StarTech com RS232 Serial Over IP Device Server User Manual

Contents

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StarTech com RS232 Serial Over IP Device Server

Product Information

Specifications

- **Product Name:** RS232 Serial Over IP Device Server
- **SKU:** I23-SERIAL-ETHERNET / I43-SERIAL-ETHERNET
- Manual Revision: 06/21/2024

Package Contents
The package includes the following items:

- RS232 Serial Over IP Device Server
- Power Adapter
- Documentation/User Manual
- Serial Over IP Device Server x 1
- DIN Rail Kit x 1
- Din Rail Screws x 2
- Universal Power Adapter x 1
- Quick-Start Guide x 1

For the latest information and specifications visit
www.StarTech.com
I23-SERIAL-ETHERNET
www.StarTech.com
I43-SERIAL-ETHERNET

Installation

Safety Statements

- **Safety Measures**
  - Wiring terminations should not be made with the product and/or electric lines under power.
  - Cables (including power and charging cables) should be placed and routed to avoid creating electric, tripping or safety hazards

Default Settings

Out-of-the-Box Settings

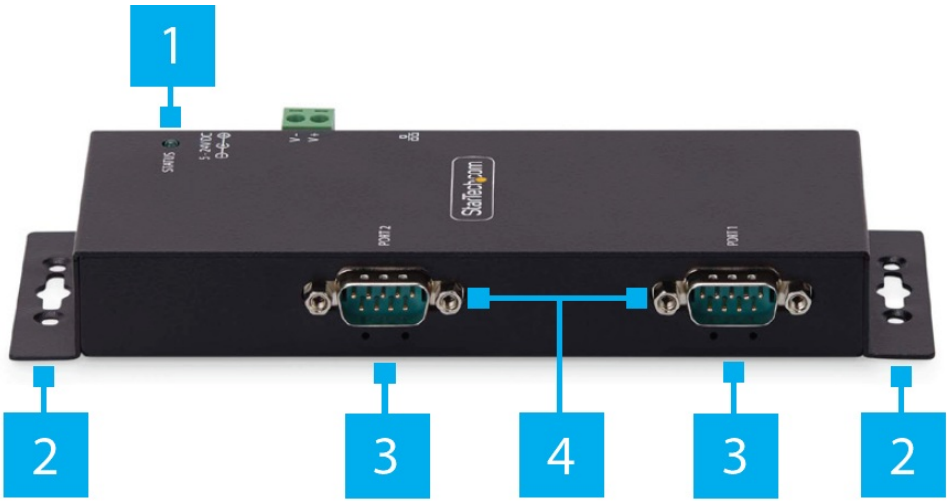
- IP Address: DHCP
- Password: admin
- Network Protocol Mode: Telnet Server (RFC2217)
- Serial Mode: RS-232

Factory Default Button Settings

- IP Address: 192.168.5.252
- Password: admin
- Network Protocol Mode: Telnet Server (RFC2217)
- Serial Mode: RS-23z

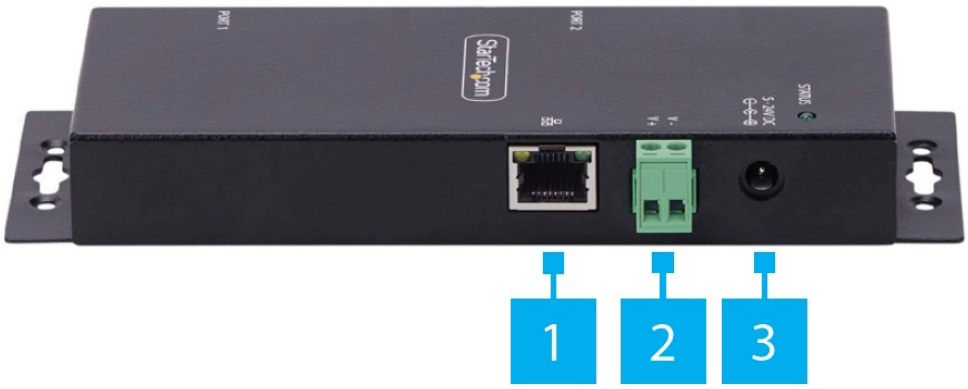
Product Diagram (I23-SERIAL-ETHERNET)

