



# **4-Port Wireless Serial Device Server**

**User's Manual**

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Before attempting to connect, operate or adjust this product, please save and read the User's Manual completely. The style of the product shown in this User's Manual may be different from the actual unit due to various models.

## **Safety Instructions**

Always read the safety instructions carefully:

- Keep this User's Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:
  - The equipment has been exposed to moisture.
  - The equipment has been dropped and damaged.
  - The equipment has obvious sign of breakage.
  - The equipment has not been working well or cannot get it to work according to the User's Manual.

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# Introduction

The serial server supports multiple serial ports and allows you to control RS232/422/485 serial devices over a TCP/IP based Ethernet. Both wire and wireless connection are supported. By specifying the IP Address and the TCP Port number, a host user can access different serial devices such as Serial Modems, Serial Thermometers, Magnetic Card Readers, Barcode Scanners, Data Acquisition Systems, POS Terminals, industrial PCs etc.. Besides, you can centralize serial device management and distribute the management to different users at the same time.

## Features

- WiFi interface support up to 54Mbps link speed
- Security mode: WEP/WPA/WPA2
- RS-232/422/485 mode selected by S/W
- 15KV ESD immunity to serial interface
- 3KV optical coupling isolation
- 9~36 VDC wide range power input
- Versatile operating mode supported, including RealCOM, TCP Server, TCP Client and UDP
- 10/100/1000 Mbps Ethernet port for LAN
- DIN-rail mountable

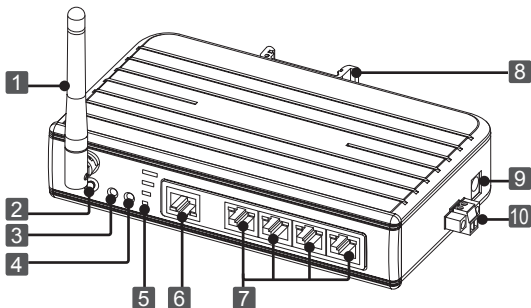
## **Package contents**

- Serial Device Server x1
- CD (Driver & User's Manual) x1
- Power adapter x1
- DIN mounting kit x1
- Screw x3
- RJ45 to DB9 Cable x4
- Power Terminal Connector x1

## **System requirement**

- IBM compatible computer
- Windows Vista<sup>®</sup>, Windows XP<sup>®</sup> 32/64-bit,  
Windows 2000<sup>®</sup>, Windows Server 2008<sup>®</sup> 32/64-bit
- 64 MB RAM or higher
- Pentium<sup>®</sup> 233 MHz or higher

# Product overview



- 1 WiFi antenna**
- 2 Reset button:** Presses to restore the factory default settings.
- 3 Link/Act:** ■ Lights green when connecting to an available network.  
■ Flashes green when the wireless data is transmitting.
- 4 Power indicator:** Lights up when the power is on.
- 5 Signal strength:** Displays the status of WiFi signal strength.
- 6 RJ-45 Ethernet connector:** Connects to an available LAN (Local area network)
- 7 RJ-45 connector:** Connects to RS232/422/485 devices. For more detailed pin assignment of RJ45, refer to **Pin assignment** chapter.
- 8 DIN mounting:** Attaches to a standard DIN-Rail.
- 9 5V3A DC Power jack**
- 10 9~36 VDC power terminal**

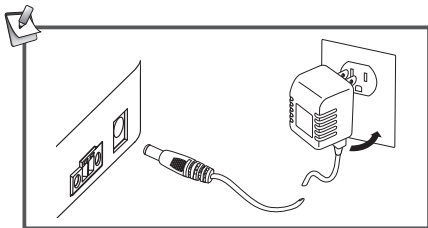
# Connection

## Power connection

To power the serial server, choose one of the below methods. Power LED lights up when the serial server's power is on.

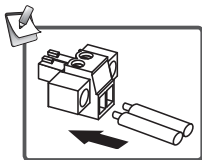
### DC-In

Plug the supplied power adapter into a wall outlet and the other end to the serial server's DC power jack.

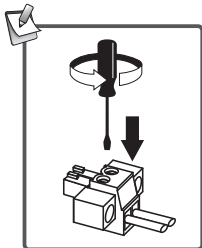


## Power cable

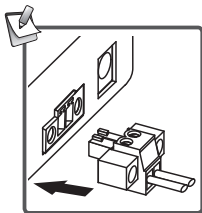
1. Insert the cable into the power terminal block.



2. Tighten the screw using screwdriver.



3. Plug the power terminal block into the serial server according to the connector's orientation.

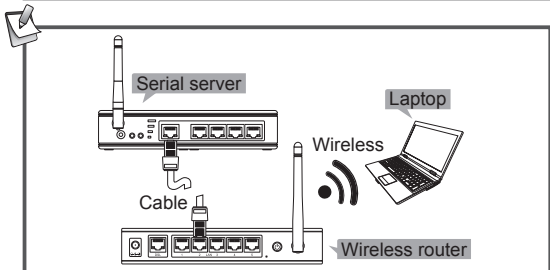
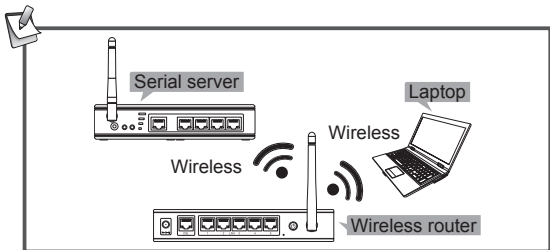




## Network connection

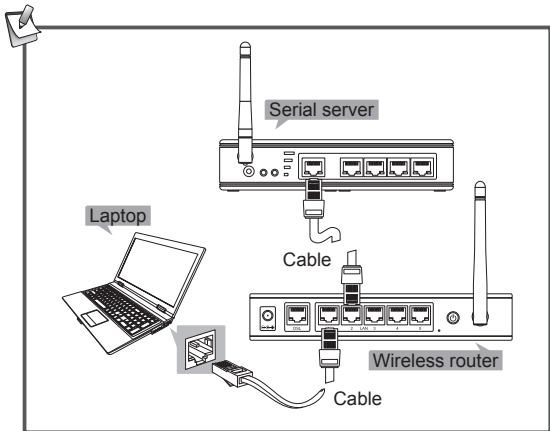
This serial server supports to connect an available LAN (Local Area Network) using wire or wireless. Select one of the following methods to connect the serial server. Note that the connection diagrams show below are examples only. The real applications may be different from the actual conditions.

### Wireless connection



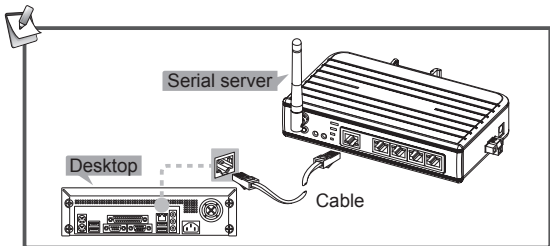
The device of router can be a DSL router, Ethernet Hub/Switch or 802.11x router/base station.

## Wire connection



## PC connection

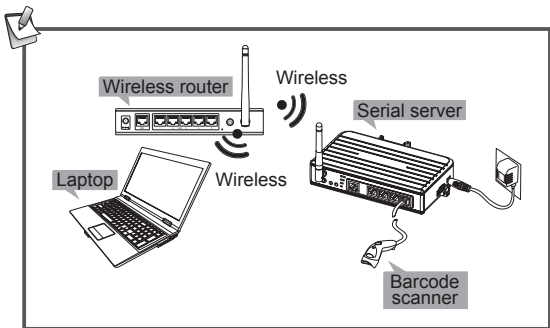
Connect the serial server to a computer using Ethernet cable directly if you do not have a network.



## Serial devices connection

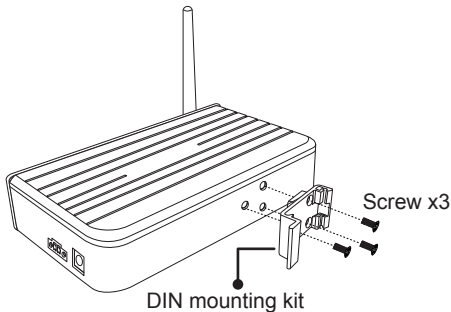
Connect serial device(s) to the serial server when the serial server has been connected to a LAN. The supported serial devices of this serial server are serial modems, serial thermometers, magnetic card readers, barcode scanners, data acquisition systems, POS terminals, industrial PCs etc..

**Note:** Install the serial device's drivers before connecting to the serial server is recommended.



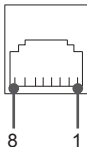
## DIN mounting kit installation

This serial server can be placed to a flat surface, mounted on a wall or attached to a standard DIN-Rail. Screw the DIN mount kit into the hub as the illustration below before mounting.



