# **COM Port Redirector**

# **User Manual**

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**Revision History** 

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## Chapter 1. **Overview**

COM Port Redirector includes network COM port driver and redirector control, and they allow using serial ports in the device server in the same manner as local COM ports on the PC. Up to 255 COM ports can be added to one PC using the redirector. Remote serial ports in device servers connected via network can be utilized as COMx ports installed in the local PC.

The following diagram depicts how the PC with COM Port Redirector installed can communicate with the serial devices connected to network.



## Software

- COM Port Redirector driver: System driver is compatible with Windows 2000/XP/2003/Vista/7/2008 creating virtual serial ports that are detected just like real COM ports. When the driver is installed, Redirectorctl.exe is executed to connect COM ports to network.
- Redirector Control: It is an application responsible for adding and removing virtual COM ports and providing user interface for port configuration and control. It operates with COM Port Redirector driver to establish connection under the TCP/IP network. The following is an executable file to run on Windows.

File name: Redirectorctl.exe

• Installer: This Windows application either installs or uninstalls COM Port Redirector.

File name: install.exe



## Environment

More port installations require more CPU power and high memory usage.

- CPU : Pentium 1Ghz or better
- Memory : 512Mb or higher
- O/S : Windows 2000/XP/2003/Vista/7/2008(64bit)
- Network : 10M Ethernet or faster

## Hardware

Redirector is compatible with the following SystemBase products.

- Portbase Series
- SerialGate Series
- Eddy Module Series

## **Technical Support**

SystemBase provides technical support as follows.

1. Please visit the Technical Support page in SystemBase website, <u>http://www.sysbas.com/</u> FAQ page is available and a user can post a question on the board.

2. E-mail at tech@sysbas.com and the response will be sent as soon as possible.

3. For more immediate assistance, please contact us via telephone. (+82-2-855-0501)



# Chapter 2. COM Port Redirector Installation

## **Install Guide**

- Insert the install CD into the CD-ROM drive.
- Run Com Redirector Setup V2.3.exe
- Redirector installer starts and provides installation details. Click "Next" to continue.

COMRedirector - InstallS	Shield Wizard 🛛 🔀
	Welcome to the InstallShield Wizard for COMRedirector The InstallShield Wizard will install COMRedirector on your computer. To continue, click Next.
InstallShield	< Back Cancel



• Click "Install"





• Click "Finish" to complete the setup.

COMRedirector - InstallSh	ield Wizard
	InstallShield Wizard Complete
	The InstallShield Wizard has successfully installed COMRedirector. Click Finish to exit the wizard.
InstallShield	< Back Cancel

- A shortcut will be created under Start  $\rightarrow$  All Programs $\rightarrow$  SystemBase  $\rightarrow$  Redirector.
- Redirector Control starts automatically after the setup is complete, and by default it automatically starts when Windows starts.

#### (Note)

Since RedirectorCtl.exe is responsible for basic functions of COM Port Redirector, it should be running before starting any applications using virtual COM ports. In Windows Vista/7/2008 64bit, a user should run Redirector

• With the Redirector Control, you can add or remove ports, view or modify port information, and monitor ports in real-time.



## **Uninstall Guide**

When you uninstall COM Port Redirector, all virtual COM ports are removed as well.

In a directory that Redirector install CD or Redirector is installed, click COM Redirector Setup V2.3.exe or click "Start  $\rightarrow$  All Programs  $\rightarrow$  SystemBase  $\rightarrow$  Redirector  $\rightarrow$  Uninstall" as follows.

🖮 SystemBase 🔹 🕨	🛅 PortView 🔸	
	🛅 Redirector 🔸	💦 Redirector Control
	🛅 TestView 🔸	🛃 Uninstall

• Click "Remove" and click "Next"

COMRedirector - Install	Shield Wizard	×
Welcome Modify, repair, or remove the pr	ogram.	
	Welcome to the COMRedirector Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.	
	Modify Select new program features to add or select currently installed features to remove.	
	Repair Reinstall all program features installed by the previous setup.	
	<ul> <li><u>Bernove</u></li> <li>Remove all installed features.</li> </ul>	
InstallShield	< Back Next > Cancel	

Click "Yes"



• Click "Finish" to complete the uninstallation.



COMRedirector - InstallShield Wizard				
	Uninstall Complete			
	InstallShield Wizard has finished uninstalling COMRedirector.			
InstallShield	< <u>B</u> ack	Cancel		



# Chapter 3. Adding / Removing Ports

A user can install, add, or remove up to 256 virtual COM ports. The process of adding ports is identical to installing ports.