Front View



Component		Function
1	Status LED	• Refer to **LED Chart**
2	Wall Mounting Bracket Holes	• Used to secure the **Serial Device Server** to a **Wall** or **Other Surface** using appropriate **Mounting Hardware**
3	Serial Communication LED Indicators	• Refer to **LED Chart**
4	DB-9 Serial Ports	• Connect an **RS-232 Serial Device**
5	DIN Rail Mounting Holes (Not Shown)	• Four **Holes** on the bottom of the **Serial Device Server** • Used to secure the included **DIN Rail Mounting Kit** to the **Serial Device Server**

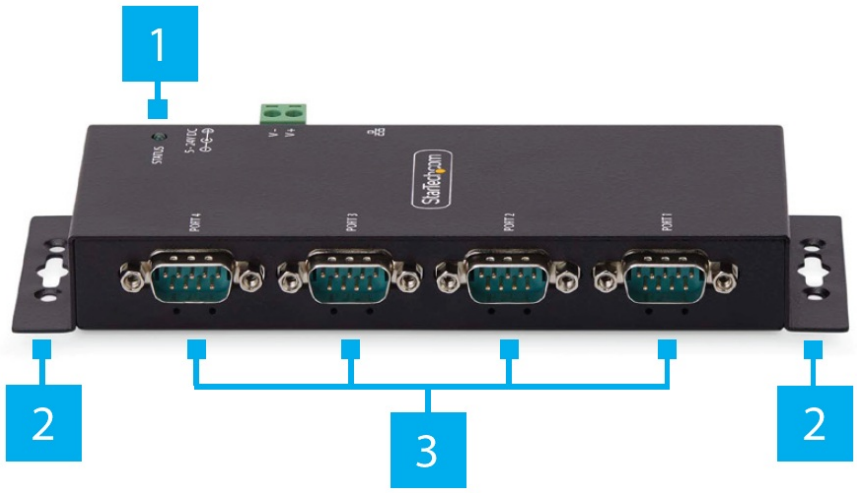
Rear View



Component		Function
1	Ethernet Port	• Connect an **Ethernet Cable** to the **Serial Device Server** • Supports 10/100Mbps • **Link/Activity LEDs:** Refer to **LED Chart**
2	DC 2-Wire Terminal Block Power Input	• Connect a **+5V~24V DC Power Source** • A minimum of **5V 3A (15W)** is required
3	DC Power Input	• Connect the included **Power Adapter**

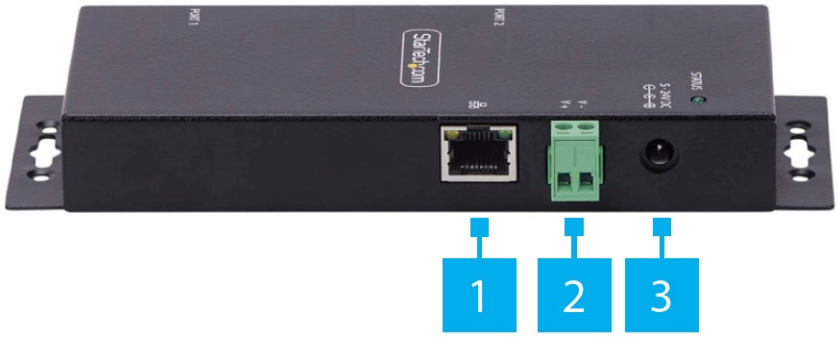
Product Diagram (I43-SERIAL-ETHERNET)

Front View



Component		Function
1	Status LED	• Refer to **LED Chart**
2	Wall Mounting Bracket Holes	• Used to secure the **Serial Device Server** to a **Wall** or **Other Surface** using appropriate **Mounting Hardware**
3	DB-9 Serial Ports	• Connect an **RS-232 Serial Device**
4	Serial Communication LED Indicators (Not Labelled)	• Below each **DB-9 Port** • Refer to **LED Chart**
5	DIN Rail Mounting Holes (Not Shown)	• Four **Holes** on the bottom of the **Serial Device Server** • Used to secure the included **DIN Rail Mounting Kit** to the **Serial Device Server**

Rear View



Component		Function
1	Ethernet Port	• Connect an **Ethernet Cable** to the **Serial Device Server** • Supports 10/100Mbps • **Link/Activity LEDs:** Refer to **LED Chart**
2	DC 2-Wire Terminal Block Power Input	• Connect a **+5V~24V DC Power Source** • A minimum of **5V 3A (15W)** is required
3	DC Power Input	• Connect the included **Power Adapter**

Hardware Installation

1. Connect the power adapter to the device server and plug it into a power outlet.
2. Connect the DB-9 serial ports to your serial devices using appropriate cables.
3. If wall mounting is desired, use the wall mounting bracket holes for installation.
4. (Optional) For DIN rail mounting, utilize the DIN rail mounting holes on the device.