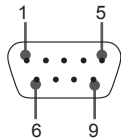
# Pin assignment

## RJ45 Pin assignment



Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DSR	RXD-	RXD-	---
2	RTS	RXD+	RXD+	---
3	GND	GND	GND	GND
4	TXD	---	---	---
5	RXD	---	---	---
6	DCD	TXD-	TXD-	Data-
7	CTS	---	---	---
8	DTR	TXD+	TXD+	Data+

## DB9 Pin assignment



Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxD-(A)	TxD-(A)	Data-(A)
2	RxD	---	---	---
3	TxD	---	---	---
4	DTR	TxD+(B)	TxD+(B)	Data+(B)
5	GND	GND	GND	---
6	DSR	RxD-(A)	RxD-(A)	---
7	RTS	RxD+(B)	RxD+(B)	---
8	CTS	---	---	---
9	---	---	---	---

# Using SEC (Serial-to-Ethernet Connector)

## Introduction

Serial to Ethernet Connector is an advanced software-based solution that allows you to share more than 255 serial port devices over network easily turning your computer into low-cost terminal server. Thus, any serial port device connected to your COM port could be accessed from anywhere in the world (via Internet or LAN) as if it is attached directly to the remote PC. When the attached serial port device sends communication data, it is actually transmitted over TCP/IP network and back from the network to your serial device. Serial to Ethernet Connector provides the ability to create several connection types for three main purposes:

- **Share serial port for incoming connections (Server)**

Server connection will be waiting for incoming client connections and actually will share local real or virtual serial port into network. Server connection provides an ability to connect many clients simultaneously and each connected client is able to transmit input/output serial data to local real or virtual serial port.

- **Connect serial port to Serial Device Server (Client)**

Creating client connection will initiate local real or virtual serial port data redirection to the remote server using TCP/IP protocol.

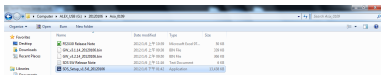
You have to do is specify remote server's IP address (or network name) and TCP port to connect to. Once connection is established, all data sent from remote serial port device, attached to the server, will be genuinely delivered to local serial port where it can be further processed.

- **Share serial port using UDP**



You can redirect input/output data from local real or virtual serial port using UDP/IP underlay protocol. Besides, you are able to broadcast all serial data to your local network.

# Driver installation

1. Double click **SDS\_Setup** in order to start installation process.



**Note:** This driver combines the utilities of **Serial to Ethernet Connector** and **Serial to Ethernet Toolkit**. Both utilities will be installed to the computer after running the installation.

2. Follow the on-screen instructions to complete the installation. Once the installation has been completed, Two shortcuts (  and  ) will appear on the desktop. To launch the utility, double-click the shortcut which created on the desktop. Alternatively, navigate the **Start** menu and locate the launcher in **Programs** submenu.

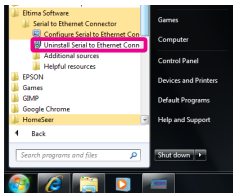
**Note:** Please install the utility before connecting the serial server to a computer.



# Uninstall the software

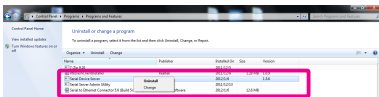
## Uninstall the Serial to Ethernet Connector

To uninstall the **Serial to Ethernet Connector**, click on **Uninstall Serial to Ethernet Connector** under **Ethernet Software** item in **Programs** submenu, and then follow the on-screen instructions.




## Uninstall the Serial to Ethernet Toolkit

1. To uninstall the **Serial to Ethernet Toolkit**, click **Control Panel** in **Programs** submenu.
2. Click **Uninstall a program** under **Program** > right click on Select **Serial Device Server** to bring up **Uninstall**.

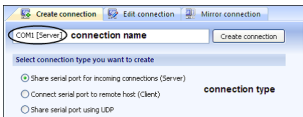


# Quick starting guide

This guide will take you through the process of establishing client-server connection over TCP/IP network. To launch the **Serial to Ethernet Connector**, double click the shortcut  on the desktop.

## Sharing a local serial port on PC

1. In **Create connection** tab choose the required connection type: Share serial port for incoming connections (Server). Also specify the name to identify this connection, for instance, COM1 [Server]



2. Select local serial port to be shared. For example, COM1



**Note:** A serial port name must not contain spaces inside.

3. Tick **Create as virtual serial port** checkbox to use a virtual serial port instead of a real one. The advantage of virtual serial ports technology is that you are not limited to the number of physical serial ports in a system, and thus you can free existing serial ports for other applications.

**Note:** A virtual serial port can have the same name as the existing physical COM port. But in this case it will be accessed instead of physical one.

4. Tick **Strict baud rate emulation** checkbox if you want to enable baud rate emulation, which permits virtual ports to work with the same speed as real ones.
5. Specify TCP port, which will be used in connection. Make sure this port is not blocked by firewall and is not used by other servers in your system (DNS, SMTP, IIS, etc.).

Select port type you want to create

Select Serial Port: COM1

port for sharing

Remote IP/Host name: localhost : 5000

✓ Create as virtual serial port

✓ Strict baudrate emulation

TCP port

6. Click **Create connection** button.

COM1 [Server]

Create connection

Select connection type you want to create

Share serial port for incoming connections (Server)

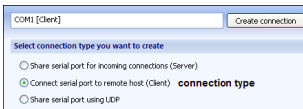
Connect serial port to remote host (Client)

Share serial port using UDP

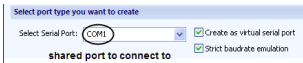
7. Now the shared serial port can be accessed from the Serial Device Server side (next page) with default settings.

# Connecting to a shared serial port from the serial device server

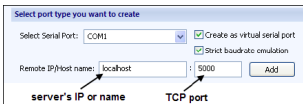
1. In **Create connection** tab choose the required connection type: Connect serial port to Serial Server Device. The name to identify this connection will be set automatically depending on the shared serial port, which participates in connection.



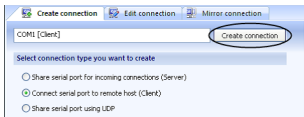
2. Specify the shared serial port number to connect to.



3. Also specify the remote server's IP or name, as well as TCP port, used in connection. Click **Add** button to add IP address to IP's list.



4. Click **Create connection** button.



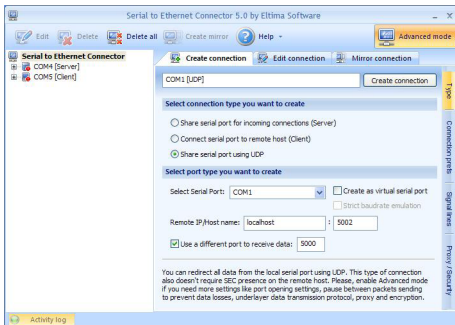
5. Now you are ready to start the communication process with default settings.

# Creating UDP Connecting

Serial to Ethernet Connector lets you establish UDP/IP connection between serial ports. UDP connection may come useful for streaming big chunks of data as well as for Mail, DNS, Finger and other services.

To create a connection, follow these instructions:

1. Switch to **Create connection** tab.
2. Specify connection name to identify this configuration. Default name is based on local serial port number, which participates in connection, and connection type in brackets.



3. Select connection type you want to create. In this case it is **Share serial port using UDP**.

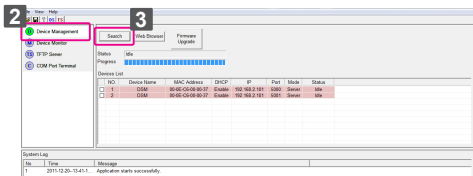
4. In **Select Serial Port** field choose local serial port which will participate in connection: either add it manually, or select one from the drop-down list.
5. Tick **Create as virtual serial port** option if you would like to use virtual serial ports instead of real ones.
6. Tick **Strict baud rate emulation** checkbox if you want to enable baud rate emulation. You can find more details about our virtual serial port and baud rate emulation technologies [here](#).
7. Specify IP address (or network name) of the remote end and port number to connect to. Make sure that the port numbers are the same at both ends and are not blocked by firewall.
8. You can also specify the port to receive the data, regardless of the port the data is sent to. It may be useful if you create UDP connection with several devices that have the same ports.
9. Finally, click **Create connection** button. Once connection is created, you can see it in Connections tree.
10. Open local serial port. You may use Windows HyperTerminal utility for this purpose. This step is necessary only if you want to verify whether the connection was created successfully.


11. Create UDP connection at the remote end. Repeat steps 1-10 listed above. Make sure that the port numbers are the same at both ends and are not blocked by firewall.
12. Now you are ready to start communication process with default settings. You can refer to Editing UDP connection section if you would like to edit a newly established connection.



