Korenix JetPort
Serial Device Server

User's Manual

July 2009 (V1.2)

www.korenix.com

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Contents

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Introduction of JetPort

Jetport 5201 is a smart one RS-232 to Ethernet serial device server. It connects the serial port of devices such as card readers, measurement devices, or data acquisition terminals, over Ethernet just like locally attached. JetPort serial device server eliminates the limitation of single host and transmission distance of traditional serial communications by creating access for multiple hosts in Ethernet. The compact size and various mounting options further create installation flexibility.

This chapter describes:

- **Serial to Ethernet Technology Overview**
- **Product features**
- **Product specification**
- **Package checklist**

Serial to Ethernet Technology Overview

Korenix JetPort serial device servers provide perfect solution to manage serial devices via Ethernet in flexible ways, such as TCP server, TCP client, UDP, or Windows virtual COM. JetPort creates a transparent gateway for the serial communication to Ethernet. If the control program uses network standard API, you can choose TCP or UDP as the communication protocol. If the control program uses COM port, you can install the Windows driver to add virtual COM ports.

Product Features

JetPort 5201 has the following features:

- Smart one-port RS232 to Ethernet Solution
- World's highest serial speed: 460.8kbps
- JetPort Commander, Windows utility for auto discovery, multiple device setting and monitoring.
- Versatile serial operation options: Virtual Com, Serial tunnel, TCP server, TCP client, UDP
- Max. 5 Virtual COM, TCP server, TCP client data links
- Configuration by Windows, Web, telnet
- Event warning by Email, SNMP trap
- Virtual COM driver for Windows NT/2000/XP/2003

Product Specification

Network Interface	
Ethernet	10/100BaseTX
Connector	RJ45
Protection	Built-in 1.5 KV magnetic isolation
Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP / RARP, Telnet, DNS, SNMP MIB II, HTTP
Serial Interface	
Interface	RS-232
Connectors	male DB9
Data Rates	110 bps to 460.8 Kbps
Data Bits	5, 6, 7, 8
Parity	odd, even, none
Stop Bits	1, 1.5, 2
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, GND, DCD
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR
Serial Line	15KV ESD

Protection	
Software Utility	
Utility	JetPort Commander for Windows NT/2000/XP ▶ Device discovery ▶ Auto IP report ▶ Device setting (run-time change, no rebooting) ▶ Access control list ▶ Group setting ▶ Device monitoring ▶ Serial port monitoring ▶ Log info ▶ Group Firmware update batch
Serial mode	Virtual Com / TCP Server / TCP Client / UDP / Serial Tunnel
	▶ TCP Alive Check Timeout ▶ Inactivity Timeout ▶ Delimiter for Data Packing ▶ Force TX Timeout for Data Packing
Multiple link	5 Hosts simultaneous connection: Virtual Com / TCP server / TCP Client
Virtual Com	Windows NT/2000/XP/2003
Configuration	Web console, Telnet console, JetPort Commander for Windows NT/2000/XP
Power Requirements	
Power Input	24VDC (9-30VDC)
Power Line protection	▶ 1 KV Burst (EFT), EN61000-4-4 ▶ 0.5 KV Surge, EN61000-4-5
Mechanical	
Dimensions	54.4mmx79.5mmx27mm
Regulatory Approvals	FCC Class A, CE Class A RoHS
Environmental	
Operating Temperature	0 to 55°C (32 to 131°F)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-20 to 85°C (-4 to 185°F)

Package Checklist

JetPort is shipped with the following items:

- Korenix JetPort Serial Device Server
- 100-240V Power adapter
- Mounting kit and 4 screws
- 4 Foot pads
- Documentation and Software CD
- Quick Installation Guide

If any of the above items is missing or damaged, please contact your local sales representative.

2
Quick Start

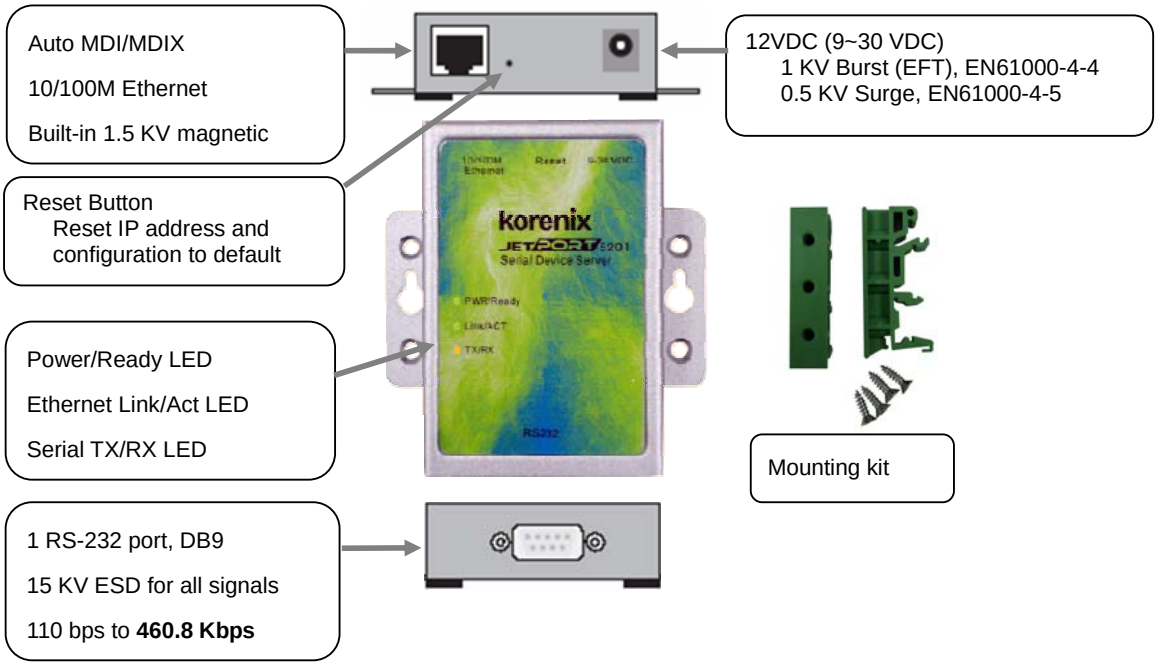
JetPort serial device server can be configured by Windows utility, web browser, or Telnet console. Advanced management features include SNMP support and Email alert. JetPort Commander is a powerful Windows utility that supports device discovery, group setup, group firmware update, and monitoring functions.

This chapter introduces how to quick start JetPort

- **Hardware installation**
- **Software setup**

Hardware Installation

Panel and Interfaces



Reset Button

The Reset button provides users with a quick and easy way to restore the default settings of JetPort. Press reset button for 10 seconds. Release after Power LED blinking orange. JetPort will restore to default value including default IP address (192.168.10.2), and no password. When the Power LED turns green, the device is ready to function.

LED Indicators

There are 3 LEDs, indicating real-time system status.

LED	Color	Indication
PWR/ Ready	**Red**	**On:** Power is on and booting up. **Blinking:** Indicates an IP conflict, or DHCP or BOOTP server did not respond properly.
	Green	**On:** Power is on and functioning normally. **Blinking:** Located by Administrator's Location function.
	Off	Power is off, or power error condition exists.
Link / ACT	**Green**	**Blinking:** 10 /100Mbps Ethernet connection.
	Off	Ethernet cable is disconnected, or has a short.
TX / RX	**Orange**	Serial port is receiving data.
	Green	Serial port is transmitting data.

	Off	No data is being transmitted or received through the serial port.

Connecting the Power

Connect the power jack input with the enclosed 12VDC power adapter, or 24VDC power input. The power LED will show red color until the system is ready. If the IP setting is running correctly, the power LED will turn green.

Connecting to the Network

Connect the Ethernet cable to the JetPort 10/100M Ethernet port. If the 10M Ethernet is working, the Link/Act LED will blinking orange. If the 100M Ethernet is working, the Link/Act LED will blinking green.

Connecting to the Serial Device

Connect the serial device to JetPort by RS232 interface cable. JetPort serial port is a standard DB9 male port.

Software Setup

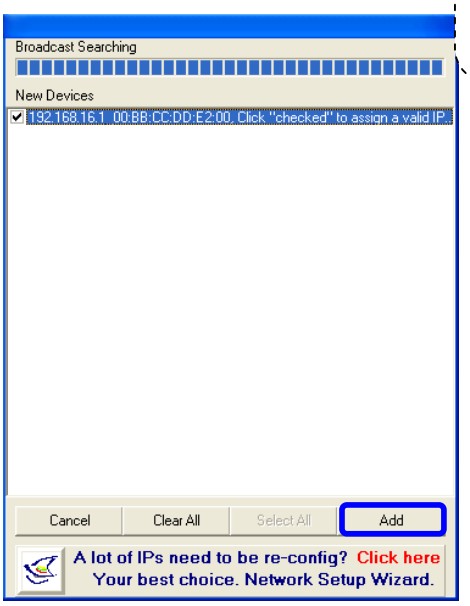
Install JetPort Commander

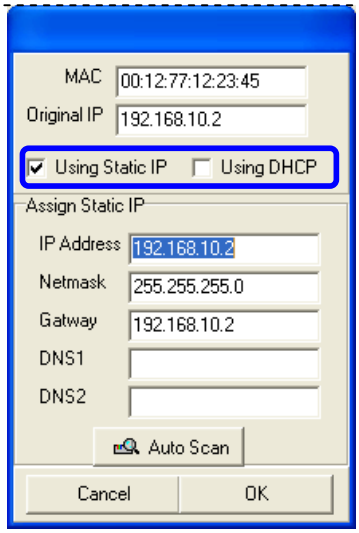
1. Insert the CD and auto-run the program. If the setup does not auto-run, select “JetPort 5201”, and “Operation System”, run JetPort Setup.exe to install Windows utility, JetPort Commander.

2. When the installation is finished, there are three options:
   - ✓ Launch JetPort Commander Now: Start configurations.
   - ✓ Visit Korenix registration page: Register products to Korenix.
   - ✓ Launch JetPort later: Start configurations later.

3. **Broadcast the JetPort unit:** JetPort Commander will broadcast the network and search all available JetPort units in the network. The default IP address of JetPort is “192.168.10.2”.

Product Tip: If you have multiple Network Adapters (i.e. wireless and wired), please activate ONLY ONE Network Adapter that can locate the JetPort devices, and CLOSE the rest Network Adapters. Otherwise, JetPort Commander may broadcast INCORRECTLY.





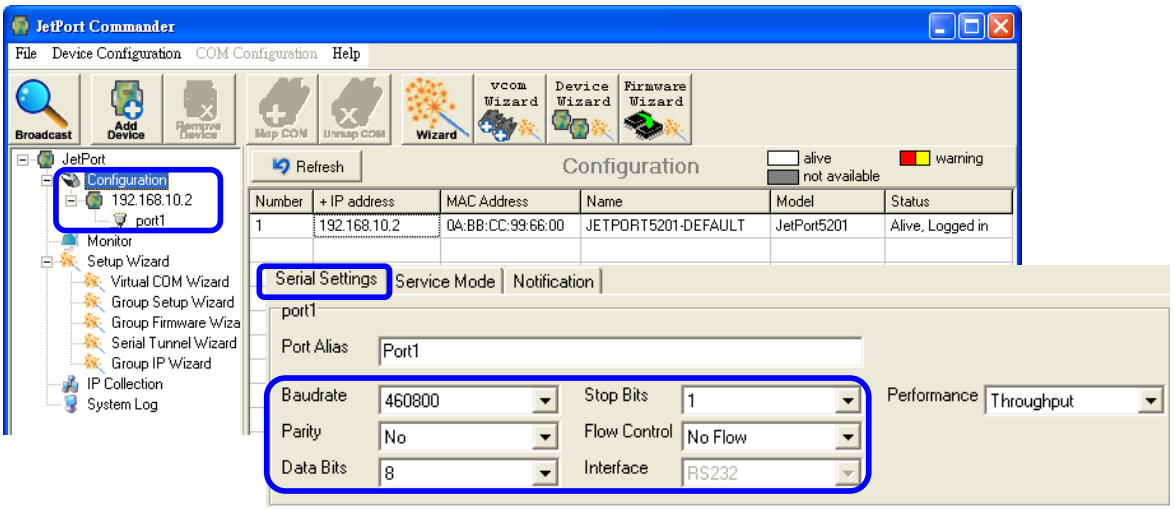
4. **Configuring the JetPort unit:**

4.1 Click on the JetPort unit and select “Add” for further configuring the unit.

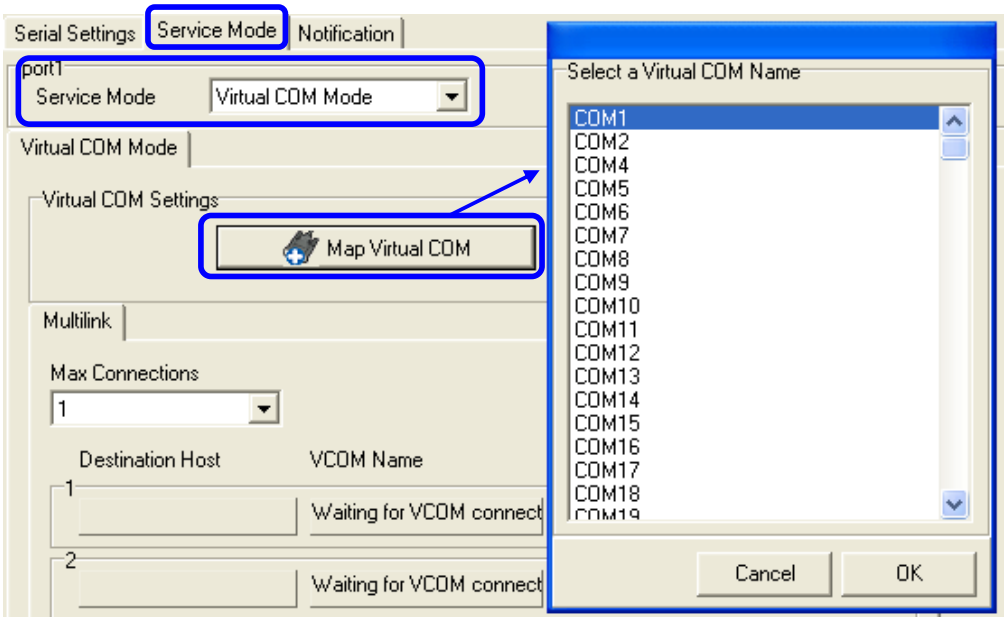
4.2 Select “Static IP” if you want to specify the network parameters, or select “DHCP”, or “BootP” if you want dynamic configuration for the JetPort unit.