#### How to run panel

As shown in the figure below, System tray icon can be found. If a user double-clicks it to add/remove/monitor a port, control panel display will be shown.



🔏 Redirector Control Ve	er 2.3			
Port Info Monitor Add Port	Delete Port			
· · · · · · · · · · · · · · · · · · ·				
COM1 COM5 COM9 COM13 COM17 COM21 COM25 COM25 COM29 COM33 COM37	COM2 COM6 COM10 COM14 COM18 COM22 COM26 COM30 COM30 COM34 COM38	COM3 COM7 COM11 COM15 COM19 COM23 COM23 COM27 COM31 COM35 COM35	COM4 COM8 COM12 COM16 COM20 COM24 COM28 COM32 COM36 COM36	
COM41 COM45 COM45 COM49 COM53 COM57 COM57 COM61 COM61	COM42 COM46 COM50 COM50 COM54 COM58 COM58 COM62	COM43 COM47 COM51 COM51 COM55 COM59 COM53 COM63	COM44 COM48 COM52 COM56 COM56 COM60 COM64 COM68	
COM69 COM73 COM77 COM81 COM85 COM89	COM70 COM74 COM78 COM82 COM86 COM86 COM90	COM71 COM75 COM79 COM83 COM87 COM87 COM91	COM72     COM76     COM80     COM84     COM88     COM92     COM92	
COM93 COM97 COM101 COM105 Start COM COM1	COM94 COM98 COM102 COM106	COM95 COM99 COM103 COM107	COM95 COM100 COM104 COM108	Install Multiports
Controller Setup Refresh	1			



#### • Start COM

This option defines the first port to be displayed on the panel. 256 ports starting from the 'Start COM' are displayed. You can change this port any time.

#### Install Checked

Install all ports checked from the panel.

#### • Auto Configuration

If checked, all ports are automatically assigned the IP address and port number of the device server. If unchecked, you can manually configure ports form the "Port Info" tab.

#### Install Multiports

When there are a number of ports to install, manually checking each of them is a tedious job. In this case, click "Install Multiports" to assign only the Start COM number and the number of ports to install. The port number will be automatically added from the specified number to 4016.

#### Controller Setup

Set up the starting COM number and Tray icon feature in the control panel display.

#### Refresh

Update all 256 checkboxes from starting number and COM port number information on the panel.

#### How to finish panel

If a user right-click on Tray icon, the following menu will be shown.



- Show Window: Click close button and reactivate Redirector Control Window
- Stop Redirector Service: Finish Redirector Control and it refers that a user is not able to use a virtual COM Port.

#### Reference

If Redirector COM port is in use by some application, Redirector Control does not quit. In order to do so, close all the application programs that use virtual COM ports, and select "Stop Redirector Service" in Tray icon menu.

#### Note

Please be advised that all the virtual COM ports can not be used when a user is not running Redirector Control. If a user wants to use Redirector COM port again, go to "Start  $\rightarrow$  Program  $\rightarrow$  SystemBase  $\rightarrow$  Redirector" and select RedirectorCtl.



## Adding Virtual COM ports

Adding virtual COM ports is performed by Redirector Control.

#### 1. Install Checked

Create a port if its corresponding box is checked.

🔏 Redirector Cont	rol Ver 2.3				Multinort Co	ofiguration
Port Info   Monitor Ad	ld Port   Delete Port				muluport co	miguration
· · · · · · · · · · · · · · · · · · ·						
COM1	COM2	COM3	COM4	^	Chevel Devel	
COM5	COM6	COM7	COM8		Start Port	▼
COM9	COM10	COM11	COM12			, _
COM13	COM14	COM15	COM16		<b>B</b>	
COM17	COM18	COM19	COM20		Port Num	
COM21	COM22	COM23	COM24			·
COM25	COM26	COM27	COM28	3	15 4 11	
COM29	COM30	COM31	COM32		IP Address	0 . 0 . 0 . 0 📑
COM33	COM34	COM35	COM36			
COM37	COM38	COM39	COM40		•	
COM41	COM42	COM43	COM44		Port	4001
COM45	COM46	COM47	COM48			
COM49	COM50	COM51	COM52			
COM53	COM54	COM55	COM56		Protocol	ГСОМ 🚽 🗖
COM57	COM58	COM59	СОМЫ			
COMPL	COM62	COM63	COM64		********	
COM65	U COM66	COM67	COMP8		AliveTime Rx:	7000
COM69		COM/I				1000
CUM73	COM/4	CUM/5	COM/6			
COM17		COM19			Τv	2500 -
					10.	2000
COM03	COMBI	COMB	COMISE		C	
		COMB	COMIN		Comment #1:	
COMINI	COM102	COM103				
	COMINE	COM103		~		
	Comin	Comit	Comito	<u> </u>	#2:	
Start COM COM1	•	Install Checked 🛛 🔽 Auto co	nfiguration Inst	tall Multiports		J
	-					
					UK UK	Lancel
Controller Setup	Refresh					