# Serial to Ethernet Toolkit

## Search a Serial Device Server

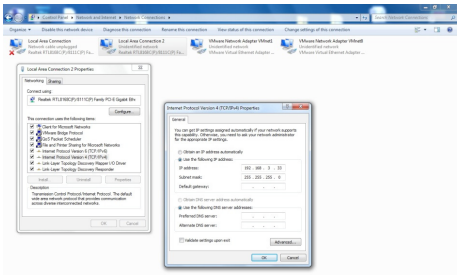


1. Double click the shortcut  on the desktop.
2. Connect a serial device server to the computer and then open the **Serial to Ethernet Toolkit**.
3. Click <**Device Management**> on the left window.
4. Click <**Search**> button on the right window.
5. All the searched devices will be listed on the **Device List** when the search procedure is finished.

# Web console

This Serial server supports the remote configuration using web console on the network. To use the web console, open a web browser (eg., Internet Explorer) and type the IP address which you have set in the **Network and Sharing Center** (string example of Windows 7®, the actual string is depending on your operating system).

**Note:** Configure the IP address to 192.168.3.X where the X is between 2 and 254. To set up your computer's IP address, refer to the operating system's instruction manual.

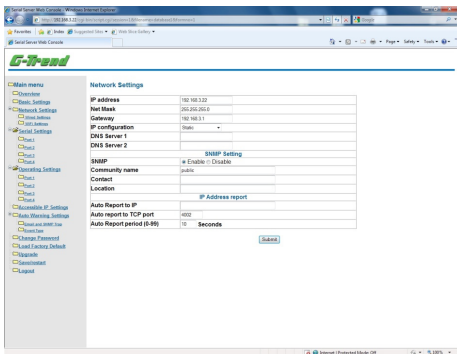


Login the web console, and then click **Submit**. By default, the password is **admin**.

Enter the password to login

Password:

# Network settings



Network settings are used to setup network parameters for serial server. User must assign a valid IP address to serial server. Network system administrator will provide you with an IP address and related settings for the network. The IP address must be unique within the network (otherwise, serial server will not have a valid connection to the network).

## **IP Address**

An IP address is a number assigned to a serial server. Computers use the IP address to identify and communicate with the device over the Network. Choose a proper IP address which is unique and valid in the network.

By default, the IP address is **192.168.3.22**

Default Net Mask will be **255.255.255.0**

Default Gateway is **192.168.3.1**

## **IP Configuration**

There are four possible IP Configuration modes, Static, DHCP, BOOTPM and DHCP/BOOTP respectively. These modes are located under the web console screen's IP configuration drop-down box In dynamic IP environments. The firmware will retry 3 times every 30 seconds until Network Settings are assigned by the DHCP or BOOTP server. The timeout for each try increases from 1 second, to 3 seconds, to 5 seconds. If the DHCP/BOOTP server is unavailable, the firmware will use the default IP Address, 192.168.3.22, Net mask, and Gateway for IP settings. The factory default is Static.

## **DNS Server 1/ DNS Server 2**

In order to use serial server's DNS feature, you need to set the IP address of the DNS server to be able to access the host with the Domain Name. Serial server provides DNS Server 1 and DNS Server 2 configuration items to configure the IP address of the DNS Server. DNS Server 2 is included for use when DNS Server 1 is unavailable. LAN server plays the role of DNS client. Functions that support domain name in serial server are Time Server IP Address, TCP Client-Destination IP Address, Mail Server, SNMP Trap IP Address, and IP Location Server.

## **SNMP Settings**

Enable or disable SNMP function. The factory default is **Enable**.

## **Community Name**

A community name is a plain-text password mechanism that is used to weakly authenticate queries to agents of managed Network Devices. The factory default is **Public**.

## **Contact**

The SNMP contact information usually includes an emergency contact name and telephone or pager number. The factory default is **NONE**.

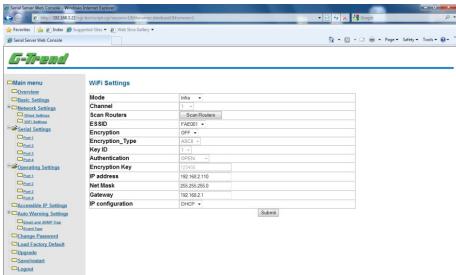
## **Location**

Specify the location string for SNMP agents such as serial server. This string is usually set to the street address where the serial server is physically located. The factory default is **NONE**.

## **IP address report**

When serial servers are used in a dynamic IP environment, users must spend more time with IP management tasks. For example, serial server works as a server (TCP or UDP), and the host, which acts as a client, must know the IP address of the server. If the DHCP server assigns a new IP address to the server; the host must take care of what happens when the IP changes. Serial servers help out by periodically reporting their IP address to the IP Location Server, in case the dynamic IP has changed. The parameters shown below are used to configure the Auto IP Report function. There are two ways to develop an Auto IP Report Server” to receive serial server’s Auto IP Report.

# WiFi settings



## Mode

- Infra: Connect via an access point
- Adhoc: Direct connect to a PC without an access point.

**Scan Routers:** Click <**Scan Routers**> to search the available wireless LAN(s), and then select a desired wireless LAN to join.

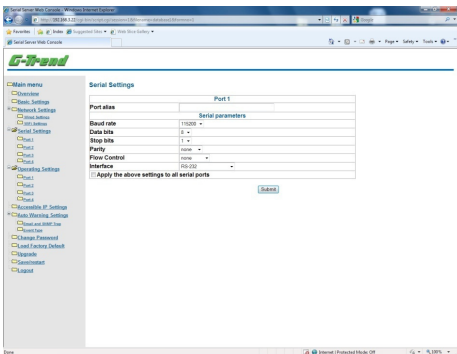
**IP configuration:** Enable the DHCP to get an IP address from the wireless router or disable to change the IP address, Subnet mask and Default Gateway.

**Encryption:** OFF and ON.

**Key ID:** Select a Key ID which you have set on the connected AP, and then enter the password. The serial server will detect the security mode automatically.

**Note:** The password you entered must be the same as configured on the AP.

# Serial settings



Serial Settings page is used to set serial port parameters and request for their status.

All of the items mentioned above will reflect real-time status. If its setting is override by some application setting, it will show the current running setting. To modify serial settings for a particular port, click on desired port number under Serial Settings. Those serial port parameters are meaningful only in multiple connection usage. When used in the single connection scenario, those setting will be override by application settings.



### **Port Alias**

Port alias is specially designed to allow easy identification of the aerial devices which are connected to serial server's aerial port. The factory default is **None** and is optional.

### **Baud rate**

Can be set from 110 bps to 921600 bps. The factory default is **115200** bps.

### **Data bits**

Data bits are 5,6,7,8. The factory default is **8**.

### **Stop bits**

Stop bits are 1 ,2. The factory default is **1**.

### **Parity**

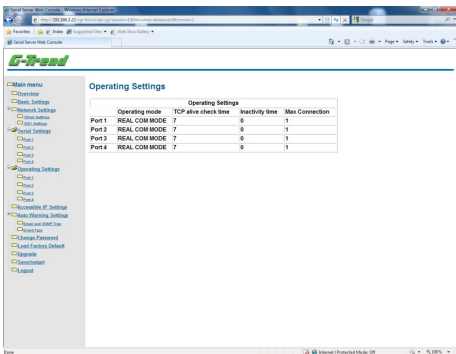
None, Even, Odd, Space, Mark. The factory default is **None**.

### **Flow control**

Supports None, RTS/CTS, DTR/DSR, Xon/ Xoff. The factory default is **None**.

**Interface:** RS-232, RS-485/422 (4-wire), RS-485(2-wire)

# Operating settings



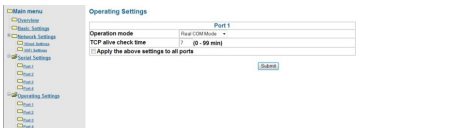
Click **Operating Settings** to display the operating settings for all of serial server ports. To configure the desired port, click from left window under **Operating Settings** item.

**Note:** When the Serial server is under REAL COM mode, the default TCP ports are as follows:

Port 1	1234
Port 2	1235
Port 3	1236
Port 4	1237

# Operation mode

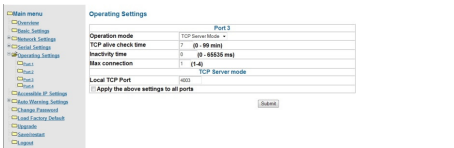
## Real COM mode



## TCP Alive check time

**1 to 99 min:** Serial server automatically closes TCP connection if there is no TCP activity for the given time. After the connection is closed, serial server starts listening for another Real COM driver's connection from another host. The factory default is **7** minutes.

## TCP server mode



**TCP Alive check time:** The factory default is **7** minutes.

- **0 min:** TCP connection is not closed due to an idle TCP connection.

- 1 to 99 min: Serial server automatically closes TCP connection if there is no TCP activity for the given time. After the connection is closed, serial server starts listening for another host's TCP connection.