5. Configuring the serial port as COM port:

5.1 Go to “Configuration”, and choose the “device” and the “port”. Select “Serial Settings” to configure the serial parameters



5.2 Select “Service mode” , “Virtual COM Mode” and press “Map Virtual COM” to map the port to the COM port.



Congratulations! You have finished JetPort configurations with Virtual COM mode. You can also use web or telnet console by the JetPort IP address.

3
Windows Management Tool

JetPort serial device server provides powerful Windows management tool for multiple device management.

This chapter introduces major functions in JetPort Windows Commander

- **Server Configuration**
  - **Broadcast**
  - **Configuration**
  - **General**
  - **Locate**
  - **Security**
  - **Networking**
  - **Notification**
  - **Management**
  - **Firmware Update**
  - **Save / Reload**
- **Port Configuration**
  - **Port Serial Settings**
  - **Port Service Mode**
  - **Port Notification**
- **Setup Wizard**
  - **Virtual COM Wizard**
  - **Serial Tunnel Wizard**
  - **Group IP Wizard**
  - **Group Setup Wizard**
  - **Group Firmware Wizard**
- **IP Collection**
- **Monitor**

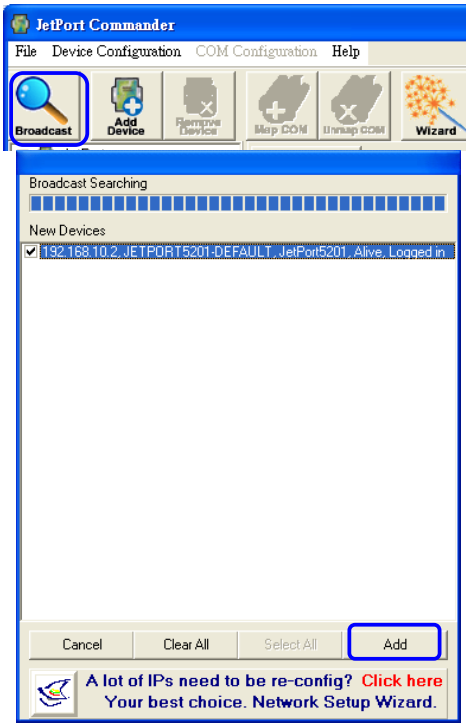
Server Configuration

Server configuration covers all settings for the device. Before you start, you need to add the devices first in the configuration list.

Broadcast

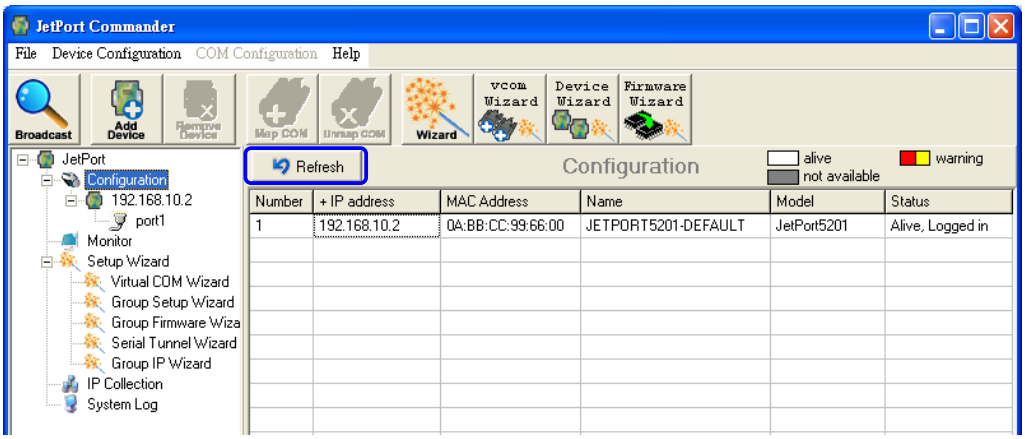
After installing JetPort Commander, you can broadcast for all available devices on the network.

Choose “Broadcast” button in the quick bar, and start to search. Select the device you wish to add and click “Add”.



Configuration

In the Configuration menu, you will find the added device in the list. Double click on the device will continue to configure rest of the device settings. The “Refresh” Button will update the latest list of added available devices.



General

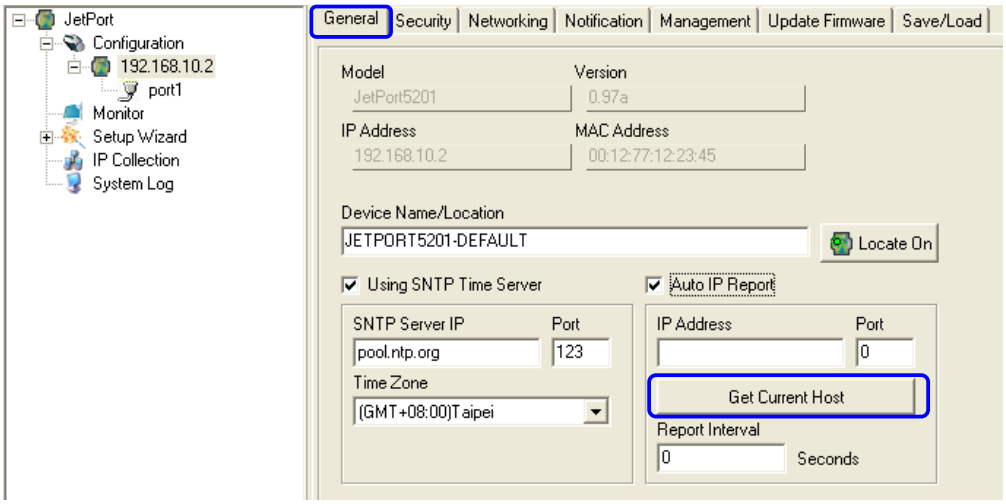
The General section lists information of “Model”, “Firmware Version”, “IP Address”, and “MAC Address”.

You can modify Device Name and remark Location information.

Using SNTP Time Server: Enable Time Server by specifying SNTP server IP and Port.

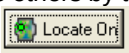
Auto IP Report: If this device uses DHCP or BootP IP, enable Auto IP Report will report its dynamic IP address to the specified host regularly. You can use “Get Current Host” to assign the IP report to be sent to current host. Specify “Report Interval” as to how often the IP address should be sent, zero means no report will be sent.

After modifying configuration, be sure to validate the changes by using “Apply Only” or “Apply and Save”.



Product Tip: Always save your configurations to validate the changes with 2 options.
Apply Only: Only apply the change one time without saving. When rebooting the device, the changes will not exist.
Apply and Save: The change will be applied and save in Flash. When rebooting the device, the changes are still

Locate the Device

JetPort Commander can identify one device among the others by the IP address with the “Locate On” function in General Menu. Select the “Locate On” 

function and the PWR/Ready LED will blink Green continuously until you select the “Locate Off” 

function.

Security

JetPort Security includes access list and administration security.

Access List

The Access IP Table specifies the IP address and subnet that can access to the device. The access is based on IP and netmask combination.

If the access is open to all hosts, do NOT enable this function.

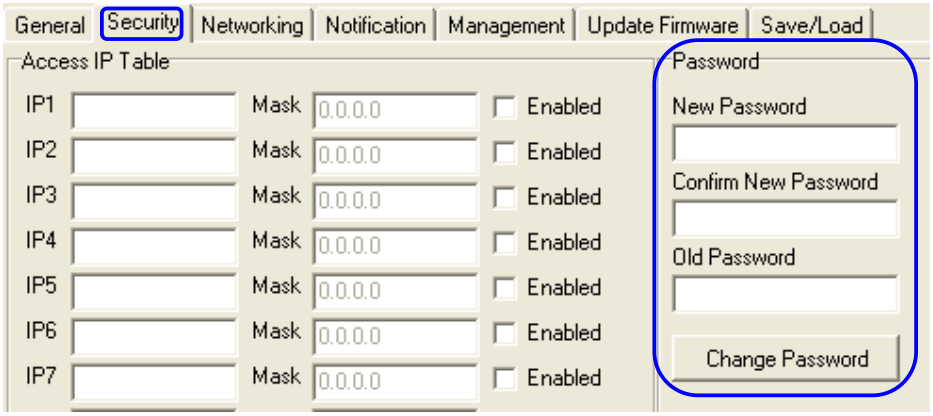
Administration Security

You can assign password to protect others from changing the configurations on the device.

If you assign password, you will need to give password every time when you access Windows, Web, or Telnet consoles. The password will also validate on Setup Wizard configuration.

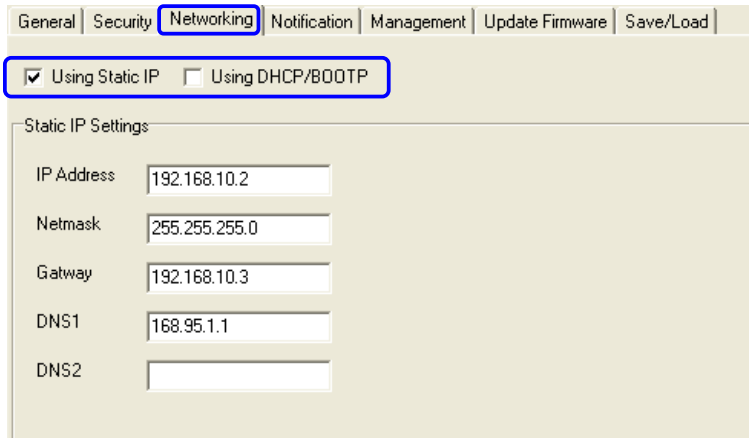
You can input max. 12 characters as password.

After modifying configuration, be sure to validate the changes by using “Apply Only” or “Apply and Save”.



Networking

JetPort supports both Static IP or DHCP/BootP IP configuration. After modifying configuration, be sure to validate the changes by using “Apply Only” or “Apply and Save”.

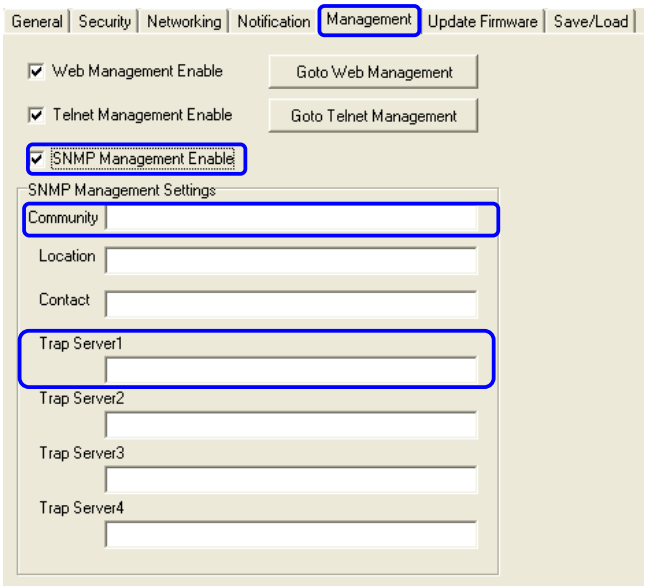


Notification

JetPort supports event notification by SNMP trap, email, or system log.

SNMP notification

To activate SNMP notification, check “SNMP management enable” from “Management” menu and assign the “community”, “location”, “contact info”, and Trap Server.

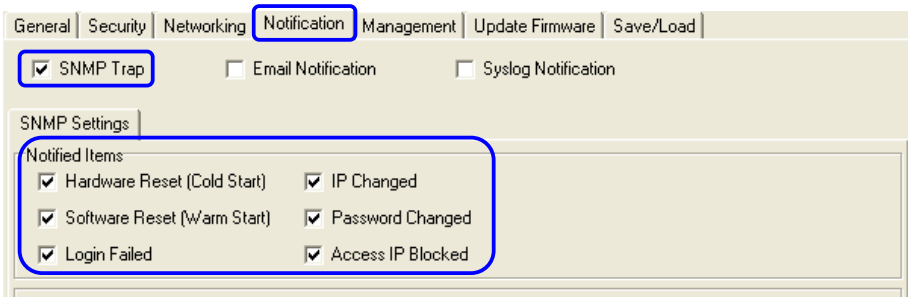


The length of community is from 1 to 31, which cannot be left blank and do NOT include ";" mark.

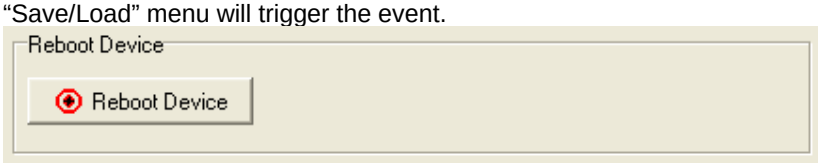
The length of Location and Contact information is from 0 to 255, which is optional.

The Trap Server supports domain name format, and requires at least one Trap Server information to activate the setting.

Select SNMP Trap in notification menu. Specify the notification event type first and enable SNMP management in Management menu.



- Hardware Reset (Cold Start): Rebooting JetPort from power plug will trigger the event
- Software Reset (Warm Start): Rebooting JetPort from "Reboot Device" function from "Save/Load" menu will trigger the event.