- Choose the ports that a user would like to install and click "Install Checked"
- Set up IP Address, port, protocol in "Multiport Configuration" and click "OK" button.
  - IP Address: The IP address of Portbase. All new ports are assigned the value in this option.
- Port: The port number of Portbase. Port numbers increase by 1.
- Protocol: Communication method used in communicating with Portbase. All new ports are assigned the value in this option.
- COM: Normal COM port operation (Selected by default)
- Encryption: Select this option when you want data encrypted.

(SEED encryption method, a symmetric key type 128-bit block encryption algorithm, is used.)

• Raw: Only data is transmitted in ordinary COM modes.



#### 2. Install Multiports

- A user can create up to 32 ports from the start port

🔏 Redirector Contro	ol Ver 2.3				Multinort Co	ofiguration
Port Info   Monitor Add	Port Delete Port				maniport co	mgaradan
COM1	COM2	🖌 COM3	🗹 COM4	<u>~</u>	Start Port	COM2
COM5	COM6	COM7	COM8			
COM9	COM10	COM11	COM12			· · · · · ·
COM13	COM14	COM15	COM16		Port Nura	1
					Formum	l' 🔤 🖬
				E		·     •
CUM25					IP Address	
					II Addiess	0.0.0.0
						· · · · · · · · · · · · · · · · · · ·
	COM/30		COM40		Port	4001
					FUIL	4001
	COM40	COM51	COM52		1	
		COM55	COM56		Protocol	COM.
COM57	COM58	COM59	COM60		FIULUCUI	
COM61	COM62	COM63	COM64			
T COM65	COM66	COM67	COM68		AlivaTima Pur	7000
COM69	COM70	COM71	COM72		Allve hille hx.	7000 🔻
COM73	COM74	COM75	COM76			,
COM77	COM78	COM79	COM80		-	
COM81	COM82	COM83	COM84		IX.	2500 👻
COM85	COM86	COM87	COM88			·
COM89	🔲 COM90	COM91	COM92			
COM93	COM94	COM95	COM96		Comment #1:	
COM97	COM98	COM99	COM100			
COM101	COM102	COM103	COM104	_		
COM105	COM106	COM107	COM108	Market 1	#2·	
	_	Level Charlest 1		II KAURA MA	π⊆.	
Start COM [CUMI	<u> </u>	Install Checked 🔽 Auto co	nfiguration	all Multiports		-
			5 · · · ·	•••••	ΠK	Cancel
					<u></u>	
Controller Setup Re	etresh					

- Click "Install Multiports"
- Set up IP Address, port, protocol in "Multiport Configuration" and click "OK" button.

COM port number that can be installed is listed in "Start Port", and the number of ports as assigned in "Port Num" will be installed from the Start Port.

#### **Device Driver Installation**

 When installation starts by selecting either "Install Checked" or "Install Multiport", the following message is displayed until installation is complete.





S Redirector	Control Ver 2.3					
COM Port COM10 COM25	IP Address 192,168,0,223 0.0.0	Port 4001 4001	Protocol COM COM	Act Closed Closed	Comment #1	Comment #2
COM26	0,0,0,0	4002	СОМ	Closed		
COM Port	Protocol [	OM 🔽 /	AliveTime Rx: 7000	Tx:	SOO 💽 Apply	Settings Confin
IP Address	Port		Comment #1:	#2:	Force F	PortClose
Controller Setup	Refresh					

## **Deleting Redirector Port**

Deleting virtual COM ports is performed by Redirector Control.

#### 1. Install Checked

Delete a port if its corresponding box is checked.