(Optional) Configure DB-9 Pin 9 Power
By default, the Serial Device Server is configured with the Ring Indicator (RI) on Pin 9, but it can be changed to 5V DC.

To change the DB9 Connector Pin 9 to 5V DC output, please follow these steps:

WARNING! Static Electricity can severely damage electronics. Ensure that you are adequately Grounded before you open the device housing or touch the change the jumper. You should wear an Anti-Static Strap or use an Anti-static mat when opening the housing or changing the jumper. If an anti-Static Strap isn't available, discharge any built-up static electricity by touching a large Grounded Metal Surface for several seconds.

1. Ensure the Power Adapter and all Peripheral Cables are disconnected from the Serial Device Server.
2. Using a Phillips Screwdriver, remove the Screws from the Housing.
   Note: Save these to re-assemble the housing after changing the jumper.
3. Using both hands, carefully open the Housing to expose the Circuit Board inside.
4. Identify Jumper #4 (JP4), located inside the Housing next to the DB9 Connector.
5. Using a pair of fine-point tweezers or a small flat-head screwdriver, carefully move the jumper to the 5V position.
6. Re-assemble the Housing, ensuring the Housing Screw Holes align.
7. Replace the Housing Screws removed in Step 3.

(Optional) Mounting The Serial Device Server With DIN Rail

1. Align the DIN Rail Bracket with the DIN Rail Mounting Holes on the bottom of the Serial Device Server.
2. Using the included DIN Rail Mounting Screws and a Phillips Head Screwdriver, secure the DIN Rail Kit to the Serial Device Server.
3. Insert the DIN Rail Mounting Plate at an angle starting from the Top, then Push it against the DIN Rail.

(Optional) Mounting The Serial Device Server To A Wall Or Other Surface

1. Secure the Serial Device Server to the desired Mounting Surface using the appropriate Mounting Hardware (i.e., wood screws) through the Wall Mounting Bracket Holes.

Install the Serial Device Server

1. Connect the included Power Supply or a 5V~24V DC Power Source to the Serial Device Server.
   Note: The Serial Device Server can take up to 80 seconds to startup.
2. Connect an Ethernet Cable from the RJ-45 Port of the Serial Device Server to a Network Router, Switch, or Hub.
3. Connect an RS-232 Serial Device to the DB-9 Port on the Serial Device Server.

Software Installation

1. Navigate to: **www.StarTech.com/I23-SERIAL-ETHERNET** or **www.StarTech.com/I43-SERIAL-ETHERNET**
2. Click the Drivers/Downloads tab.
3. Under Driver(s), download the Software Package for Windows Operating System.
4. Extract the contents of the downloaded .zip file.
5. Run the extracted executable file to start the software installation.
6. Follow the on screen prompts to complete the installation.
7.

Software Installation
To configure and manage the device server, download the required software from **www.startech.com/support** and follow the installation instructions provided in the user manual.

Operation
Once installed and configured, the device server allows you to access and control your serial devices over an IP network. Use the provided software to manage settings and establish connections with your serial devices.

Note: The devices support features which secure and protect the devices and its configuration using standard/best practices but as these are intended to be used in controlled environments using proprietary software (virtual COM port) and open communication standards (Telnet, RFC2217) which do not encrypt the data they should not be exposed to an unsecure connection.

Telnet
Using Telnet to send or receive data works with any operating system or host device that supports the Telnet protocol. The software for the connected serial peripheral device may require a COM Port or mapped hardware address. To configure this, the StarTech.com Device Server Manager is required, which is only supported on Windows operating systems.