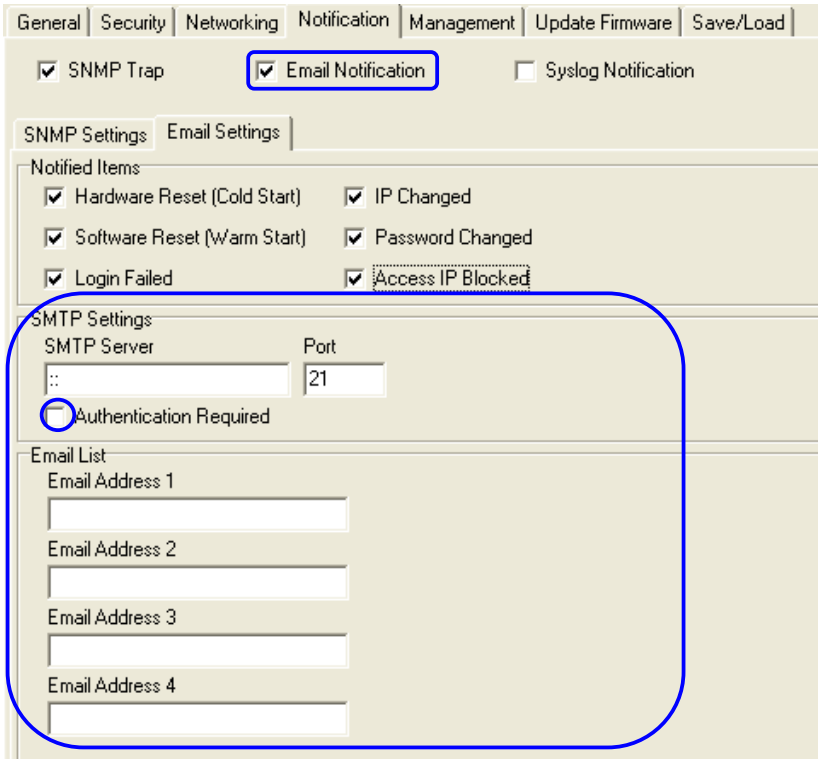
- Login Failed: Using wrong password in console will trigger the event
- IP Changed: Changing network setting will trigger the event
- Password Changed: Changing the password will trigger the event
- Access IP Blocked: Report blocked IP addresses

Email Notification

Enabling Email notification will open a windows for SMTP settings.

Assign SMTP server, and if Authentication is required for the SMTP server, check the authentication box and specify the users name and password.

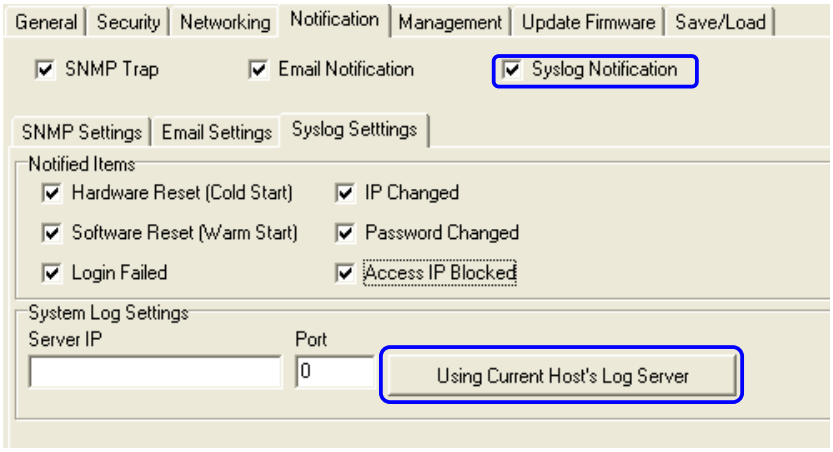
JetPort supports sending notification to max. 4 email addresses.



System Log Server Notification

Enabling Syslog Notification will open Syslog Settings window.

Specify Log Server IP, or select “Using Current Host’s Log Server” to specify current host as the log server.



After modifying configuration, be sure to validate the changes by using “Apply Only” or “Apply and Save”.

Management

In addition to JetPort Windows Commander, JetPort can also be managed by Web and Telnet consoles.

To enable or disable the management consoles, go to “Configuration” and “Management”. JetPort enables Web and Telnet consoles by default. To disable Web or Telnet consoles, uncheck the boxes.

“Go to Web Management” will open web browser and enter web console of JetPort.

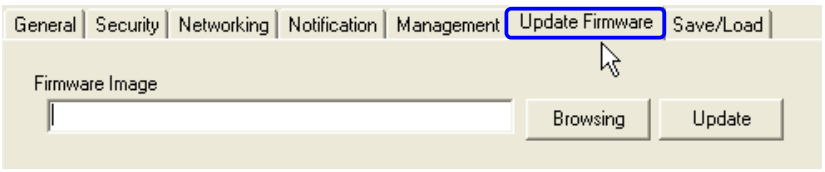
“Go to Telnet Management” will open Telnet session and enter telnet console of JetPort.

Choose “Apply Only” or “Apply and Save” to validate the changes.

Update Firmware

You can find up-to-date firmware of JetPort in Korenix website download section.
http://www.korenix.com/support_downloads.htm

To update Firmware of the device, save the firmware file in your host PC. Go to “Configuration”, and “Update Firmware”. Specify the file location by Browsing and continue operation by Update.

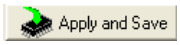


The device will reboot after firmware update and be located again in Commander device list.

Note: all configuration will restore to default except for the device IP address after the firmware update.

Save / Reload

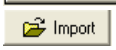
After configuration is finished, be sure to Apply and Save the changes.



Apply all configurations and Save to Flash. The changes are valid after reboot.

Load default configuration except Network Settings.

Reboot the device.



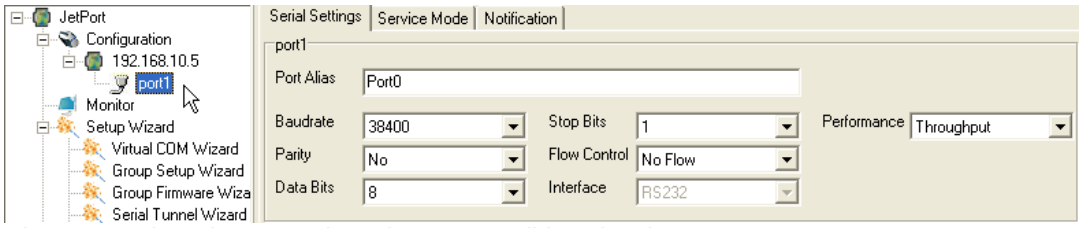
Retrieve saved configuration file to apply in the device.

Save the current configuration into a file and save the file in current host.

Port Configuration

Serial Port Configurations include configuration for the serial parameters, serial communication modes, data packing options, and event notifications.

Go to the port of the device in Configuration tree.



Choose “Apply Only” or “Apply and Save” to validate the changes.

Serial Settings

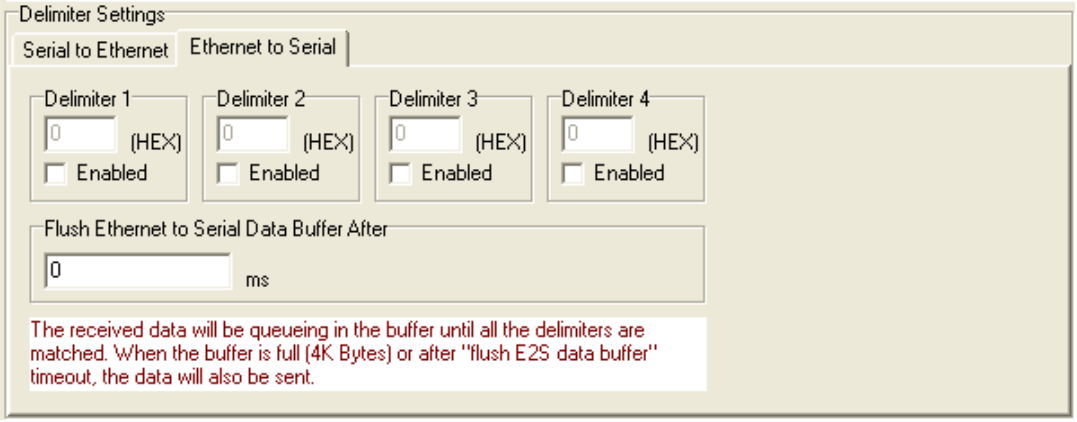
The available serial settings for JetPort is as follows:

Port Alias: Remark the port to hint the connected device.
Baud rate: from 110bps to 460.8kbps
Parity: No, Even, Odd, Mark, Space
Data Bits: 5, 6, 7, 8
Stop Bits: 1, 2 (1.5)
* 1.5 is only active when data bit is 5.
Flow Control: No, XON/XOFF, RTS/CTS, DTR/DSR
Interface: RS232
Performance: Throughput, Latency
Throughput mode guarantees highest transmission speed
Latency mode guarantees shortest response time

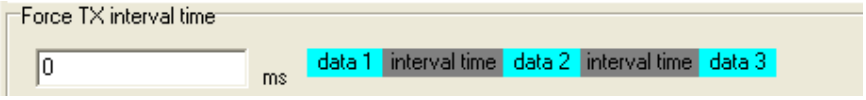
Advanced Data Packing Options

For advanced data packing options, you can specify delimiters for Serial to Ethernet and / or Ethernet to Serial communications.

You can define max. 4 delimiters (00~FF, HEX) for each way. The data will be hold until the delimiters are received or the optional “Flush Ethernet to Serial data buffer” times out. Zero means disable(factory default).



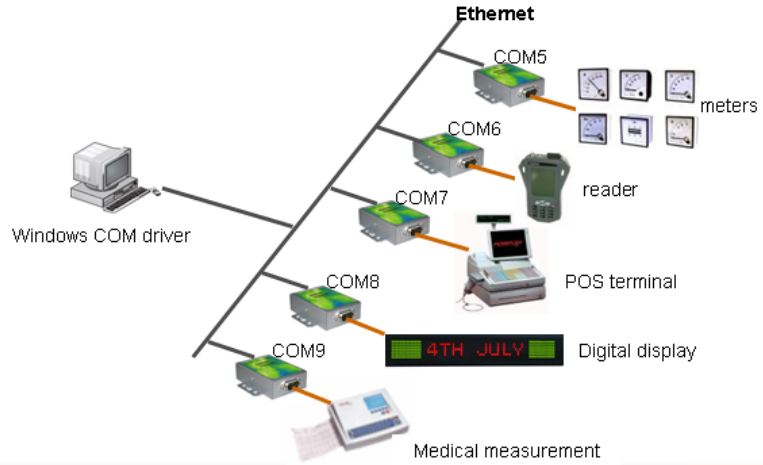
Force TX interval time is to specify the timeout when no data has been transmitted. When the timeout is reached or TX buffer is full (4K Bytes), the queued data will be sent. Zero means disable(factory default).



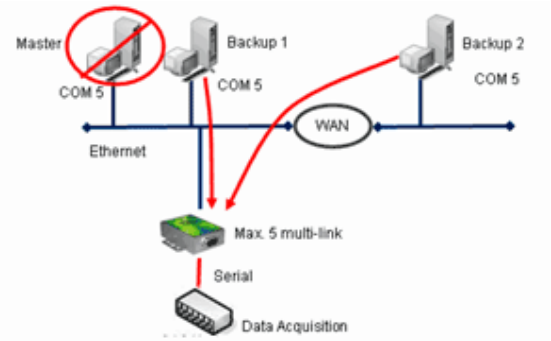
Choose “Apply Only” or “Apply and Save” to validate the changes.

Service Mode- Virtual COM

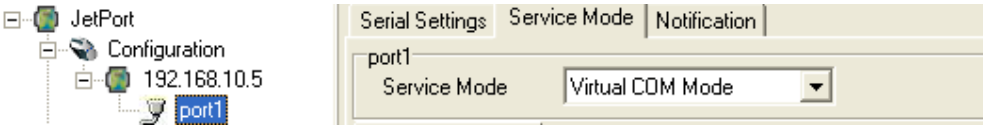
Virtual COM service mode enables the serial port in JetPort as PC’s locally-attached COM port for Windows. One PC can have as many as COM ports on the network without the limitation of PC’s physical slots. The Virtual COM ports on the network can also be shared by multiple hosts.



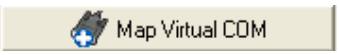
For redundant system considerations, JetPort also supports up to 5 Virtual COM links. Apply same serial setting to the backup host, all the links will transfer data simultaneously.



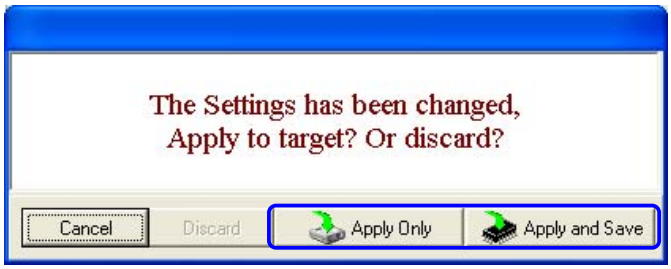
To start the Virtual COM, select Virtual COM Mode in Service Mode of Port Configuration.



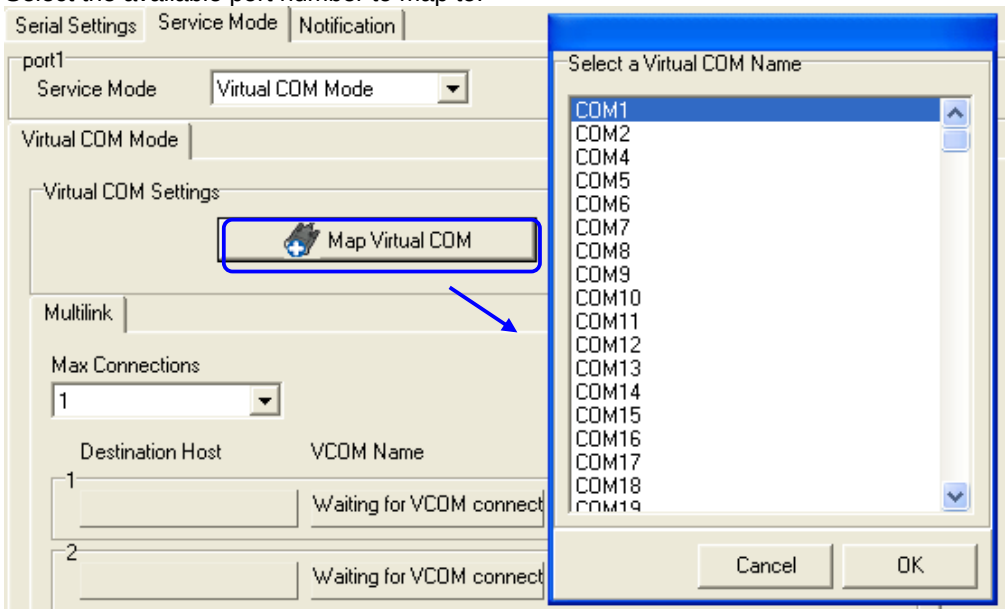
Select “Map Virtual COM” to map the port to PC’s COM port.