**Inactivity time (0-65535 ms):** The factory default is **0** ms.

- 0 ms: TCP connection is not closed due to an idle Serial Line.
- 0-65535 ms: serial server automatically closes the TCP connection if there is no Serial data activity for the given time. After the connection is closed, Serial Server starts listening for another host's TCP connection. This parameter defines the maintenances status as Closed or Listen on the TCP connection. The connection is closed if there is no incoming or outgoing data through the serial port during the specific Inactivity time.

If the value of inactivity time is set to 0, the current TCP connection is maintained until there is connection close request. Although inactivity time is disabled, the serial server will check the connection status between the serial server and remote host by sending keep alive packets periodically. If the remote host does not respond to the packet, it assumes that the connection was closed down unintentionally. Serial server will then force the existing TCP connection to close. To prevent the unintended loss of data due to the session disconnected, it is highly recommended that this value is set large enough so that

the intended data transfer is completed. Max connection: The factory default is 1. Max Connection is usually used when the user needs to receive data from different hosts simultaneously. The factory default only allows 1 connection at a time.

- Max. Connection 1: Serial server only allows 1 host to open the TCP connection to the specific serial port.
- Max Connection 2 to 4: Allow 2 to 4 host's TCP connection request to open the specific serial server's serial port, at the same time. When multiple hosts establish a TCP connection to the specific serial port at the same time, serial server will duplicate the serial data and transmit to all of the hosts. Ethernet data is sent on a first-in-first-out basis to the serial port when data comes into serial server from the Ethernet interface.

## TCP client mode

Part 3	
Operation mode	TCP Client Mode
TCP alive check time	7 (0 - 99 min)
Inactivity time	0 (0 - 65535 ms)
Destination IP Address	
Destination IP Address 1	-4201
Destination IP Address 2	-4201
Destination IP Address 3	-4201
Destination IP Address 4	-4201
TCP Connect on	Startup Any Character
<input type="checkbox"/> Apply the above settings to all ports	

### TCP Alive check time

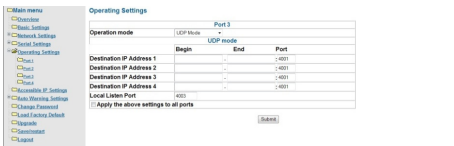
- 0 min: TCP connection is not closed due to an idle TCP connection.
- 1 to 99 min: Serial Server automatically closes TCP connection if there is no TCP activity for the given time.

### Inactivity time

- 0 ms: TCP connection is not closed due to an idle serial line.
- 0-65535 ms: Serial server automatically closes the TCP connection if there is no serial data activity for the given time. After the connection is closed, serial server starts listening for another host's TCP connection. This parameter defines the maintenance status as Closed or Listen on the TCP connection. The connection is closed if there is no incoming or outgoing data through the serial port during the specific Inactivity time. If the value of inactivity time is set to 0, the current TCP connection is maintained until there is a connection close request.

Although inactivity time is disabled, the serial server will check the connection status between the serial server and remote host by sending keep alive packets periodically. If the remote host does not respond to the packet, it assumes that the connection was closed down unintentionally. Serial server will then force the existing TCP connection to close.

## UDP mode



The screenshot shows the 'Operating Settings' for 'Port 3'. The 'Operation mode' is set to 'UDP Mode'. Below this, there is a table for 'UDP mode' with columns for 'Begin', 'End', and 'Port'. The table lists four destination IP addresses, each with a 'Begin' and 'End' field set to '-' and a 'Port' field set to '4001'. The 'Local Listen Port' is set to '4003'. There is a checkbox for 'Apply the above settings to all ports' and a 'Submit' button.

UDP mode		
Begin	End	Port
-	-	:4001
-	-	:4001
-	-	:4001
-	-	:4001

Local Listen Port: 4003

Apply the above settings to all ports

Submit

**Destination IP Address 1:** Setting destination IP address 1, allows serial server to connect actively to the remote host whose address is set by this parameter.

**Destination IP Address 2 / 3 / 4:** Destination IP address 2/3/4, allows serial server to connect actively to the remote host whose address is set by this parameter.

**Local Listen Port:** The UDP port that serial server listens to and those other devices must use to contact serial server. To avoid conflicts with well-known UDP ports, the default is set to 4001.

## Accessible IP settings

Serial server has an IP address based filtering method to control access to the serial server. Accessible IP Settings allows you to add or remove legal remote host IP addresses to prevent unauthorized access. Access to serial server is controlled by IP address. That is, if a host's IP address is in the accessible IP table, then the host will be allowed access to the serial server.

You can allow one of the following cases by setting the parameter in any of the 16 rules.

No.	Active the rule	IP Address	Netmask
1	<input type="checkbox"/>		
2	<input type="checkbox"/>		
3	<input type="checkbox"/>		
4	<input type="checkbox"/>		
5	<input type="checkbox"/>		
6	<input type="checkbox"/>		
7	<input type="checkbox"/>		
8	<input type="checkbox"/>		
9	<input type="checkbox"/>		
10	<input type="checkbox"/>		
11	<input type="checkbox"/>		
12	<input type="checkbox"/>		
13	<input type="checkbox"/>		
14	<input type="checkbox"/>		
15	<input type="checkbox"/>		
16	<input type="checkbox"/>		

- Only one host of specific IP address can access the serial server.  
→ Enter IP address/255.255.255.255  
(e.g., “192.168.1.1/ 255.255.255.255”).
- Hosts on the specific subnet can access the serial server.  
→ Enter “IP address/255.255.255.0”  
(e.g., “192.168.1.0/2 55.255.255.255”).
- Any Host can access the serial server.  
→ Disable this function. By default the accessible IPs list is disabled.



# Auto warning wettings

## E-mail and SNMP trap

Auto warning: Email and SNMP trap

Mail server

Mail server

My server requires authentication

User name

Password

From E-Mail address

E-Mail address 1

E-Mail address 2

E-Mail address 3

E-Mail address 4

SNMP trap server

SNMP trap server IP or domain name

Save

### <Mail server>

Enter the mail server IP address for the serial server to send auto warning mails to the mail server. If the mail server requires authentication, tick **My server requires authentication** check box and enter the User name / Password.

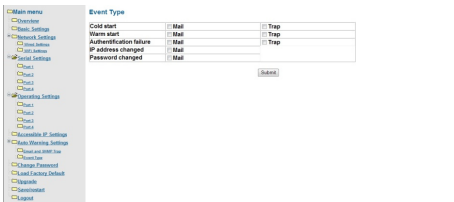
### <From E-mail address1/2/3/4>

Input the Email address of the recipient to receive auto warning mails.

### <SNMP trap server IP or domain name>

Input the SNMP trap server IP address or domain name for auto reporting.

# Event type



## <Cold start>

This refers to start the system from power off (contrast this with Warm start). When performing a cold start, serial server will automatically issue an auto warning message by e-mail, or send an SNMP trap after rebooting.

## <Warm start>

This refers to restart the computer without turning the power off. It's the opposite of cold start. When performing a warm start, serial server will automatically send an e-mail, or send an SNMP trap after rebooting.

## <Authentication failure>

The user inputs a wrong password from the console or administrator. When authentication failure occurs, serial server will immediately send an e-mail or send an SNMP trap.

### **<IP Address changed>**

The user has changed serial server's IP address. When the IP address changes, serial server will send an e-mail with the new IP address before serial server reboots.

If the serial server fails to send mail to the mail server after 15 seconds, serial server will be rebooting directly and abort the mail auto warning.

### **<Password changed>**

The user has changed serial server's password. When the password changes, serial server will send an e-mail with the password change notice before serial server reboots. If the serial server fails to send mail to the mail server after 15 seconds, serial server will be rebooting directly and abort the mail auto warning.

### **<Mail>**

This feature helps the administrator manage the serial server. Serial server sends mail to pre-defined mail boxes when the enabled events—such as cold start, warm start, authentication failure, etc.—occur. To configure this feature, click on the event type box.

### **<Trap>**

This feature helps the administrator manage the serial server. Serial server send SNMP Trap to a pre-defined SNMP Trap server when the enabled events—such as cold start, warm start, authentication failure, etc.—occur. To configure this feature, you need to click on the event type box.

# Change password

Input the Old password and New password to change the password. Leave the password boxes blank to erase the password.

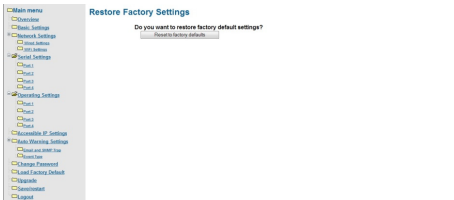
**Change Password**

Old password	
New password	
Confirm password	
Enable the Password	<input checked="" type="checkbox"/>

In this case, the serial server will not have password protection. If user forgets the password, the **ONLY** way to configure serial server is by using the Reset button on serial server's casing to Load Factory Default. (default password is **admin**)

# Load factory default

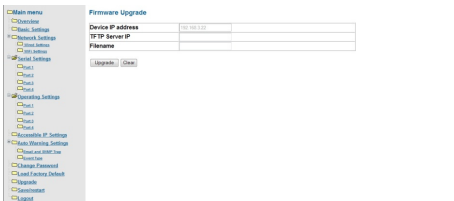
This function will reset all of serial server's settings to the factory default values.