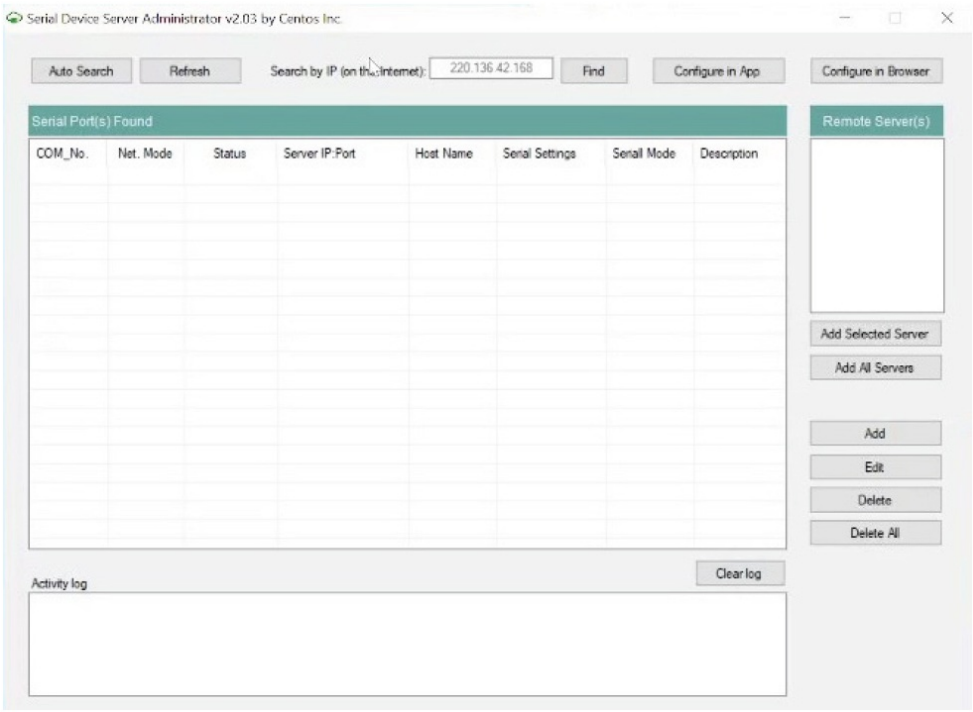
To communicate with the connected Serial Peripheral Device via Telnet, perform the following:

1. Open a terminal, command prompt, or third-party software that connects to a Telnet server.
2. Type the IP Address of the Serial Device Server.

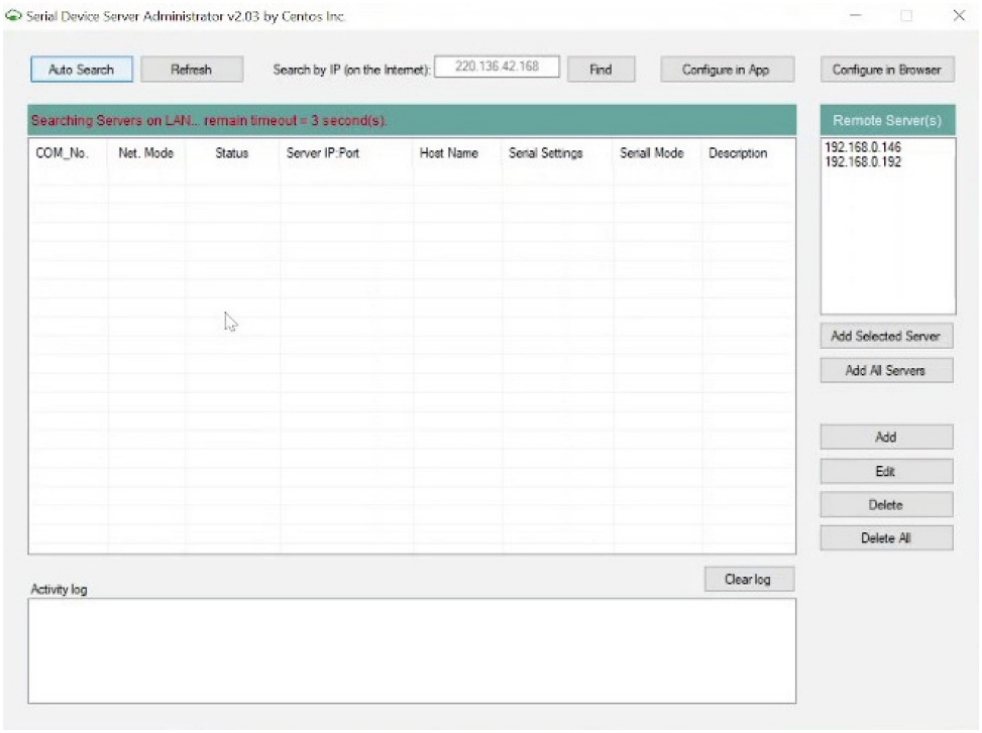
   Note: This can be found using the StarTech.com Device Server Manager for Windows, or by viewing the connected devices on the local network router.
3. Connect to the Serial Device Server.
4. Type in the terminal, command prompt, or third-party software to send commands/data to the Serial Peripheral Device.