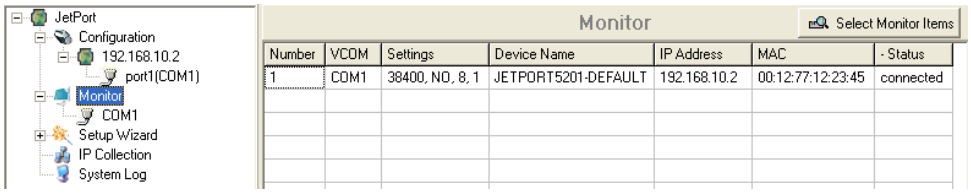
A Window will appear to confirm to change to Virtual COM mode. Choose Apply Only or Apply and Save.



Select the available port number to map to.



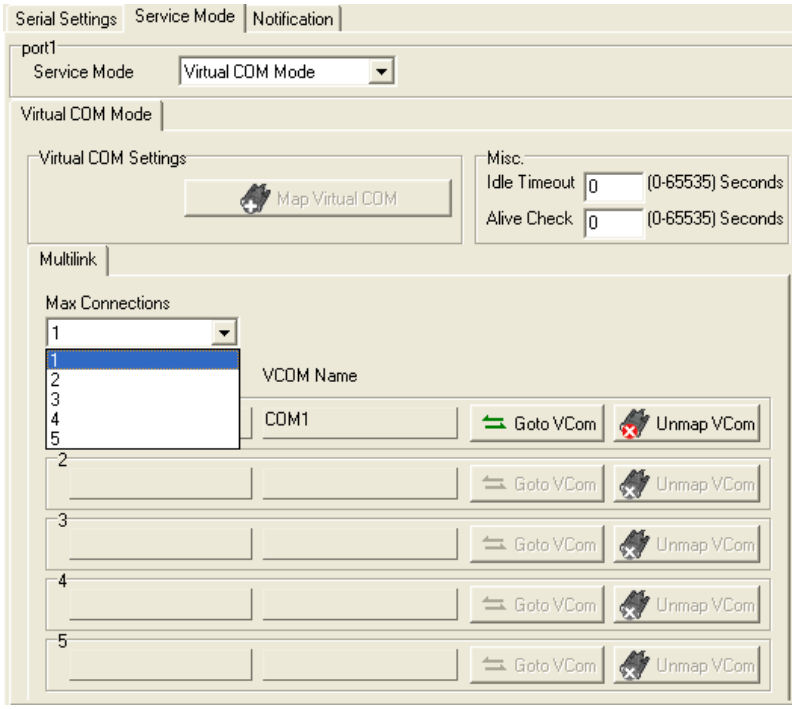
When the configuration is finished and saved, the COM port number will be shown after port, and you can monitor the port in Monitor menu.



Multiple Virtual COM Connections

Max. one connection is default. To create multiple Virtual COM connection, select max. connection number that the JetPort device is allowed. After increasing the max. connection number, other hosts on the same subnet as JetPort can use the port as Virtual COM port at the same time.

Note that all the hosts for the multiple Virtual COM connections must have the same serial parameters, i.e. baud rate, start bit, data bit, etc.



Miscellaneous Settings:

Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed and re-try for connection with other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

Alive Check: The JetPort device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

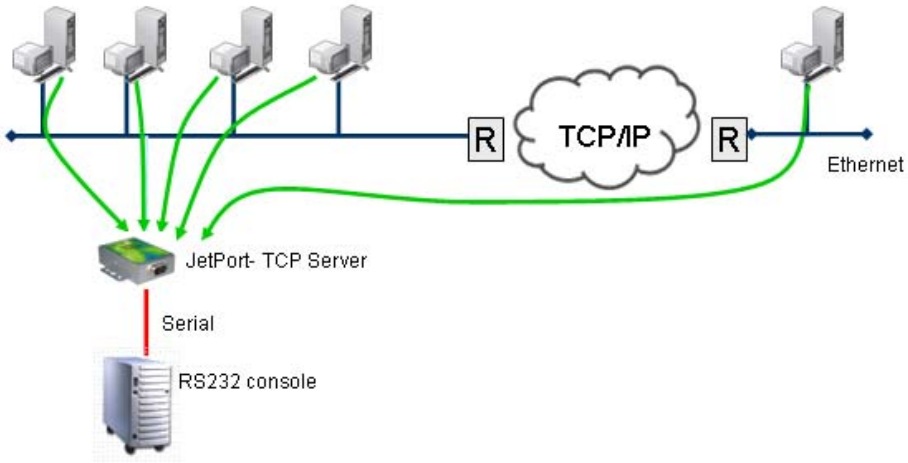
To unmap the COM port, specify the port and select Unmap in the quick bar. 

Service Mode- TCP Server

When JetPort is configured as TCP Server, it gives the connected serial device a unique IP:Port address on a TCP/IP network that can be accessed by other network hosts. JetPort as TCP Server waits passively to be contacted by the host computer, allowing the host computer to establish a connection and get data from the serial device.

TCP Server mode supports up to 5 simultaneous connections, so that max. 5 network hosts as TCP Clients can connect to the device at the same time.

Note that all the hosts for the multiple TCP Server connections must have the same serial parameters to communicate with JetPort, i.e. baud rate, start bit, data bit, etc.

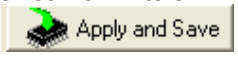


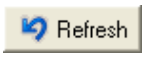
TCP Server proceeds as follows:
1. Network host requests a TCP connection with JetPort in TCP Server Mode by IP address and port number.
2. Once the connection is established, data can be transmitted in both directions from the host to the JetPort device, and vice versa.

To configure TCP Server, select TCP Server Mode in Service Mode of Port Configuration.

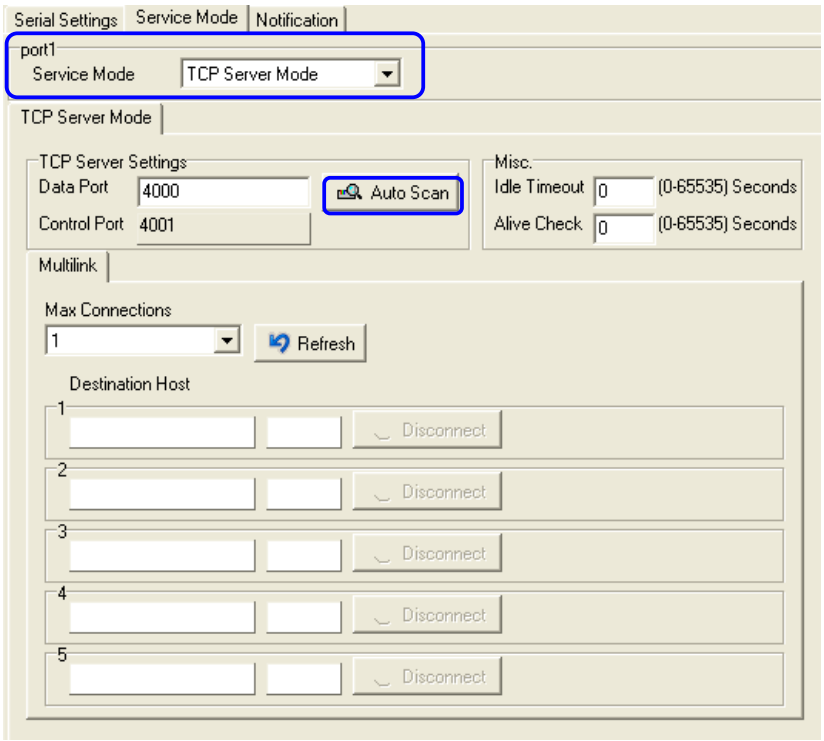
"Auto Scan" the TCP Data Port number that is available from current host.
The Control Port is Data Port number plus one.

Define the max. connection allowed from 1 to 5.

Apply and Save the changes. 



function refreshes the current connections.



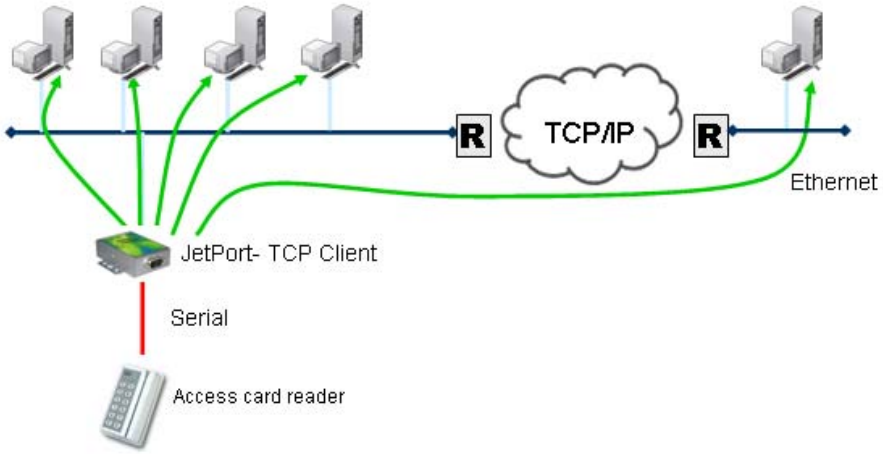
Miscellaneous Settings:

Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

Alive Check: The JetPort device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

Service Mode- TCP Client

When JetPort is configured as TCP Client, it will build TCP connection to remote host when data is received. When the connection is built, the data is transmitted bi-directionally. When the data transmission is finished, the TCP connection will be closed by TCP Client. The connect-on-demand TCP Client operation helps the host computer to manage high number of remote devices that exceeds the maximum simultaneous TCP connections allowed. JetPort supports up to 5 simultaneous TCP Client connections for redundant system considerations.



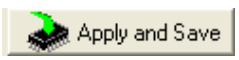
TCP Client proceeds as follows:

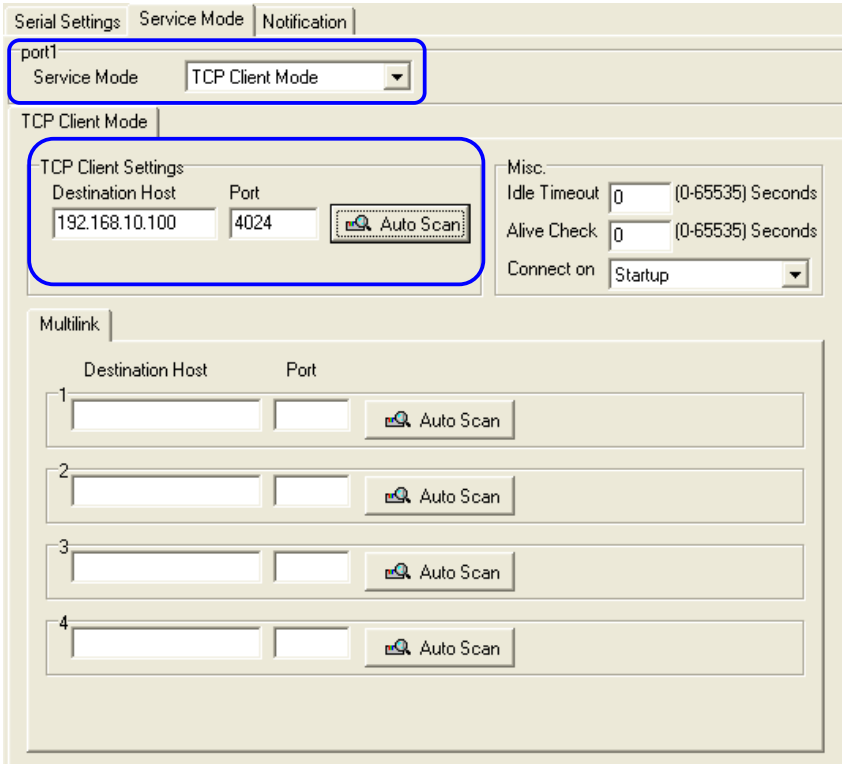
1. The JetPort configured as TCP Client Mode requests a connection to the host.
2. Once the connection is established, data can be transmitted in both directions from the host to the JetPort, and vice versa.

To configure TCP Client, select TCP Client Mode in Service Mode of Port Configuration.

Specify the IP and port number of the host. If the TCP Client should connect to the current host, “Auto Scan” will scan current host IP address and available port number. If the TCP Client should connect to other hosts, specify the IP address of the host and “Auto Scan” will scan the available port number of JetPort.

If the TCP Client should connect to more than one host, specify the IP addresses and port number or use “Auto Scan” to scan the port number of JetPort.

Apply and Save the changes. 



Miscellaneous Settings:

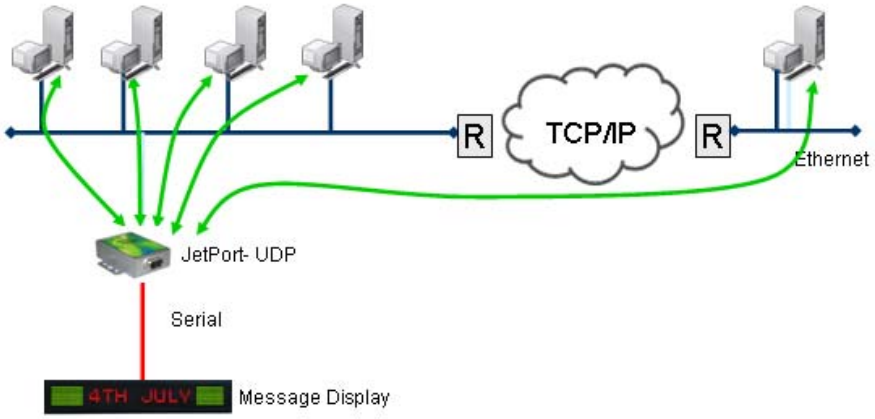
Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed and re-try for connection with other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

Alive Check: device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

Connect on Startup: The TCP Client will build TCP connection once the connected serial device is startup.
Connect on Any Character: The TCP Client will build TCP connection once the connected serial device starts to send data.

Service Mode- UDP

The UDP Server/Client Mode of operation is designed for applications that require speedy but no-guaranteed data transmission over UDP protocol layer. When JetPort is configured as UDP Server/Client, your serial device can deliver data to multiple destinations at almost the same time since the UDP does not request building connection first before sending data.



To configure UDP, select UDP Mode in Service Mode of Port Configuration.

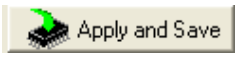
“Auto Scan” the Listening port number of JetPort.