	Redirector Control Ver 2.3     Image: Second								
	Po	ort Info   Monitor   /	Add Port Delete F	'ort					1
	Γ	COM1		COM2		COM3	~	COM4	<u> </u>
_		COM5		COM6		COM7		COM8	
		COM9		COM10	~	COM11	~	COM12	
		COM13	~	COM14		COM15		COM16	
		COM17	~	COM18		COM19		COM20	
		COM21	~	COM22		COM23		COM24	
		COM25		COM26		COM27		COM28	
		GQM29		COM30		COM31		COM32	
		COM33	~	COM34		COM35	~	COM36	
		COM37	~	COM38		COM39		COM40	
		COM41	~	COM42		COM43		COM44	
		COM45	~	COM46		COM47		COM48	
		COM49	~	COM50		COM51		COM52	
		COM53	~	COM54	~	COM55	~	COM56	
		COM57	~	COM58	~	COM59	~	COM60	
		COM61	~	COM62		COM63		COM64	
		COM65	~	COM66		COM67		COM68	
		COM69	~	COM70		COM71		COM72	
		COM73	~	COM74		COM75		COM76	
		COM77	~	COM78		COM79		COM80	
		COM81	~	COM82		COM83		COM84	
		COM85	~	COM86	~	COM87	~	COM88	
		COM89	~	COM90		COM91		COM92	
		COM93	~	COM94	~	COM95	~	COM96	
		COM97	~	COM98		COM99		COM100	
		🗖 COM101	~	COM102	$\sim$	COM103	$\sim$	COM104	×
		<							>
	S	Start COM COM1	<b>•</b>		Uninstall Che	ecked			Uninstall Multiports
	С	Controller Setup	Refresh						



- When you select "Uninstall Checked", ports are removed. Ports currently in use, however, are not removed.

#### 2. Uninstall Multiports

- A user can delete up to 32 ports from the start port

🔏 Redirector Contro	ol Ver 2.3			Multiport Configuration
Port Info   Monitor   Add	Port Delete Port			
COM1	COM2	COM3	COM4	
COM5	COM6	COM7	COM8	Start Port [CUM10 -
COM9	COM10	COM11	COM12	
COM13	COM14	COM15	COM16	Port Num 1
COM17	COM18	COM19	COM2U	FortNull
COM21	COM22	COM23	COM24	
COM25		COM27		IP Address
COM23	COM30	COM31		
COM33	COM34	COM35	COM30	
COM41	COM42	COM43	COM44	Port
COM45	COM46	COM47	COM48	1 on
COM49	COM50	COM51	COM52	
COM53	COM54	COM55	COM56	Protocol
COM57	COM58	COM59	COM60	
COM61	COM62	COM63	COM64	
COM65	COM66	COM67	COM68	AliveTime Bx:
COM69	COM70	COM71	COM72	
COM/3	COM/4	COM /5	COM /6	
COMP1	COM/8			To:
COMBI	COM02			10.
	COM66	COMB7	COMB0	
COM93	COM30	COM95	COM96	Commont #1:
COM97	COM98	COM99	COM100	Comment #1.
COM101	COM102	COM103	🛱 COM104 🛛 💌	
<			>	#2
		University Characters 1	11-1-1-1-1	#2.
Start COM  COMI	<u>·</u>	Unitistali Checked	Uninstali Multiports	
				OK Cancel
Controller Setup Re	efresh			



# **Chapter 4. Using Redirector Control**

#### Overview

After COM Port Redirector driver is installed from the Redirector Control, you need to make use of these ports and make appropriate configurations.

## **View or Modify Port Info**

You can view or modify COM port configurations in the "Port Info" tab. All COM ports are displayed in the panel, along with settings and status.

💦 Redirector	Control Ver	2.3					
Port Info Monito	r   Add Port   D	elete Port					
COM Port	IP Address		Port	Protocol	Act	Comment #1	Comment #2
COM10 COM25 COM26	192,168,0,225 0,0,0,0 0,0,0,0	3	4001 4001 4002		Closed Closed Closed		
COM Port		Protocol CON Port	Ali	iveTime Rx:  7000 iomment #1:	▼ Tx: ■ #2:	Apply S	ettings rtClose
Controller Setup	Refresh						

## **1. Single Port Configuration Changes**

When you want to change port settings, click COM port that you wish to change, and make changes to IP address, port number, or protocol. Click "Apply Settings" to apply these changes.



## 2. Multiple Port Changes (Config Multiports)

"Config Multiports" option allows changing IP address, port number, and protocol settings of multiple ports at once.