Use the Software to Discover the Serial Device Server

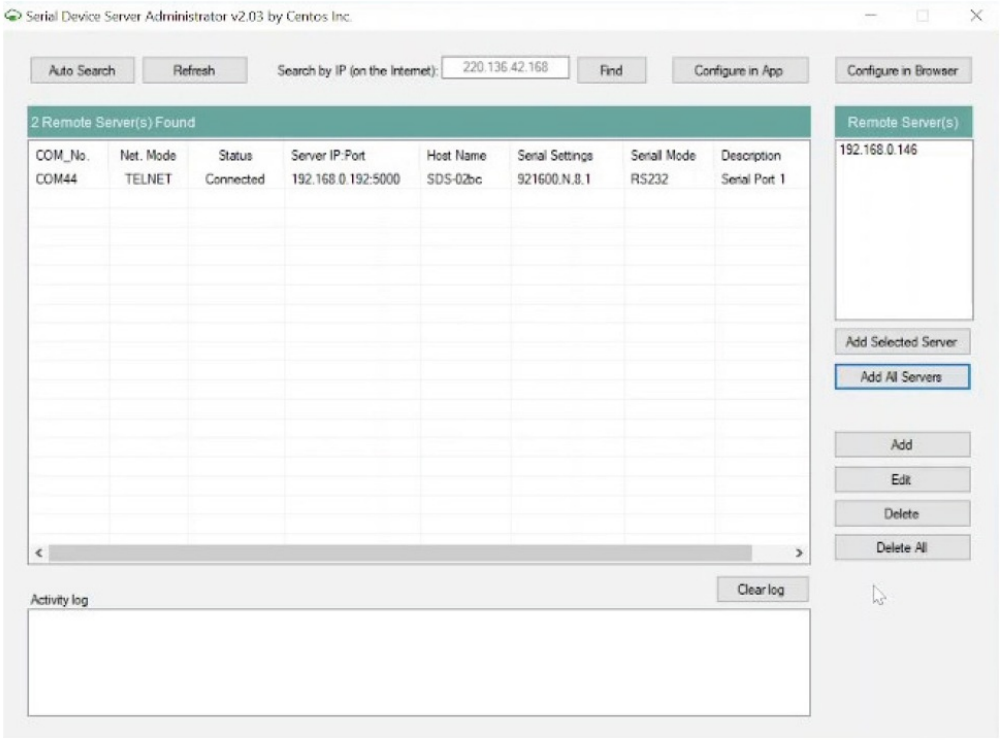
1. Launch the StarTech.com Device Server Manager.