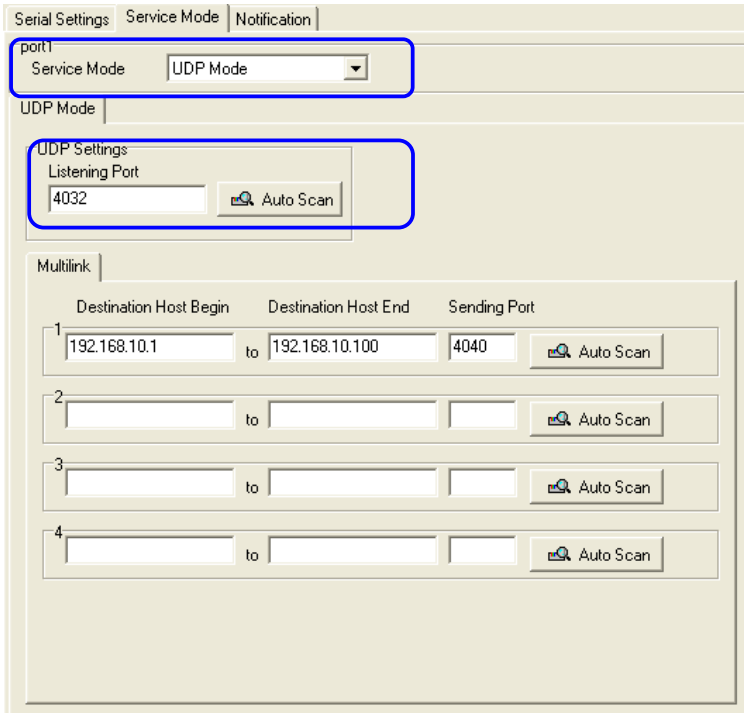
If there are more than one destination hosts, specify the IP address range by Destination Host IP Begin and End. “Auto Scan” the sending port number of the device.

For example:

Destination Host Begin = 192.168.10.1
Destination Host End = 192.168.10.100
Send Port = 4040
Listening Port = 4032

*JetPort will receive Ethernet data from port 4032 and send to serial port
*JetPort will receive Serial data to 192.168.10.1 to 192.168.10.100 via port 4040

Apply and Save the changes. 



Notification

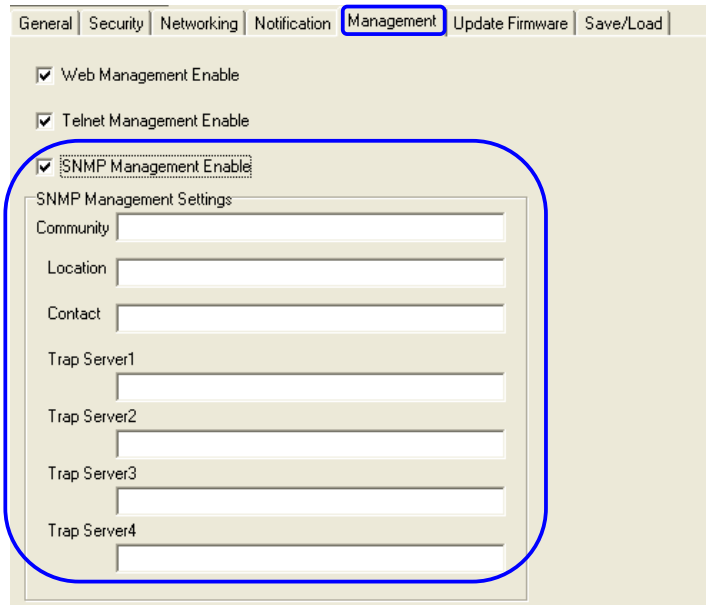
Port status can be notified to administrator by means of Email, SNMP trap, or System Log.

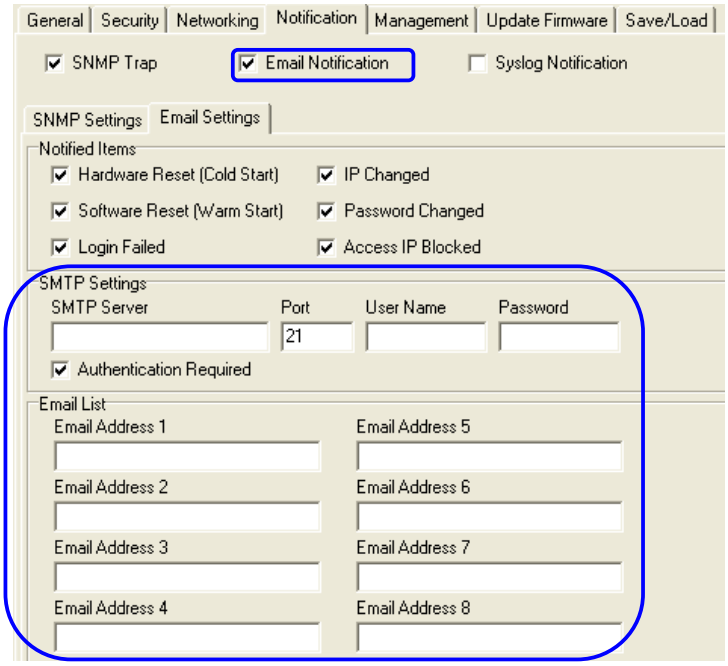
The events for notification include:

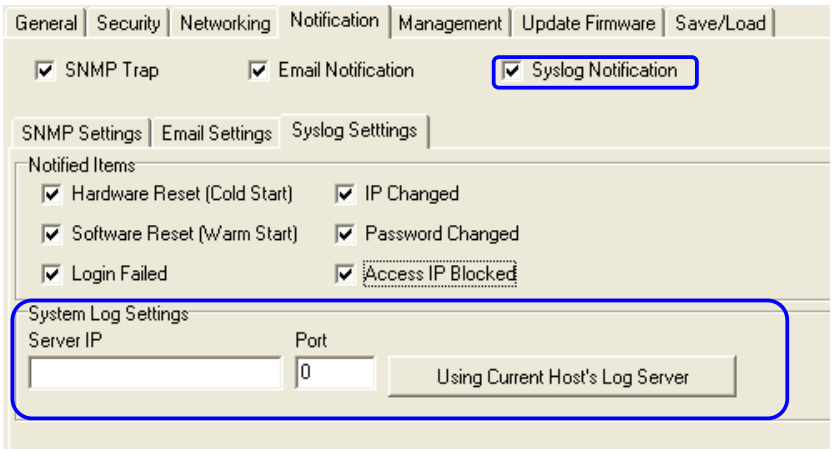
- DCD changed: When DCD (Data Carrier Detect) signal changes, indicating the modem connection status has changed, the event will be triggered.
- RI changed: When RI (Ring Indicator) signal changes, indicating the incoming of a call, the event will be triggered.
- DSR changed: When DSR (Data Set Ready) signal changes, indicating that the data communication equipment is powered off, the event will be triggered.
- CTS changed: When CTS (Clear To Send) signal changes, indicating that the transmission between computer and DCE can proceed.
- Port connected: In TCP Server Mode, when the device accepts an incoming TCP connection, this event will be trigger. In TCP Client Mode, when the device has connected to the remote host, this event will be trigger. In Virtual COM Mode, when Virtual COM is ready to use, this event will be trigger.
- Port disconnected: In TCP Server/Client Mode, when the device lost the TCP link, this event will be trigger. In Virtual COM Mode, When Virtual COM is not available, this event will be trigger.

To enable activate the notification, specify the event type and the notification methods.

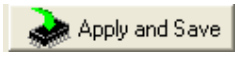
The details of SNMP trap Server, Email SMTP server, or Log server IP should be configured first properly in device “Configuration” “Management”.





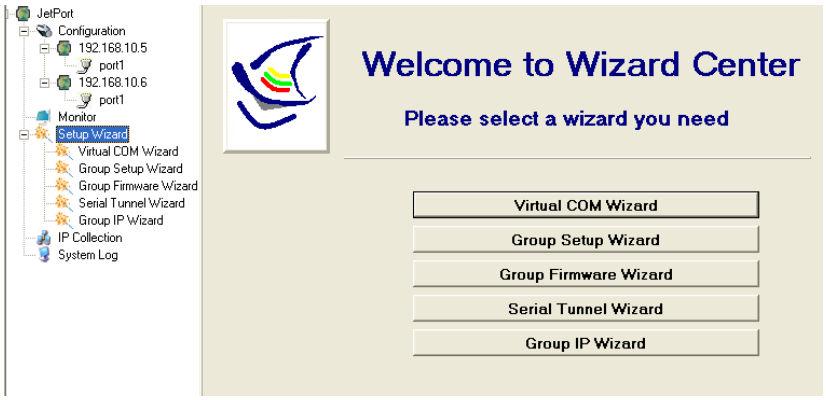


After modifying configuration, be sure to validate the changes by using “Apply Only” or “Apply and Save”.



Setup Wizard

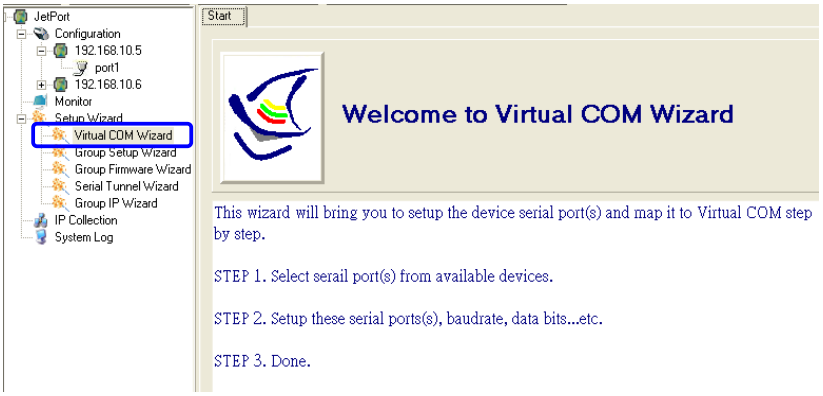
JetPort Commander offers 5 Setup Wizards to help you manage JetPort devices as a group and streamline the management tasks.



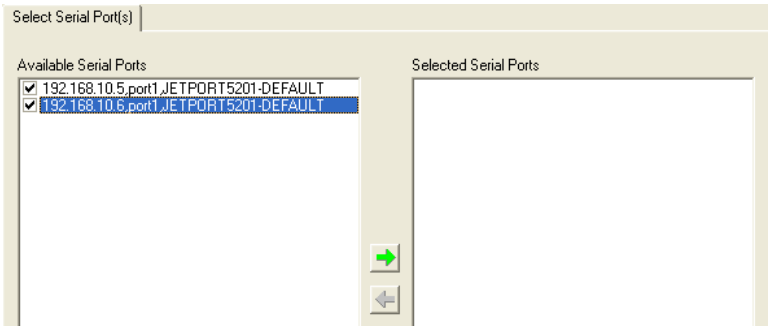
Virtual COM Wizard

JetPort Commander offers one of the easiest way to add serial COM ports over the network by the Virtual COM Wizard. JetPort COM port driver is installed when you install JetPort Commander.

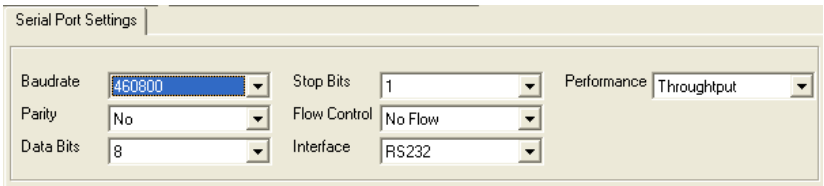
Select the Virtual COM Wizard from Setup Wizard. There are only 3 steps to follow up.



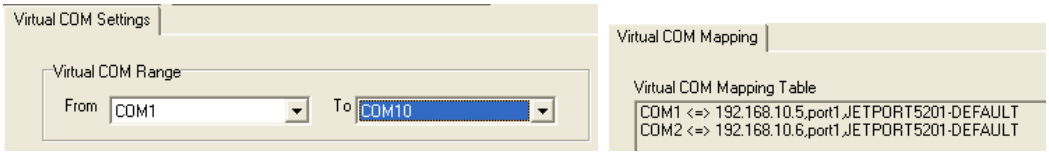
Select the available ports of JetPort devices on the network.



Continue by configuring the serial settings of the serial ports. In Performance mode, there are “Throughput” mode and “Latency” mode. In Throughput mode, the throughput is high. In Latency mode, the response time is fast.



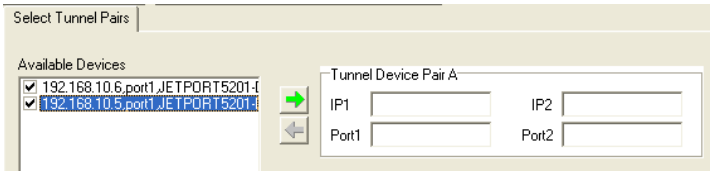
Specify the Virtual COM port range and continue the operation by checking the COM port table.



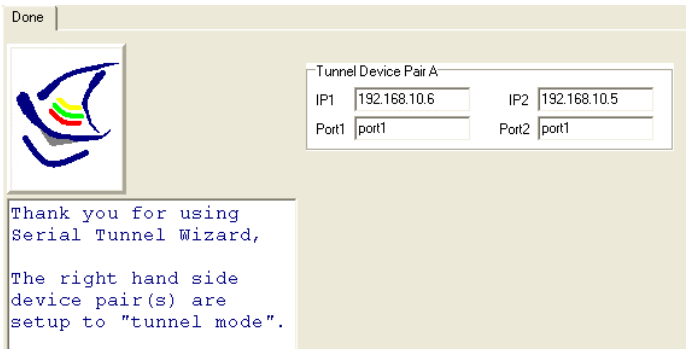
Serial Tunnel Wizard

The Serial Tunnel Wizard gives you the option to transparently pair two devices over the network.

Select the devices that should be paired and move the devices into IP1 and IP2.