The console must prompt the warning message to the users to notice them that previous settings will be lost.

# Upgrade

The Upgrade page enables user to upgrade firmware from web console.



The screenshot shows a web console interface for 'Firmware Upgrade'. On the left is a navigation menu with categories like 'Main menu', 'Device Info', 'Basic Settings', 'Network Settings', 'Serial Settings', 'Operating Settings', 'Accessible IP Settings', and 'Auto-Watching Settings'. The 'Upgrade' option is highlighted under 'Auto-Watching Settings'. The main content area is titled 'Firmware Upgrade' and contains a form with three input fields: 'Device IP address' (containing '192.168.1.222'), 'TFTP Server IP', and 'Filename'. Below the form are 'Upgrade' and 'Clear' buttons.

Firmware Upgrade	
Device IP address	192.168.1.222
TFTP Server IP	
Filename	

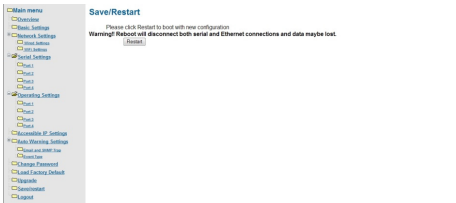
The upgrade option needs a TFTP Server program which needs to be run on the client PC from where the complete firmware Image is to be downloaded onto the serial server board.

The Device IP Address displays the IP address of the serial server.

Enter the TFTP server IP Address and the Filename of the update file, and then click **Upgrade**. The firmware will be completely upgraded.

# Save/Restart

This function is used to save current setting and automatic restart the serial server.



Click **Submit** to save and restart the serial server.

Warning!! Reboot will disconnect both serial and Ethernet connections and data maybe lost.

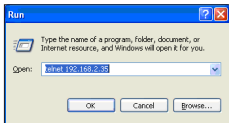
# Telnet console

Serial server implements a telnet server and can be invoked by making a telnet from remote PC.

1. Enable the **Telnet Console** function from **Windows Configuration Utility**.

2. Go to **Start Menu > Run**.

3. Run telnet from remote pc with the IP address of serial server.



## Main menu

1. As soon as the telnet console is opened, it comes with an authentication screen displaying the **Model Name**, **MAC Address**, **Serial Number** and the **Firmware** version.

2. Enter the **Password**.





3. The **Main menu** contains following options
- (1) **Basic Settings:** To configure basic settings like **Server Name, Time Zone, Real Time Clock, Time server IP address, Enable/Disable Web** and **Telnet Consoles**.
  - (2) **Network Settings:** To configure Network settings like **IP Address, Net mask, Gateway, IP Configuration, DNS, SNMP** and **Auto IP Report**.
  - (3) **Serial Settings:** To configure serial communication parameters like **Baud Rate, Data bits, Stop bits, Parity** and **Flow control**.
  - (4) **Operating Settings:** To configure operating settings like **Operating Mode, TCP Alive Check** and **Inactivity**.
  - (5) **Accessible IP Settings:** To configure accessible IP settings which allows you to add or remove Legal remote host IP addresses to prevent unauthorized access.
  - (6) **Auto Warning Settings:** To configure auto warning settings which sends the status messages to email id's and trap servers in order to warn or acknowledge the changes made in the serial server.
  - (7) **Monitor:** To monitor the serial line and sync settings in order to know the current status of serial server.

- (8) **Ping:** To test whether a particular host is reachable across an IP network.
- (9) **Password Settings:** To configure password settings like **Enable / Disable Password** or giving new password to the serial server.
- (a) **Load Factory Defaults:** To set the serial server to factory defaults.
- (v) **View Settings:** To view all the settings made in the serial server.
- (s) **Save/Restart:** To give soft restart.
- (q) **Quit:** To quit from the telnet console.

## 1. Basic settings

### << Main Menu >>

Type <1> and then press <Enter> on **Main Menu** screen to access **Basic settings** screen.

```
<< Main Menu ->Basic Settings >>
(1) Server Name
(2) Time Zone
(3) Local Time
(4) Time Server
(5) Web Console
(6) Telnet console
(v) View Settings
(q) Back to main Menu
key in your selection.
```

## <<Main Menu -->Basic settings >>

1-1. Type <1> and set the **Server Name**.

```
Key in your selection:1
Server Name:
Enter new Server name: Serials
```

Note that the **Server Name** should not be more than 7 characters and no space should be allowed between characters.

1-2. Type <2> to set the **Time zone** for the serial server.

```
(0) (GMT-12:00) Kwajalein
(1) (GMT-11:00) Wakey Island, Samoa
(2) (GMT-10:00) Hawaii
(3) (GMT-09:00) Alaska
(4) (GMT-08:00) Pacific Time(USA & Canada)
(5) (GMT-07:00) Arizona
(6) (GMT-07:00) Mountain Time(USA & Canada)
(7) (GMT-06:00) Mexico
(8) (GMT-05:00) Central Time(USA & Canada)
(9) (GMT-05:00) Indiana East, Colombia, Panama
(a) (GMT-05:00) Eastern Time (USA & Canada)
(b) (GMT-04:30) Bolivia, Venezuela
(c) (GMT-04:00) Atlantic Time(Canada), Brazil west
(d) (GMT-03:30) Newfoundland
(e) (GMT-03:00) Guyana
(f) (GMT-03:00) Brazil East, Greenland
(g) (GMT-02:00) Mid-Atlantic
(h) (GMT-01:00) Azores
(i) (GMT)Gambia, Liberia, Morocco
(j) (GMT)Greenwich mean time
(n) Next Page
Enter Your Selection:
```

Select the **Time zone** for the serial server from the list displayed. Enter your selection 0-9 or a-j to set the **Time Zone** or type <n> to go to next page of **Time zone** screen and press <Enter>.

```
(0) (GMT)ing land
(1) (GMT+01:00) Tunisia
(2) (GMT+01:00) France, Germany, Italy
(3) (GMT+02:00) South Africa
(4) (GMT+02:00) Greece, Ukraine, Romania, Turkey
(5) (GMT+03:00) Iraq, Jordan, Kuwait
(6) (GMT+04:00) Armenia
(7) (GMT+05:30) India
(8) (GMT+06:00) Bangladesh, Russia
(9) (GMT+07:00) Thailand, Russia
(a) (GMT+08:00) China, Hong Kong, Australia Western
(b) (GMT+08:00) Singapore, Taiwan, Russia
(c) (GMT+09:00) Japan, Korea
(d) (GMT+10:00) Guam, Russia
(e) (GMT+10:00) Australia
(f) (GMT+11:00) Solomon Islands
(g) (GMT+12:00) Fiji
(h) (GMT+12:00) New Zealand
(n) Previous Page
Enter Your Selection: _
```

- 1-3. Type <3> to set the **Local time** and enter the **Year, Month, Day, Hours, Minutes** and **Seconds** for the local time information.

```
Key In your selection:3
Year(yyyy):2008
Month(mm):07
Date(dd):04
Hour(hh):09
Minute(mm):28
Second(ss):30
```

- 1-4. Type <4> to set the **Time server** for the serial server. Enter the IP address of the **Time Server** which you want to synchronize in time with the serial server.

```
Time Server :
Enter Time Server: 192.168.2.36
Press Any Key To Continue
```

- 1-5. Type <5> to access the Web console screen and type the number 0 or 1 to **Disable** or **Enable** the web console. (Web console was enabled by default).

```
Key In your selection:5
Web Console :enable
(0)Disable
(1)Enable
Key In Your Selection:
```

- 1-6. Type <6> to access the **Telnet console** screen and type the number to **Disable** or **Enable** the telnet console. (Telnet console was enabled by default).

```
key in your selection:6
Telnet Console :enable
(0)Disable
(1)enable
key in your selection:
```

- 1-7. Type <V> to view the **Basic Settings** applied to the serial server, and then press <Enter>.

```
key in your selection:v
Server Name      :Serials
Time Zone       : (GMT+05:30) India
Local Time      :Fri Jul 4 09:37:08 UTC 2008
Time Server     :
Web Console     :enable
Telnet Console  :enable
Press Any Key To Continue
```

- 1-8. Type <m> to go back to the **Main Menu**. If any option in **Basic Settings** page was configured, telnet console will ask to save **Settings**.

```
key in your selection:m
save change ?
1 Yes
0 No
```

- 1-9. Type <1> to save changes or type <0> to quit without saving.