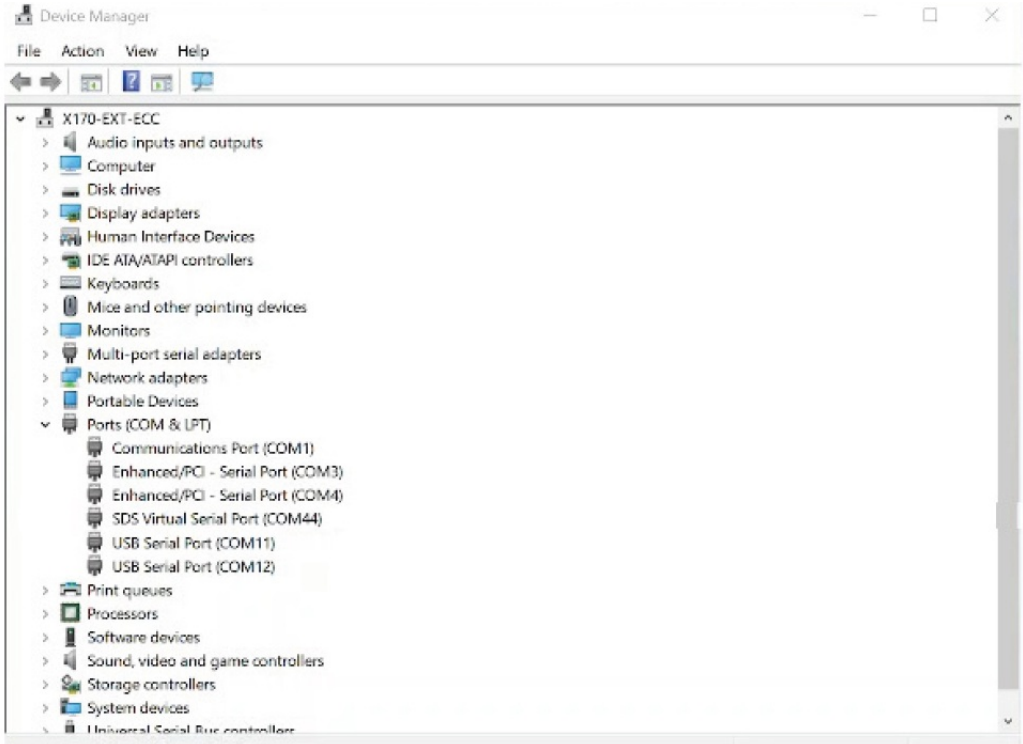
2. Click Auto Search to initiate the process of discovering Serial Device Servers on the local network.
3. Discovered Serial Device Servers will appear in the “Remote Server(s)” list in the right pane.



4. Select “Add Selected Server” to add a specific Serial Device Server or “Add All Servers” to add all discovered Serial Device Servers.



5. The Serial Device Servers will be mounted in Device Manager as “SDS Virtual Serial Port” with an associated COM port number.



Configure the Serial Port Settings

Available Serial Port Options

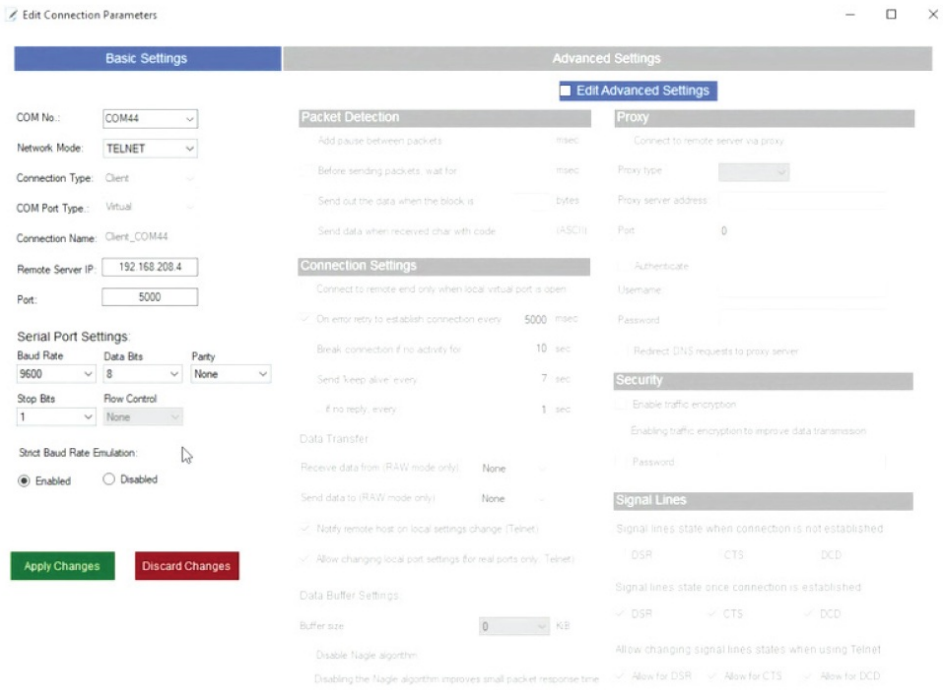
Setting	Available Options
Baud Rate	• 300 • 600 • 1200 • 1800 • 2400 • 4800 • 9600 • 14400 • 19200 • 38400 • 57600 • 115200 • 230400 • 921600
Data Bits	• 7 • 8
Parity	• None • Even • Odd • Mark • Space
Stop Bits	• 1 • 2
Flow Control	• Hardware • Software • None

- **In the Software**
    1. Open the **StarTech.com** Device Server Manager.
    2. Select “Configure in App” or double click the Serial Device Server in the list.
    3. When the Settings Window opens, use the drop down menus to change Baud Rate, Data Bits, COM Port

Number, and more.

