystemBase Portbase → COM Port Redirector → Configure Installed Ports

Redirector Prope	rties			? 🛛	<
Port Settings					1
	IP Address 192.168.0.244	Port 4001	Encryption	Name	
			<u>E</u> dit	Auto Setting	
				OK Cancel	

- 5) If you like to change the IP address and the socket number of the device server assigned to the virtual COM port, click "Edit".
- 6) Enter the IP address, socket number (4001 to 4032) and the port name (32 bytes maximum) that you like to edit. Click "OK" to apply new settings.



IP	192.168.0.244	OK
Port	4001	Cancel
Name		

- If you want to enable data encryption for your communication, check "Data Encryption". (Encryption mechanism used in this option is SEED, a 128-bit symmetric key type block encryption algorithm.)
- 8) If the user application opens the virtual COM port registered in the system, the Redirector service starts. The connection is established using the IP address and the socket number designated for the device server.
- 9) If the user application closes the COM port, the connection with the device server is lost and the Redirector service is terminated.



# 4. Uninstalling Redirector

Uninstall process for Redirector is the same for all Windows versions.

- From Windows, select Start → All Programs → SystemBase Portbase → COM Port Redirector → Uninstall COM Port Redirector". Uninstall wizard will guide through the process.
- All pre-installed virtual COM ports are removed when Redirector is uninstalled.