## 2. Network settings

<< Main Menu >>

Type <2> and then press <Enter> on the **Main Menu** to access network settings screen.

```
<< Main Menu -->Network Settings >>
(1) IP Address
(2) Netmask
(3) Gateway
(4) IP Configuration
(5) DNS Server 1
(6) DNS Server 2
(7) SNMP
(8) SNMP Community Name
(9) SNMP Contact
(a) SNMP Location
(b) Auto IP report to IP
(c) Auto IP report to TCP port
(d) Auto IP report Period
(v) View Settings
(m) Back to Main Menu
Key in your selection:
```

<< Main Menu -->Network settings >>

2-1. Type <1/2/3> to change the settings of **IP address / Net mask / Gateway** of serial server respectively.

```
Key in your selection:1
Enter The IP Address: 192.168.2.35
```

```
Key in your selection:2
Enter The Netmask :
255.255.255.0
255.255.255.0_
```

```
Key in your selection:3
Enter The Gateway :192.168.2.1
192.168.2.1
```

2-2. Type <4> to set IP configuration, and then type the number to set the **IP Configuration**.

```
Key in your selection:4
IP configuration :static
(0) Static
(1) DHCP
(2) DHCP/BOOTP
(3) BOOTP
Key in your selection:_
```

2-3. Type <5/6> to set **DNS 1 / DNS 2** servers. Give the **IP Addresses** of the **DNS Servers**.

```
key in your selection:5
DNS Server 1:
192.168.200.55_
```

```
key in your selection:6
DNS Server 2:
192.168.200.55
```

2-4. Type <7> to **Disable** or **Enable** the **SNMP**.

```
key in your selection:7
SNMP:(enable)
(0) Disable
(1) Enable
key in your selection:1
```

2-5. Type <8> to set **SNMP Community Name**. Give any name. By default it is **Public**.

```
key in your selection:
8
SNMP Community Name:(public)
Enter new Community Name: public_
```

2-6. Type <9> to set **SNMP** contact. Give any name.

```
key in your selection:9
SNMP Contact:()
Enter new SNMP Contact: aa_
```

2-7. Type <a> to set **SNMP** location.

```
key in your selection:a
SNMP Location:()
Enter new SNMP Location: bb
```

2-8. Type <b> to set **Auto IP Report**. Give the IP address of the client PC to which the serial server has to give the auto IP report.

```
Key in your selection:b
Auto Report to IP:( )
192.168.2.36
```

2-9. Type <c> to set **Auto IP report** to TCP port. Give the **TCP Port No.** of the client PC to which the serial server has to give the auto IP report. By default its value is 4002.

```
Key in your selection:c
Auto IP report to TCP port:(4002)
4002_
```

2-10. Type <d> to set **Auto IP report period** <0-99 secs>. By default its value is 10 secs.

```
Key in your selection:d
Auto IP Report period(seconds):(10)
10_
```

2-11. Type <v> to view the settings, and then press <Enter>.

```
Key in your selection:v
IP Address          :192.168.2.35
Net Mask            :255.255.255.0
Gateway             :192.168.2.1
IP Configuration is :Static
DNS Server 1        :192.168.200.55
DNS Server 2        :192.168.200.55
SNMP                :enable
SNMP community name :public
SNMP contact        :aa
SNMP location       :bb
Auto IP report to IP :192.168.2.36
Auto IP report to TCP port :4002
Auto IP report period(seconds):10
Press Any Key to Continue
```

2-12. Type <m> to go back to the previous menu, and then press <Enter>. If any option in **Network Settings** page was configured, telnet console will ask to save **Settings**. Type <1> to save changes or type <0> to quit without saving.



### 3. Serial settings

#### << Main Menu >>

Type <3> and then press <Enter> on the **Main Menu** to access serial settings screen.

```
<< Main Menu ->Serial settings >>
(1) Port 1
(2) Port 2
(3) Port 3
(4) Port 4
(e) Back to main menu
Key in your selection: 1
```

#### << Main Menu -- >Serial settings >>

Type <1/2/3/.....> and then press <Enter> to set the serial settings for the ports 1/2/3/..... respectively. The serial port settings has the menu shown below:

```
<< Main Menu->Serial settings->Port 1 >>
(1) Port alias
(2) Baud rate
(3) Data bits
(4) Stop bits
(5) Parity
(6) Flow control
(7) Interface
(8) Apply to all ports
(v) View settings
(m) Back to main menu
Key in your selection:
```

#### <<Main Menu -- >Serial settings -- > Port 1/2/3.....>>

3-1. Type <1> to set the **Port Alias**.

```
Key in your selection: 1
Port Alias :
Enter Port Alias name: COMs
```

Note that **Port Alias** should not be more than 5 characters and no space should be allowed between characters.

3-2. Type <2> to access the **Baud rate** screen, and type the number to set **Baud rate**.

```
Key in your selection:2
Baud_Rate is115200
(0) 110
(1) 300
(2) 600
(3) 1200
(4) 2400
(5) 4800
(6) 9600
(7) 19200
(8) 38400
(9) 57600
(A) 115200
(a) 230400
(C) 460800
(D) 921600
Key in your selection:
```

3-3. Type <3> to access the **Data bits** screen, and type the number to set the **Data bits**.

```
Key in your selection:3
Data Bits :8
(0) 5
(1) 6
(2) 7
(3) 8
Key in your selection:
```

3-4. Type <4> to access the **Stop bits** screen, and type the number to set the **Stop bits**.

```
Key in your selection:4
Stop Bits :1
(0) 1
(1) 2
Key in your selection:
```

3-5. Type <5> to access the **Parity** screen, and type the number to set the **Parity**.

```
Key in your selection:5
Parity :None
(0) None
(1) Odd
(2) Even
(3) Mark
(4) Space
Key in your selection:
```

3-6. Type <6> to access **Flow control** screen, type the number to set the **Flow control**.

```
Key in your selection:6
Flow Control is :XON/XOFF
(0) None
(1) XON/XOFF
(2) Hardware
Key in your selection:_
```

3-7. Type <7> to display the Interface.

```
interface: RS-232
(1) RS-232
(2) RS-485/RS-422 4 Wire
(3) RS-485 2 Wire
Key in your selection:
```

Note that this model supports only RS232/RS-422/RS-485 Interface.

3-8. Type <8> to configure settings Apply to all ports.

```
Key in your selection:8
Press Any Key To Continue
```

3-9. Type <v> to view the settings of the Port.

```
Key in your selection:v
Port 1 COMs
Baud rate :460800
Data Bits :8
Parity :None
Stop Bits :1
Flow control :Xon/Xoff
Interface :RS-232
Press Any Key To Continue
```

3-10. Type <m> to go back to the previous menu. If any option in **Serial Port Settings** page was configured,

telnet console will ask to save settings. Type <1> to save changes or type <0> to quit without saving. Again type <m> to go back to **Main Menu**.

## 4. Operating settings

### <<Main Menu >>

Type <4> and then press <Enter> on the **Main Menu** to access operating settings screen.

```
<< Main Menu->Operating settings >>
(1) Port 1
(2) Port 2
(3) Port 3
(4) Port 4
(m) Back to main menu
Key in your selection: _
```

### <<Main Menu -- >Operating settings >>

Type <1/2/3/.....> to set the operating settings for the respective ports 1/2/3/....., and then press <Enter>.

```
<< Main Menu->Operating settings->Port 1 >>
(1) Operating mode
(2) TCP alive check time
(3) Apply to all ports
(v) View settings
(m) Back to main menu
Key in your selection: _
```

### <<Main Menu -- >Operating settings -- > Port 1/2/3/.... >>

Type <1> to access the **Operating mode** of port, and type number to set the operating mode.

```
<< Main Menu->Operating settings->Port 1 >>
Operating Mode:      Real con Mode
(0) Real GM Mode
(1) TCP Server Mode
(2) TCP Client Mode
(3) UDP Client/Server Mode
Key in your selection:
```

## 4-0. Real com mode

1. Real com mode is set with "0".... Following screen appears while entering into **Real Com Mode**.

```
<< Main Menu->Operating settings->Port 1 >>
(1) Operating mode
(2) TCP alive check time
(3) Apply to all ports
(4) View settings
(5) Back to main menu
key in your selection:
```

By default, operating mode for all ports is **Real Com Mode**.

2. Type <2> to set **TCP Alive check time** from the range (0-99 min). By default its value is 7 mins.

```
key in your selection:2
TCP alive check time(0-99min): (7)
7
```

3. Type <3> to configure settings apply to all ports.

```
key in your selection:3
Set Apply to allport success
Press Any Key To Continue
```

4. Type <v> to view the settings made in Real Com mode as below.

```
key in your selection:v
Port 1
TCP alive check time :7
Press Any Key To continue
```

5. Type <m> to go back to the previous screen. If any option in **Operating Port Settings** page was configured, telnet console will ask to save settings. Type <1> to save changes or Type <0> to quit without saving.