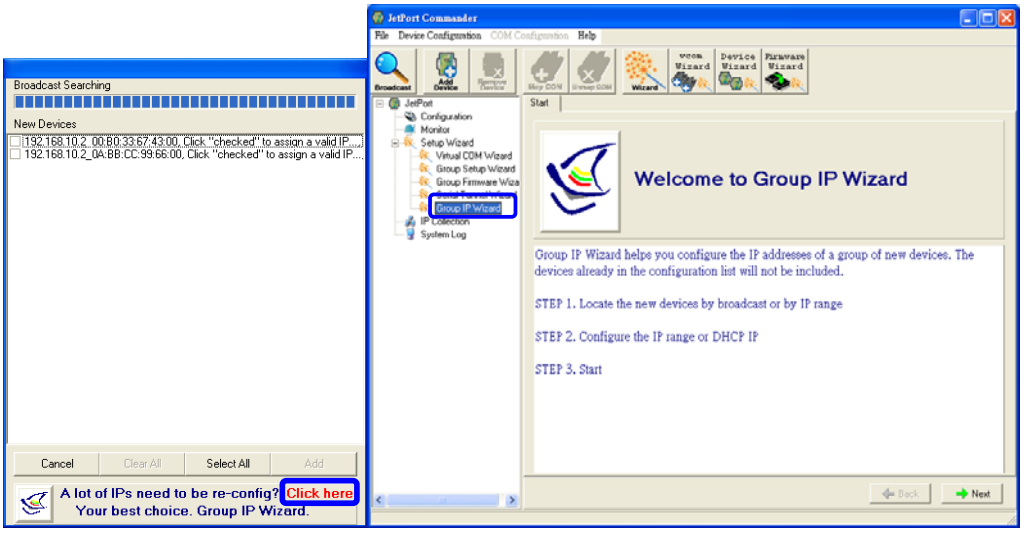
After configuring the serial setting of the ports, the serial tunnel will be built by assigning one port as the TCP Server mode and the other as the TCP Client mode.



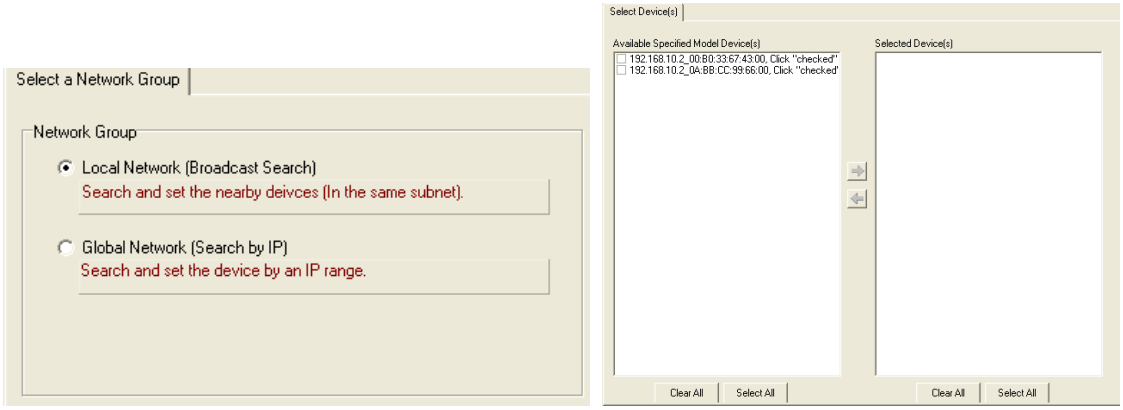
Group IP Wizard

When you have more than one device to configure, it is handful to use Group IP wizard to configure all IP addresses of the devices remotely.

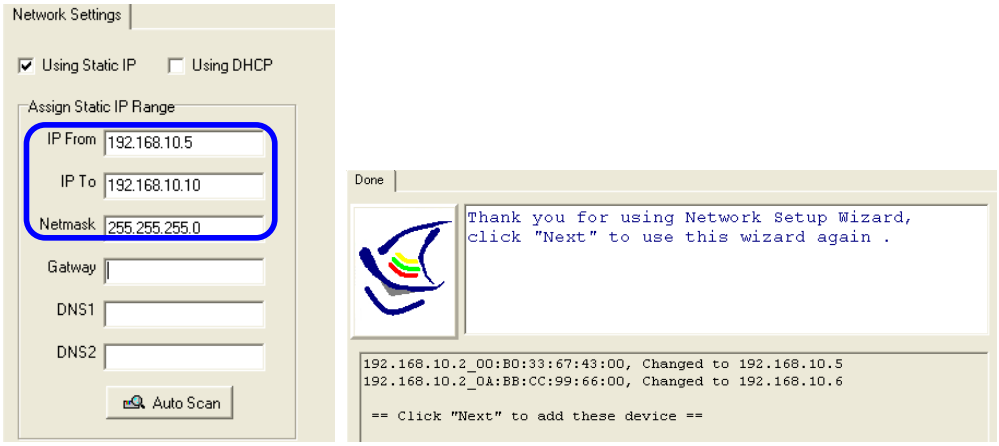
Select Group IP Wizard after opening JetPort Commander, or use Broadcast and find more than one devices on the network and click Group IP Wizard hint at the bottom.



Search the devices in local network (i.e. same subnet), or search by an IP range. Select the devices.



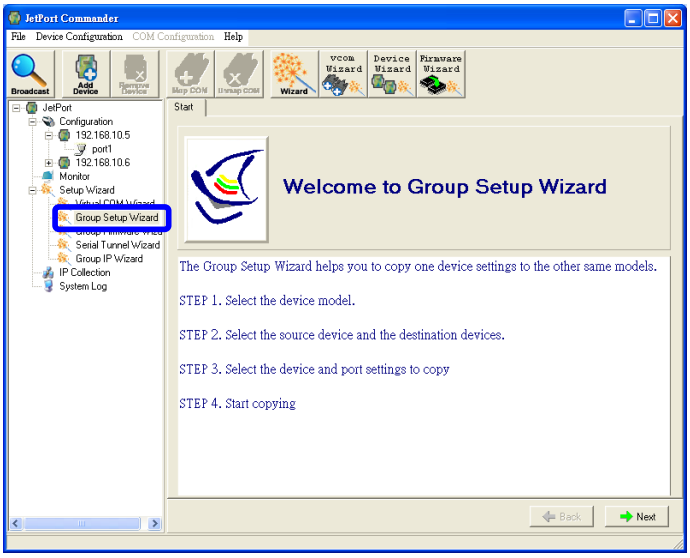
Select the devices for group IP configuration and define the IP addresses range or by DHCP.



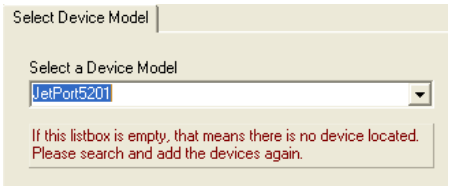
Click next to confirm the setup and the IP configuration is finished, you will see the IP addresses for the devices.

Group Setup Wizard

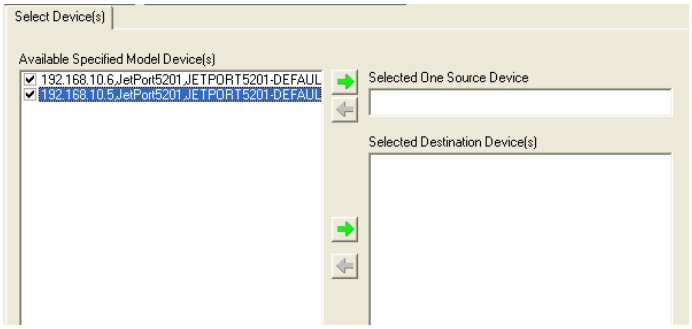
Group Setup Wizard helps you to copy the configuration of one device to other devices. You can select the items to be copied or not. Go to “Setup Wizard”, “Group Setup Wizard”, and choose “Next” to continue.



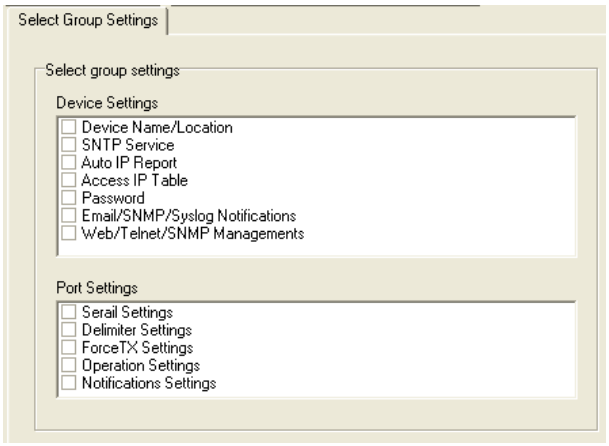
Select device model as “JetPort 5201”.



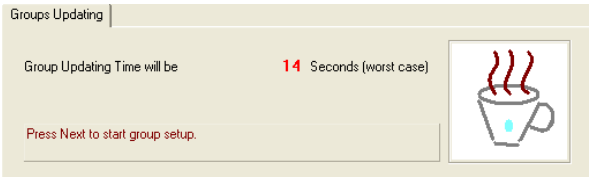
Select the source device for the configuration and destination devices.

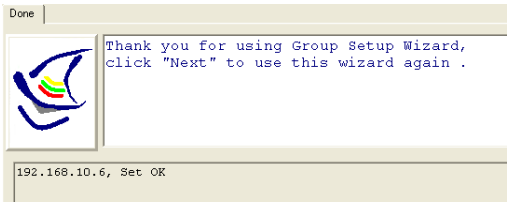


Specify the configuration items from the source device to the destination devices.



Click next to confirm and finish the wizard.

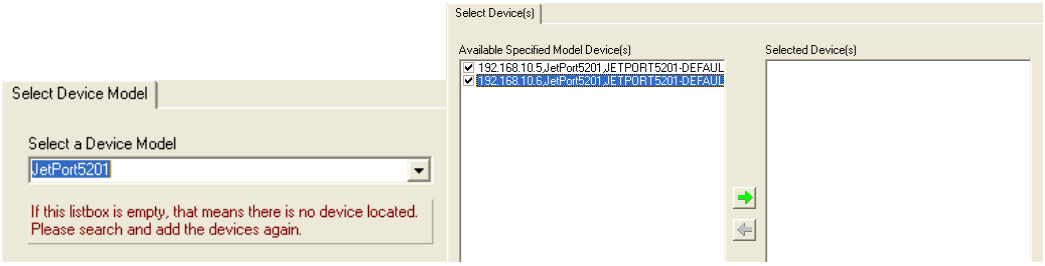




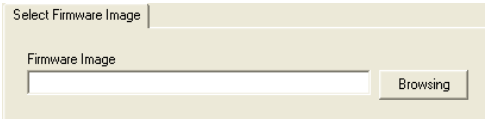
Group Firmware Wizard

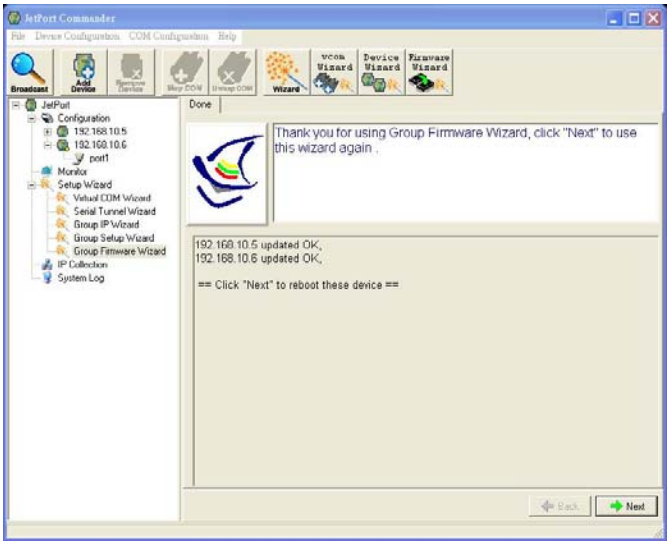
To update firmware for a group of devices can be as easy as 4 steps of Group Firmware Wizard.

Select the device model as JetPort 5201, and select available devices on the network for the upgrade.



Specify the firmware image and select next. Confirm the firmware upgrade and continue operation. JetPort Commander will upgrade firmware of the devices and reboot again to finish.



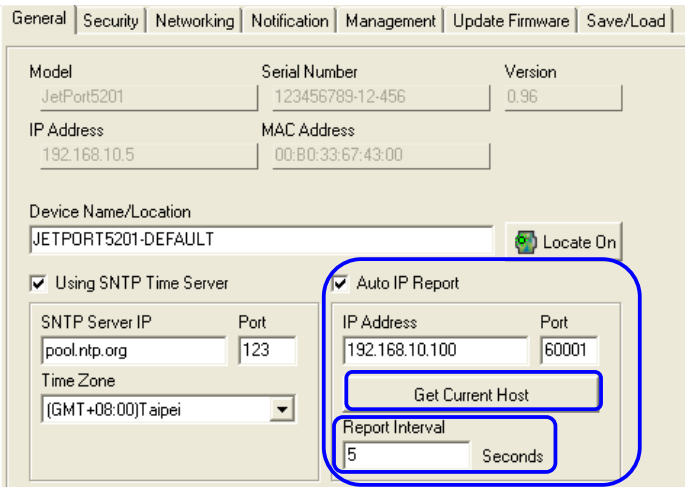


IP Collection

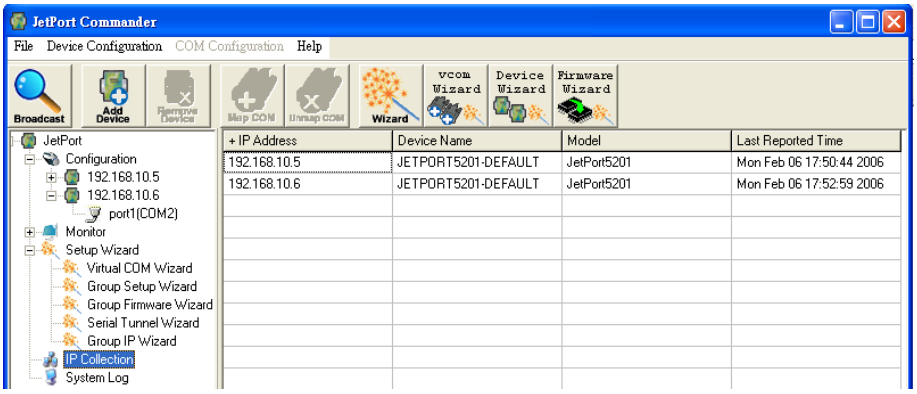
For the dynamic DHCP IP settings, it is often a task to find the changing IP addresses.