A Redirector	Control Ver 2.3							Multiport Configuration
Port into   Monit	or   Add Port   Delete Port					1		
COM Port COM10 COM25 COM26	IP Address 192,168,0,223 0,0,0 0,0,0	Port 4001 4001 4002	Protocol COM COM COM	Act Closed Closed Closed	Comment #1	Comment #2		Start Port COM10
								Port Num 1
								IP Address 0 . 0 . 0 . 0
								Port 4001
							Ш	Protocol COM
							Ш	AliveTime Rx: 7000
							Ш	Tx: 2500 💌
							Ш	Comment #1:
IP Address	Protocol CC Port	Aliv	verime Hx: 1000	▼ 1×:	Force F	Settings Config Multiports		#2:
Controller Setup	Refresh							OK Cancel

## **Force Port Close**

"Force Port Close" closes any COM port that fails to close in normal operation.

- When you click open COM ports, "Force Port Close" button is activated.
- Click "Force Port Close"

Redirecto	r Control Ver 2.3	1				
COM Port	IP Address	Port	Protocol	Act	Comment #1	Comment #2
COM10 COM25 COM26	192,168,0,217 0,0,0,0 0,0,0,0	4001 4001 4002	COM COM COM	Open Closed Closed		
COM Port C IP Address	COM10 Protocol 92, 168, 0, 217 Port	COM 💽 / 4001	AliveTime Bx:  7000 Comment #1:	▼ T×: 2 #2:	500 🗹 Apply Force F	Settings Config Multiports
					******	
Controller Setup	Refresh					



#### Click "OK"

AS Redirector	r Control Ver 2.3					
Port Into   Moni	tor   Add Port   Delete Pr	Dout	Diretagel	LAst	Commont #1	Commont #2
COMPOR COM25 COM26	192,168,0,217 0,0,0,0 0,0,0,0	4001 4001 4002	COM COM COM	Open Closed Closed	Comment #1	
	4	This ope	ration may cause i	Jnexpected errol 취소	rs, Are you sure?	
COM Port C	OM10 Protoco		AliveTime Bx: 700		2500 <b>-</b> Apply	Settings
IP Address 19	92, 168, 0, 217 Po	4001	Comment #1:	#2:	Force F	PortClose Contig Multiports
Controller Setup	Refresh					

#### Warning:

If you perform "Force Port Close" on ports that are operating normally, system might hang or unexpected errors are prone to occur. Use this option at your own risk, only in emergency when applications fail to close ports.

## **Port Status Monitor**

Select "Monitor" tab to monitor port status in real-time.

🔏 Redirector C	ontrol Ver 2.3											
Port Info Monitor	Add Port   Delete Port											1
COM Port	IPAddr (Port)	Protocol	ACT	CON	ERR	TX	RX	RTS	CTS	DTR	DSR	DCD
COM10 COM25	192, 168, 0, 217 (4001)	COM	9	0	<b>a</b>	0	0	0	0	<b>0</b>	0	0
COM25	0,0,0,0 (4001)	COM	ă	ă -	ő.	3	3	3	ă -	õ	ă	3
J												
Controller Setup	Refresh											



- ACT : Blue when application is using this COM port.
- CON : Blue when this port is connected to Portbase.
- ERR : Red when connection with Portbase has errors.
- TX : Green when transmitting data
- RX : Yellow when receiving data
- RTS, ..., DCD : Modem signals for each port. Blue when on.
- "Refresh" button

When you changed COM port numbers or installed serial ports manually from external applications, click "Refresh" or reactivate tabs to update changes. Remember to use this button when changes are made in "Device Manager".

• "Controller Setup" button

Configure functions related to Com Port Redirector or initialize ComDB. If a user clicks "Controller Setup" button, the following windows will be shown.

Redirector Control Setup
Redirector Control Setup
ShowType
Show Only Tray
C Show Tray and Taskbar
Clean Up
CleanUp Start ComNum
Сом1 🔽
Old Version Registry
CleanUp Old Version
Ver 1.x 🔽
OK Cancel



- Show Type: A mode that only shows tray and another showing both tray and taskbar are available for Show Type.
- ComDB CleanUP: Check Star Com Number and Clean UP, and click 'OK' button.
- Old Version Registry CleanUP: This is used to organize Registry for older version. Select the related checkbox and version, and click 'OK' button.