## 4-1. TCP server mode

1. Real com mode is set with "1"... Following screen appears while entering into **TCP Server Mode**.

```
<< Main Menu->Operating settings->Port 1 >>
(1) Operating mode
(2) TCP alive check time
(3) Inactivity Time
(4) Max Connection
(5) Local TCP Port
(6) Apply to all ports
(y) View settings
(m) Back to main menu
Key in your selection:
```

2. Type <2> to set TCP Alive check time from the range (0-99 min). By default its value is 7 mins.

```
Key in your selection:2
TCP alive check time(0-99min): (7)
```

3. Type <3> to set Inactivity time from the range (0-65535 ms). By default its value is 0 ms.

```
Key in your selection:3
Inactivity Time (0-65535ms):(0)
0
```

4. Type <4> to set the Max connection from the range (1-4). By default its value is 1.

```
Key in your selection:4
Max connection(1-4): (1)
1
```

Note that the **Real Com Mode** only 1 connection per port is allowed at a time, for other modes max connection setting applies.

5. Type <5> to set the **Local TCP Port**. By default its value is 4001.

```
Key in your selection:
5
Local TCP Port (0-65535):(4001)
4001
```

6. Type <a> to configure settings apply to all ports.

```
Key in your selection:a
Set Apply to allport success
Press Any Key To Continue
```

7. Type <v> to view settings made in **TCP Server Mode** as below.

```
Key in your selection:v
Port 1 TCP Server Mode
TCP alive check time      :7
Inactivity Time           :0
Max Connection            :1
Local TCP PORT            :4001
Press Any Key To Continue
```

8. Type <m> to go back to previous screen. If any option in **Operating Port Settings** page was configured, Telnet Console will ask to save settings. Type <1> to save changes or type <0> to quit without saving.

## 4-2 TCP Client Mode

1. Real com mode is set with “2”.... Following screen appears while entering into **TCP Server Mode**.

```
<< Main Menu->Operating settings->Port 1 >>
(1) Operating mode
(2) TCP alive check time
(3) Inactivity Time
(4) Destination IP Address 1
(5) Destination Port 1
(6) Destination IP Address 2
(7) Destination Port 2
(8) Destination IP Address 3
(9) Destination Port 3
(a) Destination IP Address 4
(b) Destination Port 4
(c) TCP Connect ON
(d) Apply to all ports
(v) View settings
(n) Back to main menu
Key in your selection: 2
```

2. Type <2> to set **TCP Alive check time** from the range (0-99 min). By default its value is 7 mins.

```
Key in your selection:2
TCP alive check time(0-99min): (7)
_
```

3. Type <3> to set **Inactivity time** from the range (0-65535 ms). By default its value is 0 ms.

```
Key in your selection:3
Inactivity Time (0-65535ms):(0)
0
```

4. Type <4 / 6 / 8 / a> to set the **Destination IP Address 1 / 2 / 3 / 4**.

```
Key in your selection:4
Destination IP Address 1 :(0)
192.168.2.36_
```



5. Type **<5 / 7 / 9 / b>** to set the **Destination Port 1 / 2 / 3 / 4** from the range (0-65535). By default its value is 4001.

```
Key in your selection:5
Destination Port 1 (1-65535):(4001)
4001_
```

6. Type **<c>** to set the **TCP Connect ON Mode**. Type **<0>** to select **Start up** mode or Type **<1>** to select **Any Character** mode. By default the **Connect ON Mode** is **Start up**.

```
Key in your selection:c
TCP Connect ON: (startup)
(0) startup
(1) Any Character
```

7. Type **<d>** to configure settings apply to all ports.

```
Key in your selection:d
Set Apply to allport success
Press Any Key To Continue
```

8. Type **<v>** to view settings made in **TCP Client Mode** as below.

```
Key in your selection:v
Port 2 TCP Client Mode
TCP alive check time : 7
Inactivity Time : 10
Destination IP Address 1 :192.168.2.36
Destination Port 1 :4001
Destination IP Address 2 :192.168.2.37
Destination Port 2 :4001
Destination IP Address 3 :192.168.2.38
Destination Port 3 :4001
Destination IP Address 4 :192.168.2.39
Destination Port 4 :4001
TCP Connect ON :*startup
Press Any Key To Continue
```

9. Type **<m>** to go back to previous screen. If any option in **Operating Port Settings** page was configured, telnet console will ask to save settings. Type **<1>** to save changes or type **<0>** to quit without saving.

## 4-3 UDP Client/Server Mode

1. Real com mode is set with "3"... Following screen appears while entering into **UDP Client/Server Mode**.

```
<< Main Menu->operating settings->Port 1 >>
(1) operating mode
(2) Destination IP Begin Address 1
(3) Destination IP End Address 1
(4) Destination Port 1
(5) Destination IP Begin Address 2
(6) Destination IP End Address 2
(7) Destination Port 2
(8) Destination IP Begin Address 3
(9) Destination IP End Address 3
(a) Destination Port 3
(b) Destination IP Begin Address 4
(c) Destination IP End Address 4
(d) Destination Port 4
(e) Local Listen Port
(f) Apply to all ports
(v) View settings
(m) back to main menu
Key in your selection:
```

2. Type <2 / 5 / 8 / b> to set **Destination IP End Address 1 / 2 / 3 / 4**.

```
Key in your selection:2
Destination IP Begin Address 1 :(
192.168.2.36
```

3. Type <3 / 6 / 9 / c> to set **Destination IP End Address 1 / 2 / 3 / 4**.

```
Key in your selection:3
Destination IP End Address 1 :(
192.168.2.36
```

4. Type <4 / 7 / a / d> to set **Destination Port 1 / 2 / 3 / 4** from the range (0-65535). By default its value is 4001.

```
Key in your selection:4
Destination Port 1 (1-65535):(4001)
4001
```

5. Type <e> to set Local Listen Port from the range (0-65535). By default its value is 4001.

```
key in your selection:e
Local Listen Port (1-65535):(4001)
4001
```

6. Type <f> to configure settings apply to all ports.

```
key in your selection:f
Set Apply to allport success
Press Any Key To Continue
```

7. Type <v> to view the settings made to **UDP Client/Server Mode** as below.

```
key in your selection:v
Port 1 UDP Client Server Mode
Destination IP Begin Address 1 :192.168.2.36
Destination IP End Address 1 :192.168.2.36
Destination Port 1 :4001
Destination IP Begin Address 2 :192.168.2.37
Destination IP End Address 2 :192.168.2.37
Destination Port 2 :4001
Destination IP Begin Address 3 :192.168.2.38
Destination IP End Address 3 :192.168.2.38
Destination Port 3 :4001
Destination IP Begin Address 4 :192.168.2.39
Destination IP End Address 4 :192.168.2.39
Destination Port 4 :4001
Local Listen Port :4001
Press Any Key To Continue
```

8. Type <m> to go back to the previous screen. If any option in **Operating Port Settings** page was configured, Telnet Console will ask to save Settings. Type <1> to save changes or Type <0> to quit without saving. Again type <m> to go back to **Main Menu**.

## 5. Accessible IP settings

### << Main Menu >>

Type <5> on the **Main Menu**, and then press <Enter> to access **Accessible IP settings** page.

```
<< Main Menu->Accessible IP settings >>
(0) Enable the accessible IP list
(1) Rule 1
(2) Rule 2
(3) Rule 3
(4) Rule 4
(v) View settings
(n) Back to main menu
Key in your selection:~
```

### <<Main Menu -->Accessible IP Settings >>

1. Type <0> to **Enable Accessible IP List**. Type <1> to enable or type <0> to disable.

```
Key in your selection:0
Enable the accessible IP list :disable
(enable1/disable0)
```

2. Type <1~g> to activate the rules 1~g. To activate the rules, type 1 to enable or type <0> to disable. Then type the **IP address** and **Net Mask** on each rule to allow the authorised clients in order to access serial server.

```
Key in your selection:1
Activate the rule
(0) disable
(1) enable
Key in your selection:1
IP Address:192.168.2.96
Set IP Address Success
Net Mask:255.255.255.0
Set netmask success
Press Any Key To Continue
```

3. Type <v> to view the settings made on **Accessible IP Settings** page.

```
key in your selection:
Enable the accessible IP list : enable
rule 1 enable 192.168.2.24 255.255.255.0
rule 2 disable
rule 3 disable
rule 4 disable
rule 5 disable
rule 6 disable
rule 7 disable
rule 8 disable
rule 9 disable
rule 10 disable
rule 11 disable
rule 12 disable
rule 13 disable
rule 14 disable
rule 15 disable
rule 16 disable
press any key to continue
```

4. Refer the following table for more details about the configuration example.

Allowable Hosts	Input format
Any host	Disable
192.168.2.246	192.168.2.246 / 255.255.255.255
192.168.2.1 to 192.168.2.254	192.168.2.0 / 255.255.255.0
192.168.0.1 to 192.168.255.254	192.168.0.0 / 255.255.0.0
192.168.2.1 to 192.168.2.128	192.168.2.0 / 255.255.255.128
192.168.2.129 to 192.168.2.254	192.168.2.128 / 255.255.255.128

5. Type <m> to go back to the previous menu. If any rule in **Accessible IP Settings** page was configured, telnet console will ask to save settings. Type <1> to save changes or <0> quit without saving.