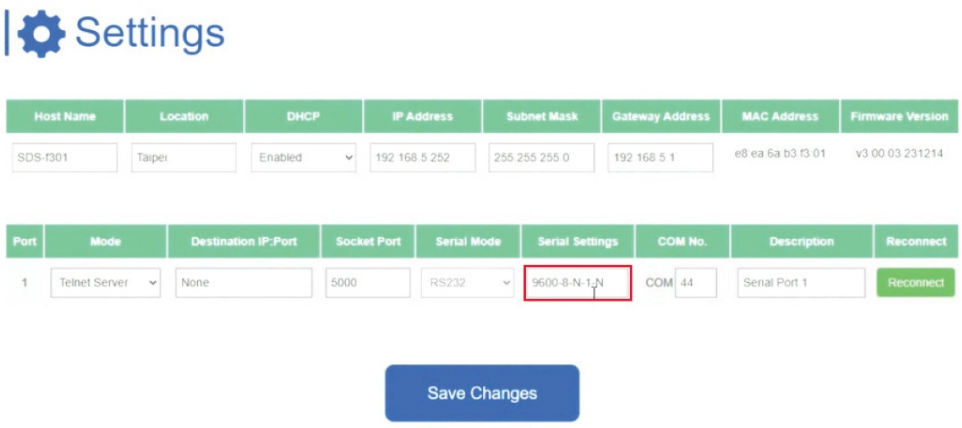
Note: If changing the COM Port Number, see “Changing COM Port or Baud Rate in Windows” on Page 15.

4. Select “Apply Changes” to save the settings.

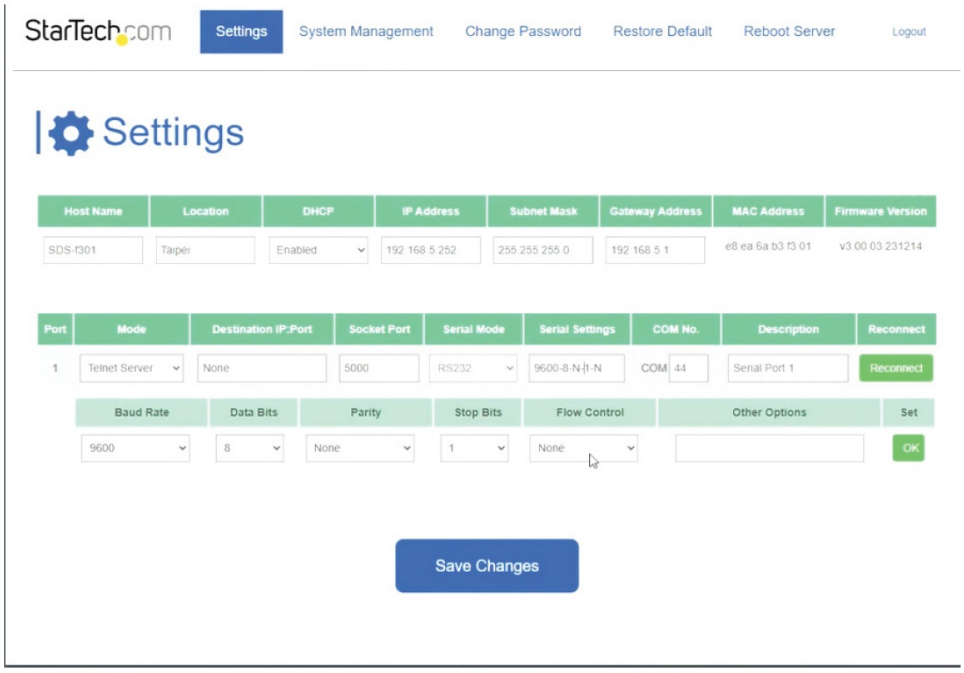


In the Web Interface

1. Open a web browser.
2. Type the IP address of the Serial Device Server into the address bar.
3. Enter the password and select “Login”. See Default Password on Page 6.
4. Select the “Serial Settings” to expand the options.
5. Use the drop down menus to change Baud Rate, Data Bits, COM Port Number, and more.