JetPort Commander supports auto IP report function to report the current IP address of the JetPort units to administrator. To enable the function, check “Auto IP Report” in “Configuration”, “General”. Specify the host that the device should report IP to, or define current host as the report host.

Be sure to define the Report Interval time. Zero is disable.

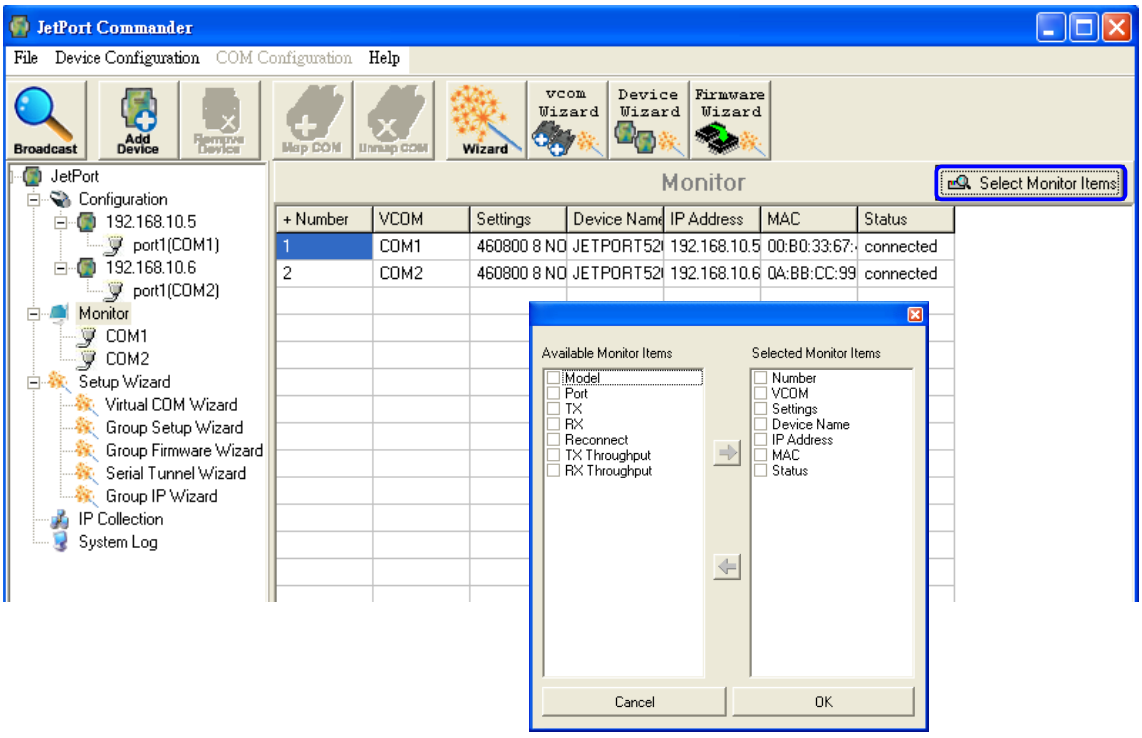


Go to the IP Collection function of the main menu and find the devices auto IP report list.



Monitor

You can monitor the COM port status from the Monitor function. The monitored items can also be defined by the “Select Monitor Items”. You must configure the COM ports first before monitoring the status.



4

Web and Telnet Console

In addition to Windows utility, JetPort can also be managed by Web and Telnet Console.

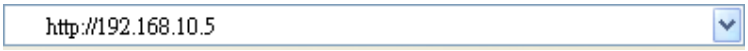
This chapter describes:

- **Web Console**
  - Server Configuration
  - Port Configuration
  - Management
  - Save / Restart
- **Telnet Console**
  - Overview
  - Configuration

Web Console

When the JetPort has been configured with proper IP address and the web management is enabled, you can use web browser to make further configurations.

Type JetPort's IP address in the Address input box, for example 192.168.10.5.

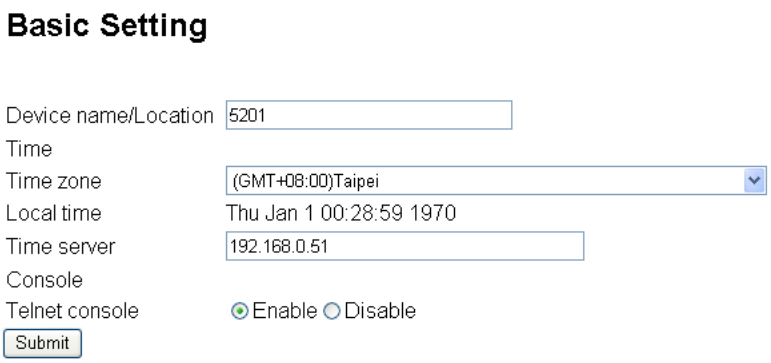


If the JetPort is password protected, use the pre-assigned password to login first.

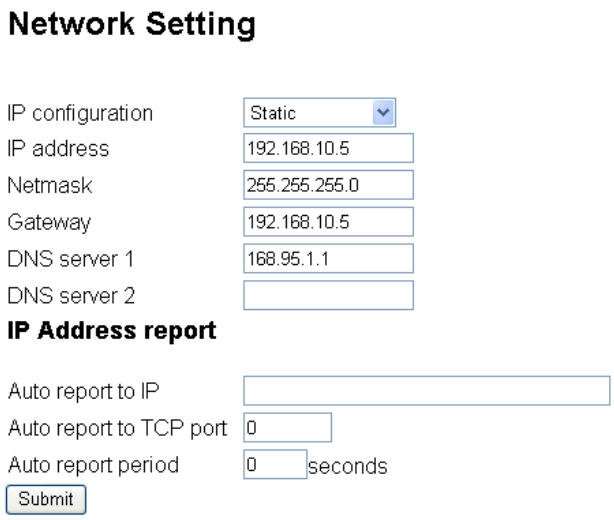
The overview page lists the basic information of this JetPort device.

Server Configuration

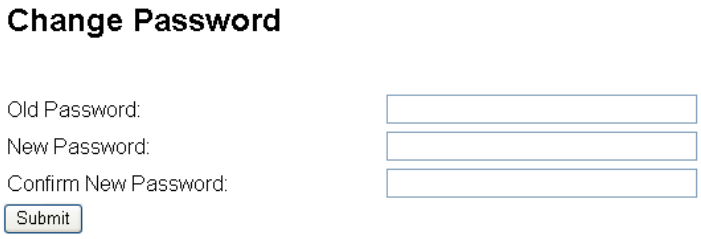
Basic Setting configures Server name, Time Server, and Telnet console enable/disable.



Network Setting configures the IP address, netmask, gateway, and DNS server for the JetPort. Auto IP report is for dynamic IP address reporting in defined intervals.



You can also define Administration password to protect the JetPort from unauthorized modification. Avoid using space in password.



Port Configuration- Serial Parameter

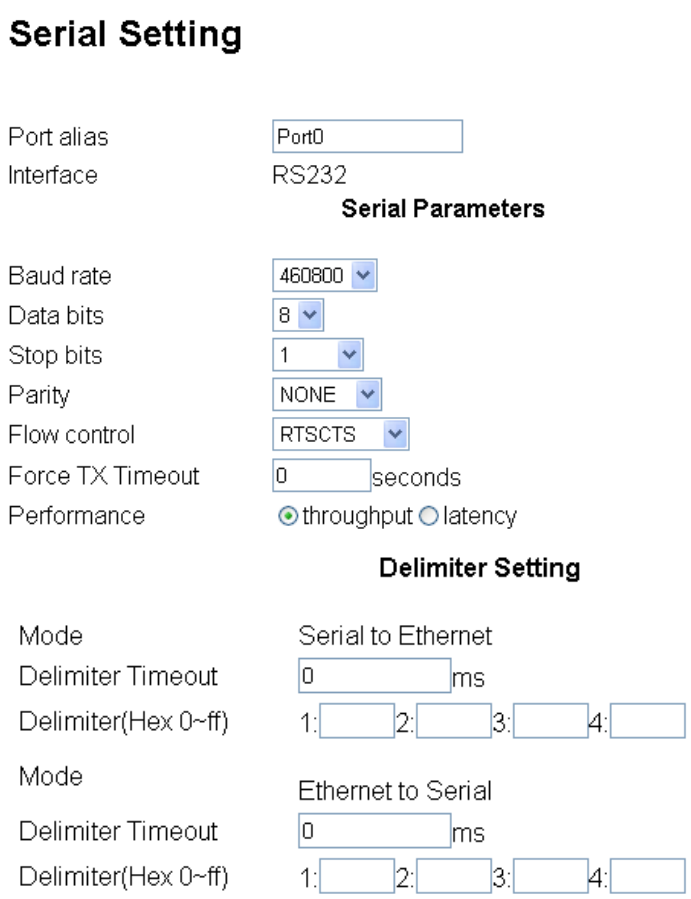
Port Configuration covers Serial Parameter settings, such as baud rate, data bits, stop bits, parity, and flow control.

Port Alias: Remark the port to hint the connected device.
Baud rate: from 110bps to 460.8kbps
Parity: No, Even, Odd, Mark, Space
Data Bits: 5, 6, 7, 8
Stop Bits: 1, 2 (1.5)
Flow Control: No, XON/XOFF, RTS/CTS, DTR/DSR
Interface: RS232
Performance: Throughput, Latency

Throughput mode guarantees highest transmission speed
Latency mode guarantees shortest response time

For advanced data packing options, you can specify delimiters for Serial to Ethernet and / or Ethernet to Serial communications.

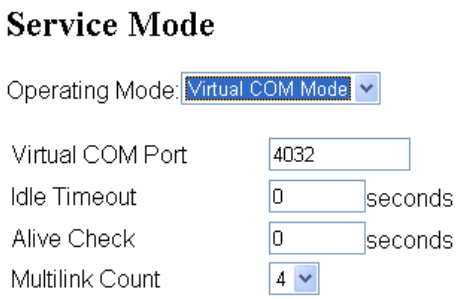
You can define max. 4 delimiters (00~FF, HEX) for each way. The data will be hold until the delimiters are received or the optional “Flush Ethernet to Serial data buffer” times out. Zero means disable(factory default).



Force TX interval time is to specify the timeout when no data has been transmitted. When the timeout is reached or TX buffer is full (4K Bytes), the queued data will be sent. Zero means disable(factory default).

Service Mode- Virtual COM

In Virtual COM mode, you need to define the available port number, Idle timeout, Alive check, and Max. connections allowed from 1 to 5.

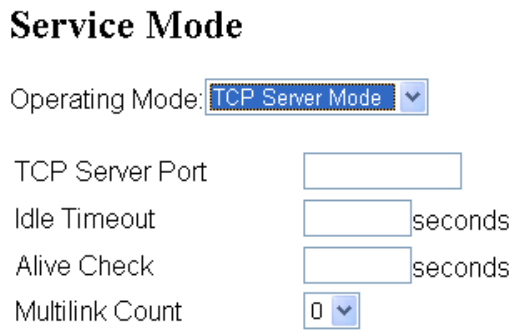


Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed and re-try for connection with other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

Alive Check: The JetPort device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

Service Mode- TCP Server

In TCP Server mode, you need to define the available port number, Idle timeout, Alive check, and Max. connections allowed from 1 to 5.

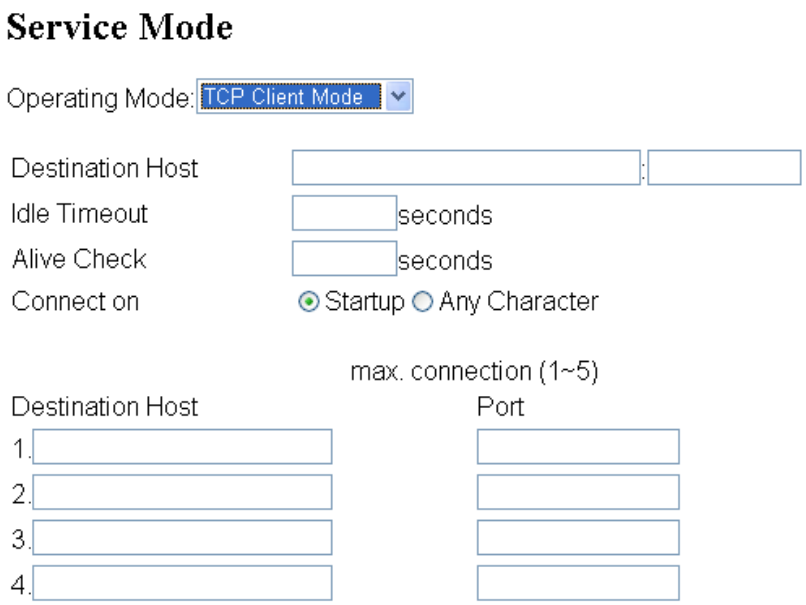


Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed and re-try for connection with other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

Alive Check: The JetPort device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

Service Mode- TCP Client

In TCP Client mode, you need to define the destination host IP and port number, Idle timeout, Alive check. To deploy multilink, specify up to 4 more hosts IP and Port number.



Idle Timeout: When serial port stops data transmission for a defined period of time (Idle Timeout), the connection will be closed and the port will be freed and re-try for connection with other hosts. Zero is disable this setting (default). If Multilink is configured, only the first host connection is effective for this setting.

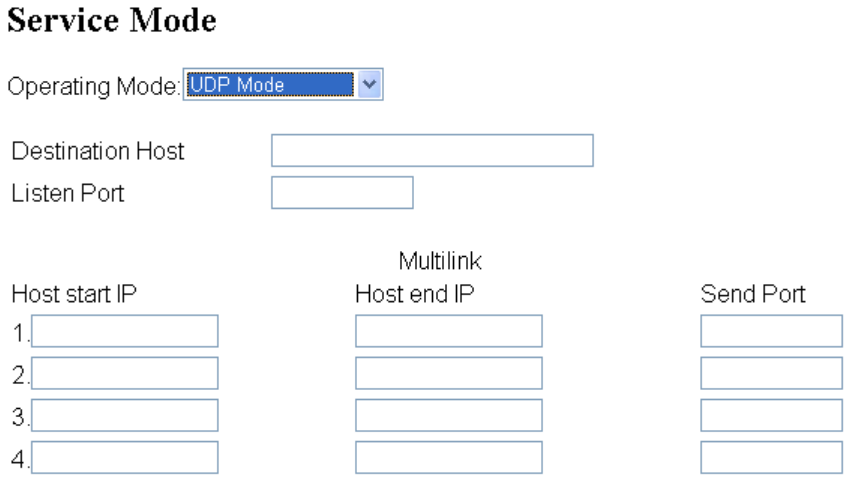
Alive Check: The JetPort device will send TCP alive check package in each defined time interval (Alive Check) to remote host to test the TCP connection. If the TCP connection is not alive, the connection will be closed and the port will be freed for other hosts. Zero is disable this setting (default).