## 6. Auto warning settings

### << Main Menu >>

Type <6> on the **Main Menu**, and then press <Enter> to access **Auto warning settings** page.

```
<< Main Menu->Auto warning settings >>
(1) Email and SNMP trap
(2) Event type
(m) Back to main menu
Key in your selection:
```

### << Main Menu -- >Auto warning settings>>

#### 6-1 Email and SNMP trap

Type <1> to access **Email and SNMP trap**.

```
<< Main Menu->Auto warning settings->Email and SNMP >>
(1) Mail server
(2) My server requires authentication
(3) From account address
(4) Email address 1
(5) Email address 2
(6) Email address 3
(7) Email address 4
(8) SNMP trap server or IP or domain name
(9) View settings
(m) Back to main menu
Key in your selection:
```

### << Main Menu -- >Auto warning settings -- >Email and SNMP Trap >>

1. Type <1> to set the **Mail server**. Give the IP address of the mail server.

```
Key in your selection:1
Enter your mail server:
192.168.200.55_
```

2. Type <2> to set the **My server** requires authentication screen, **Enable** if the mail server requires authentication and set the user name and password. **Disable** if authentication is not required.

```
Key in your selection:2
My server requires authentication disable
(0)Disable
(1)Enable
Key in your selection:0_
```

3. Type <3> to set **From account address**.

```
Key in your selection:3
From account address:
SerialServer@moschip.com
```

4. Type <4 / 5 / 6 / 7> to set the **Email address 1 / 2 / 3 / 4**.

```
Key in your selection:4
Email address 1:
apps_team@moschip.com
```

5. Type <8> to set the **SNMP Trap server IP or domain name**.

```
Key in your selection:8
SNMP trap server IP or domain name:
192.168.2.36_
```

6. Type <v> to view the settings made in **Email and SNMP strap** page.

```
Key in your selection:v
MailServer :192.168.200.55
My server requires authentication :disable
From account address :SerialServer@moschip.com
Email address 1 :apps_team@moschip.com
Email Address :
Email Address2 :
Email Address3 :
SNMP trap server or domain IP :192.168.2.36
Press any key to continue
```

7. Type <m> to back to the previous menu. If any option in **Email and SNMP trap** page was configured, telnet console will ask to save settings. Type <1> to save changes or type <0> to quit without saving.

## 6-2 Event type

<< Main Menu -->Auto warning settings >>

Type <2> to access **Event type**.

```
<< Main Menu--auto warning settings-->Event type >>
(1) Cold start
(2) Warm start
(3) Authentication Failure
(4) IP address changed
(5) Password changed
(v) View settings
(m) Back to main menu
Key in your selection:
```

<< Main Menu -->Auto warning setting -->Event type >>

1. Type <1> to set the event **Cold start**. We can enable the auto warning methods: **Mail** or **Trap**.

```
Key in your selection:1
Cold start Mail disable Trap disable
(0)Mail On
(1)Mail off
(2)Trap On
(3)Trap off
Key in your selection: _
```

2. Type <2> to set the event **Warm Start**. We can enable the auto warning methods: **Mail** or **Trap**.

```
Key in your selection:2
Warm start Mail disable Trap disable
(0)Mail On
(1)Mail off
(2)Trap On
(3)Trap off
Key in your selection: _
```

3. Type <3> to set the event **Authentication Failure**. We can enable the auto warning methods: **Mail** or **Trap**.

```
Key in your selection:3
Authentication Failure Mail disable Trap disable
(0)Mail On
(1)Mail off
(2)Trap On
(3)Trap off
Key in your selection: _
```



4. Type <4> to set the event **IP Address Changed**. We can only enable the auto warning method: **Mail**.

```
key in your selection:4
IP Address Changed Mail disable
(0)Mail On
(1)Mail Off
Key in your selection:_
```

5. Type <5> set the event **Password Changed**. We can only enable the auto warning method: **Mail**.

```
key in your selection:5
Password Changed Mail disable
(0)Mail On
(1)Mail Off
Key in your selection:
```

6. Type <v> to view the settings made in **Event Type** page.

```
key in your selection:v
Cold start          Mail          Trap
warn start          enable       enable
authentication failure enable       enable
IP address changed  enable
Password changed    enable
Press Any Key To Continue
```

7. Type <m> to back to the **Main Menu**. If any option in **Event Type** page was configured, telnet console will ask to save settings. Type <1> to save changes or <0> quit without saving.

## 7. Monitor

### << Main Menu >>

Type <7> on the **Main Menu**, and then press <Enter> to access **Monitor** settings page.

```
<< Main Menu->Monitor >>
(1)Line
(2)Async
(3)Async-setting
(m)Back to main menu
Key in your selection:_
```

### << Main Menu -->Monitor >>

1. Type <1> to monitor the **Line** status of serial server serial ports, and then press <Enter> to quit.

```
Port Mode IP1 IP2 IP3
1 REAL_COMM TCP_LISTEN
2 REAL_COMM TCP_LISTEN
3 REAL_COMM TCP_LISTEN
4 REAL_COMM TCP_LISTEN
Press Enter to quit...
```

2. Type <2> to monitor the **Async** status, and then press <Enter> to quit.

```
Port TxCnt RxCnt TXTotalCount RXTotalCount DSR CTS DCD
1 0 0 0 0 0N 0N 0N
2 0 0 0 0 0N 0N 0N
3 0 0 0 0 0N 0N 0N
4 0 0 0 0 0N 0N 0N
Press Enter to quit...
```

3. Type <3> to monitor the **Async-Setting** status, and then press <Enter> to quit.

```
Port Baudrate Bits Parity Stop RTS/CTS XON/XOFF
1 460800 8 None 1 OFF 0N
2 460800 8 None 1 OFF 0N
3 460800 8 None 1 OFF 0N
4 460800 8 None 1 OFF 0N
Press Enter to quit...
```

4. Type <m> to go back to the **Main Menu**.

## 8. Ping

<< Main Menu >>

Type <8> on the **Main Menu**, and then press <Enter> to access **Ping** settings page.

```
Input target host IP address: _
```

Give the **Target Host IP address** and press <Enter>. Type <Ctrl-c> to stop the ping and to go back to **Main Menu**.

```
Input target host IP address:192.168.2.36
PING 192.168.2.36 (192.168.2.36): 56 data bytes
64 bytes from 192.168.2.36: icmp_seq=0 ttl=128 time=0.6 ms
64 bytes from 192.168.2.36: icmp_seq=1 ttl=128 time=0.6 ms
```

If the IP Address of DNS Server is given in **Network Settings** page, then we can translate the **Domain name** given in this ping option to IP address. See the screen below.

```
Input target host IP address:www.moschip.com
PING www.moschip.com (209.216.203.97): 56 data bytes
```

## 9. Change password

### << Main Menu >>

Type <9> on the **Main Menu**, and then press <Enter> to access **Password Settings** page.

```
<< Main Menu->Password Settings >>
(1)Enable Password
(2)Change Password
(m)Back to main menu
Key in your selection:
```

### << Main Menu -- > Password Settings>>

1. Type <1> to **Enable** password to the serial server. Type <1> to **Enable** or type <0> to **Disable** the **Password Status**.

```
Key in your selection:1
Password Status:enable
(1) Enable
(0) Disable
Enter Your Choice 1_
```

2. Type <2> to **Change the Password** of the serial server. Enter the **Old Password**. Then give the **New Password** and then Re-enter **New Password**.

```
Key in your selection:2
Change Password:(Password Length Should be Less than 7 Characters
Old Password:
New Password:
Retype Password: _
```

## 10. Load factory defaults

### << Main Menu >>

Type <a> on the **Main Menu**, and then press <Enter> to access the **Load factory Defaults** settings page.

```
Loading Factory Defaults
Connection to host lost.
```

# Regulatory compliance

## FCC conditions

This equipment has been tested and found to comply with Part 15 Class B of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received and include interference that may cause undesired operation.



## CE

This equipment is in compliance with the requirements of the following regulations:  
EN 55 022: CLASS B



## WEEE information

For EU (European Union) member users: According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.



# Specification

Item	Description
Ports	4xRS-232/422/485
Connector	8-pin RJ-45
FIFO	512 bytes
ESD protect	15KV ESD, 3KV isolation (RS-485)
Transmission Speed	110bps~921.6Kbps
Interface	GigaLAN / Wi-Fi
Interface connector	RJ-45 / Antenna
Power requirements	5V3A DC / 9~36 VDC
Operating temperature	0 ~ 55°C
Operating humidity	5 ~ 95% RH
Regulatory approvals	FCC / CE

## FCC INFORMATION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation.

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

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

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure: A distance of 20 cm shall be maintained between the antenna and users, and the transmitter module may not be co-located with any other transmitter or antenna.

## 4-Port Wireless Serial Device Server User's Manual