6. Under “Set”, select “OK” to set the serial settings to the port.



7. Select “Save Changes” to save the settings to the Serial Device Server.

Changing COM Port or Baud Rate in Windows

To change the COM Port number or Baud Rate in Windows, the device must be deleted and re-created in the StarTech.com Device Server Manager.

Note: This is not necessary when using macOS or Linux which use Telnet to communicate with the Serial Device Server and do not map the device to a COM port or hardware address.

1. Open a web browser and navigate to the IP address of the Serial Device Server or click “Configure in Browser” in the StarTech.com Device Server Manager.
2. Enter the Serial Device Server password.
3. Under “COM No.”, change it to the desired COM Port number or change the Baud Rate to match the Baud Rate of the connected Serial Peripheral Device.

   Note: Ensure the COM port number you assign is not already in use by the system, otherwise it will cause a conflict.
4. Click Save Changes.
5. In the StarTech.com Device Server Manager, click the Serial Device Server which should still have the old COM Port number, then click Delete.
6. Re-add the Serial Device Server using “Add Selected Server” to add a specific Serial Device Server or “Add All Servers” to add all discovered Serial Device Servers.
7. The Serial Device Server should now be mapped to the new COM Port number.

LED Chart

LED Name		LED Function
1	Link/Activity LEDs (RJ-45)	• **Steady Green:** Indicates Ethernet connection has established, but no data activity • **Blinking Green:** Indicates data activity • **Off:** Ethernet is not connected
2	Serial Port LEDs (DB-9)	• **Blinking Green:** Indicates serial data is being transmitted and/or received • **Right LED:** Transmit Data Indicator • **Left LED:** Receive Data Indicator • **Off:** No serial data is being transmitted or received
3	Power/Status LED	• **Steady Green:** Power is On • **Off:** Power is Off • **Blinking Green:** Restoring to Factory Defaults

Warranty Information
This product is backed by a two-year warranty. For further information on product warranty terms and conditions, please refer to **www.startech.com/warranty.**

Limitation of Liability
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StarTech.com is your one-stop source for every connectivity part you need. From the latest technology to legacy products — and all the parts that bridge the old and new — we can help you find the parts that connect your solutions. We make it easy to locate the parts, and we quickly deliver them wherever they need to go. Just talk to one of our tech advisors or visit our website. You'll be connected to the products you need in no time.Visit www.StarTech.com for complete information on all StarTech.com products and to access exclusive resources and time-saving tools. StarTech.com is an ISO 9001 Registered manufacturer of connectivity and technology parts. StarTech.com was founded in 1985 and has operations in the United States, Canada, the United Kingdom and Taiwan servicing a worldwide market.

Reviews
Share your experiences using StarTech.com products, including product applications and setup, what you love about the products, and areas for improvement.

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- United Kingdom

To view manuals, videos, drivers, downloads, technical drawings, and more visit **www.startech.com/support**

Compliance Statements

FCC Compliance Statement
This equipment has been tested and found to comply with the limits for a ClassB 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

Industry Canada Statement
This Class B digital apparatus complies with Canadian ICES-003.Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada. CAN ICES-3 (B)/NMB-3(B)

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To view manuals, videos, drivers, downloads, technical drawings, and more visit **www.startech.com/support**

FAQ

Q: How do I reset the device server to factory settings?
A: To reset the device server to factory settings, locate the reset button on the device (usually near the power port) and press and hold it for 10 seconds until the status LEDs flash.

Q: Can I use the device server with both Windows and Mac operating systems?
A: Yes, the device server is compatible with both Windows and Mac operating systems. Install the appropriate software for your system from **www.startech.com/support**.

Documents / Resources

	**StarTech com RS232 Serial Over IP Device Server** [pdf] User Manual RS232, RS232 Serial Over IP Device Server, Serial Over IP Device Server, Over IP Device Server, IP Device Server, Device Server, Server

References

- **User Manual**