Connect on Startup: The TCP Client will build TCP connection once the connected serial device is startup.
Connect on Any Character: The TCP Client will build TCP connection once the connected serial device starts to send data.

Service Mode- UDP

In UDP mode, you need to define the destination host IP and Local listen port number.

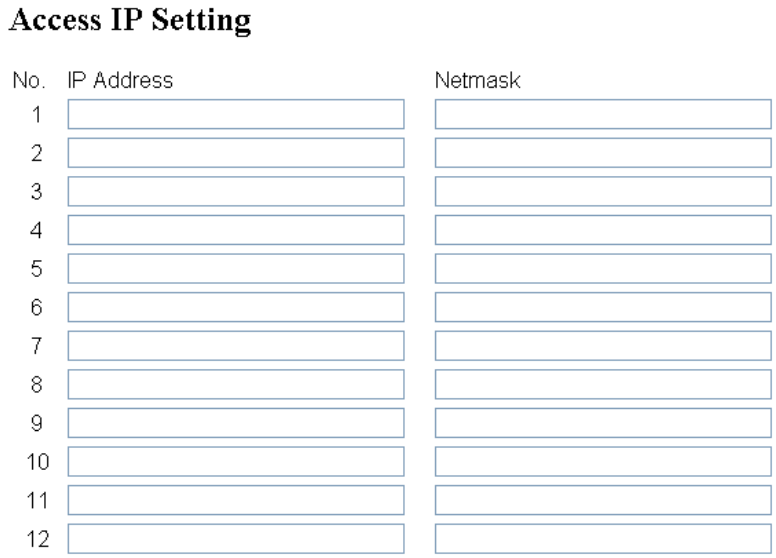
To create more destination hosts, specify the IP range of destination IP and send port number.



Access IP Table

The Access IP Table specifies the IP address and subnet that can access to the device. The access is based on IP and netmask combination.

If the access is open to all hosts, do NOT enable this function.



Event Notification

Specify the events that should be notified to the administrator. The events can be alarmed by means of email, SNMP trap, or system log.

Device Notification:

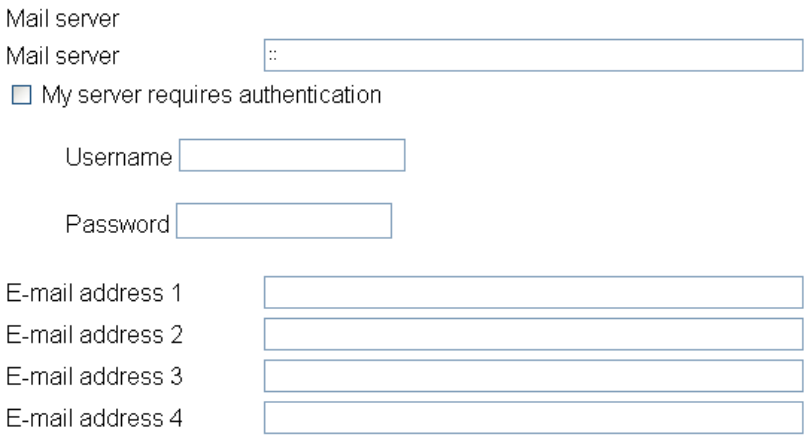
- Hardware Reset (Cold Start): Rebooting the JetPort will trigger the event
- Software Reset (Warm Start): Restarting the computer will trigger the event
- Login Failed: Using wrong password in console will trigger the event
- IP Changed: Changing network setting will trigger the event
- Password Changed: Changing the password will trigger the event
- Access IP Blocked: Report blocked IP addresses

Port Notification:

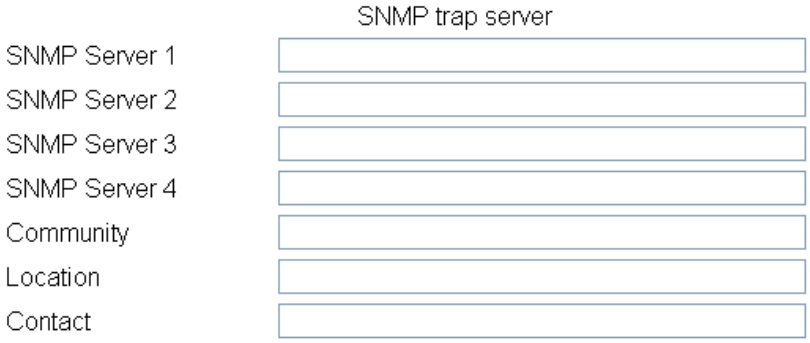
- DCD changed: When DCD (Data Carrier Detect) signal changes, indicating the modem connection status has changed, the event will be triggered.
- RI changed: When RI (Ring Indicator) signal changes, indicating the incoming of a call, the event will be triggered.
- DSR changed: When DSR (Data Set Ready) signal changes, indicating that the data communication equipment is powered off, the event will be triggered.
- CTS changed: When CTS (Clear To Send) signal changes, indicating that the transmission between computer and DCE can proceed.
- Port connected: In TCP Server Mode, when the device accepts an incoming TCP connection, this event will be trigger. In TCP Client Mode, when the device has connected to the remote host, this event will be trigger. In Virtual COM Mode, when Virtual COM is ready to use, this event will be trigger.
- Port disconnected: In TCP Server/Client Mode, when the device lost the TCP link, this event will be trigger. In Virtual COM Mode, When Virtual COM is not available, this event will be trigger.

Email and SNMP Trap Notification

Email Server configuration includes the mail server's IP address or domain. If the authentication is required, specify the username and password. There are 4 email addresses you can specify to receive the notification.



SNMP Trap configuration includes up to 4 Trap Servers. You need to at least fill in one Trap Server's IP or domain. The Community is also required information. Do not use the ";" in this column. Location and Contact is optional information.

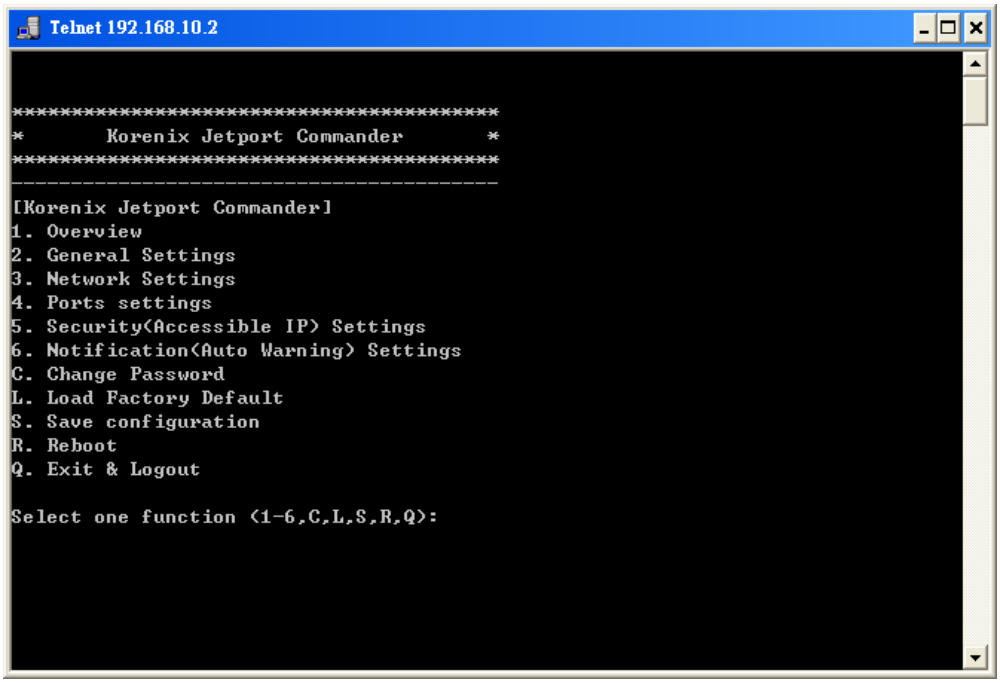


Save / Restart

Load Factory Default: Load default configuration except Network Settings.
Import Configuration: Retrieve saved configuration file to apply in the device.
Export Configuration: Save the current configuration into a file and save the file in current host.
Upgrade Firmware: Upgrade to new firmware

Telnet Console

Telnet the IP of JetPort, you will enter the Telnet console menu.



Configuration

Configure the device and port by pressing function number or the hinted initial.

Press “q” to exit the function.
Always press “a” to apply and save change after making a configuration.

A

SNMP MIB II and RS232 Like Support

Jetport 5201 has build-in SNMP agent that supports SNMP trap, RFC 1317 RS232 MIB and RFC1213 MIB-II. The following tables list SNMP variables implemented in Jetport 5201.

RFC1213 MIB-II supported SNMP variables

System MIB				
sysDescr	sysObjectID	sysUpTime	sysContact	sysName
sysLocation	sysORLastChange	sysORID	sysORDescr	sysORUpTime

Interface MIB				
ifNumber	ifIndex	ifDescr	ifType	ifMtu
ifSpeed	ifPhysAddress	ifAdminStatus	ifOperStatus	ifInOctets
ifInUcastPkts	ifInDiscards	ifInErrors	ifOutOctets	ifOutUcastPkts
ifOutDiscards	ifOutErrors	ifOutQLen	ifSpecific	

Address MIB				
atIfIndex	atPhysAddress	atNetAddress		

IP MIB				
ipForwarding	ipDefaultTTL	ipInReceives	ipInHdrErrors	ipInAddrErrors
ipForwDatagrams	ipInUnknownProtos	ipInDiscards	ipInDelivers	ipOutRequests
ipOutDiscards	ipOutNoRoutes	ipReasmTimeout.	ipReasmReqds	ipReasmOKs
ipReasmFails	ipFragOKs	ipFragFails	ipFragCreates	ipAdEntAddr
ipAdEntIfIndex	ipAdEntNetMask	ipAdEntBcastAddr	ipRouteDest	ipRouteIfIndex

ipRouteMetric1	ipRouteNextHop	ipRouteType	ipRouteProto	ipRouteMask
ipRouteInfo	ipNetToMediaIfIndex	ipNetToMediaPhysAddress	ipNetToMediaNetAddress	ipNetToMediaType
ipRoutingDiscards				

ICMP MIB				
icmpInMsgs	icmpInErrors	icmpInDestUnreachs	icmpInTimeExcds	icmpInParmProbs
icmpInSrcQuenchs	icmpInRedirects	icmpInEchos	icmpInEchoReps	icmpInTimestamps
icmpInTimestampReps	icmpInAddrMasks	icmpInAddrMaskReps	icmpOutMsgs	icmpOutErrors
icmpOutDestUnreachs	icmpOutTimeExcds	icmpOutParmProbs	icmpOutSrcQuenchs	icmpOutRedirects
icmpOutEchos	icmpOutEchoReps	icmpOutTimestamps	icmpOutTimestampReps	icmpOutAddrMasks
icmpOutAddrMaskReps				

TCP MIB				
tcpRtoAlgorithm	tcpRtoMin	tcpRtoMax	tcpMaxConn	tcpActiveOpens
tcpPassiveOpens	tcpAttemptFails	tcpEstabResets	tcpCurrEstab	tcpInSegs
tcpOutSegs	tcpRetransSegs	tcpConnState	tcpConnLocalAddress	tcpConnLocalPort
tcpConnRemAddress	tcpConnRemPort	tcpInErrs	tcpOutRsts	

UDP MIB				
udpInDatagrams	udpNoPorts	udpInErrors	udpOutDatagrams	udpLocalAddress
udpLocalPort				

SNMP MIB				
snmpInPkts	snmpOutPkts	snmpInBadVersions	snmpInBadCommunityNames	snmpInBadCommunityUses
snmpInASNParseErrs	snmpInTooBigs	snmpInNoSuchNames	snmpInBadValues	snmpInReadOnlys
snmpInGenErrs	snmpInTotalReqVars	snmpInTotalSetVars	snmpInGetRequests	snmpInGetNexts
snmpInSetRequests	snmpInGetResponses	snmpInTraps	snmpOutTooBigs	snmpOutNoSuchNames
snmpOutBadValues	snmpOutGenErrs	snmpOutGetRequests	snmpOutGetNexts	snmpOutSetRequests
snmpOutGetResponses	snmpOutTraps	snmpEnableAuthenTraps	snmpSilentDrops	snmpProxyDrops

RFC1317 RS232 supported SNMP variables

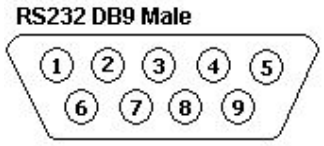
RS232 MIB				
rs232Number	rs232PortIndex	rs232PortType	rs232PortInSigNumber	rs232PortOutSigNumber

rs232PortInSpeed	rs232PortOutSpeed	rs232PortInFlowType	rs232PortOutFlowType	
rs232AsyncPortIndex	rs232AsyncPortBits	rs232AsyncPortStopBits	rs232AsyncPortParity	rs232AsyncPortAutobaud
rs232AsyncPortParityErrs	rs232AsyncPortFramingErrs	rs232AsyncPortOverrunErrs		
rs232InSigPortIndex	rs232InSigName	rs232InSigState	rs232InSigChanges	
rs232OutSigPortIndex	rs232OutSigName	rs232OutSigState	rs232OutSigChanges	

B

RS232 Pin Assignment

Pin No.	Name	Notes/Description
1	DCD	Data Carrier Detect
2	RD	Receive Data (RxD, Rx)
3	TD	Transmit Data (TxD, Tx)
4	DTR	Data Terminal Ready
5	SGND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicator



C

Revision History

Version	Description	Date
V1.0	The first version.	Mar. 2006
V1.1	Correct Serial Port LED color	Oct. 2008
V1.2	Remove Linux TTY driver	July 2009