

Model XS1000
TCP/IP to RS232/422/485 Device Server
User's Manual



1.0 Introduction

The XS1000 is a cost effective and highly integrated Serial-to-Ethernet 10/100Mbps device server. Embedding a 8051CPU with 64KB OTP ROM and 32KB SRAM. The serial interface supports handshake signals RTS and CTS. The XS1000 can access a serial RS232/422/485 device located virtually anywhere (via Ethernet or Internet). It automatically finds devices on the network and can be configured by a web-browser.

2.0 Features:

- ◆ 3-in-1 RS-232/422/485 interface Max.230Kbps Serial interface and 10/100 Mbps Ethernet.
- ◆ Supports 4- and 2-wire RS-485 with AUTO-SEND™.
- ◆ Terminal block for easy RS-422/485 serial wiring
- ◆ Supports IP configuration by MAC address.
- ◆ Supports Driver, TCP Server/Client, UDP Server/Client and Pair Connection protocols.
- ◆ Easy and powerful configuration management.
- ◆ Approvals: CE, RoHS.

3.0 . Hardware Installation & Initial Setup

3.1 RS-232 Configuration: (DB9 Male)

(DB9Male)	Signal	I/O
PIN2	RXD	IN
PIN3	TXD	OUT
PIN5	GND	-
PIN7	RTS	OUT
PIN8	CTS	IN

3.2 RS-422/485 Configuration: (terminal header)

Terminal No	1	2	3	4	5	6
RS-422	T+	T-	R+	R-	VIN	GND
RS-485	485+	485-	-	-	VIN	GND

3.3 Connecting to 10/100M:

Use a standard Ethernet cable to connect the XS1000 to an Ethernet switch, or use a cross-over cable if you connect it directly to a PC.

3.4 Power Supply:

The XS1000 needs a 9 to 24VDC 100mA power supply.

3.5 XS1000 LED indication :

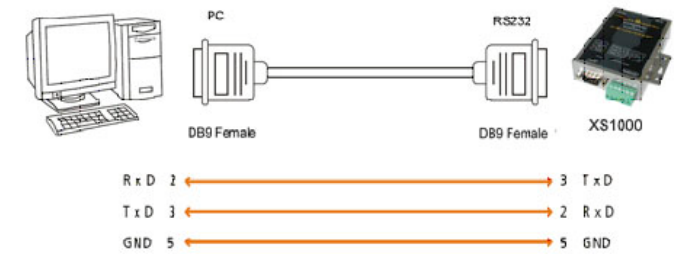
LINK: Ethernet Link established.

ACT: Data flow TX/RX.

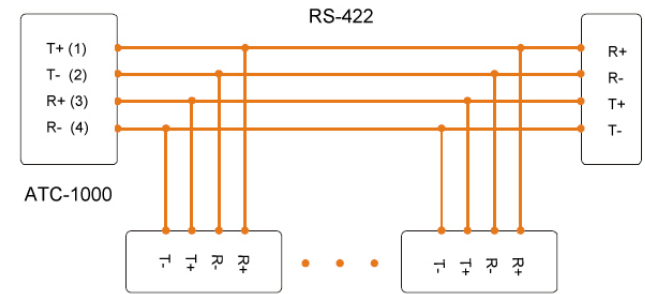
PWR: Power ON.

3.6 Connection Diagram

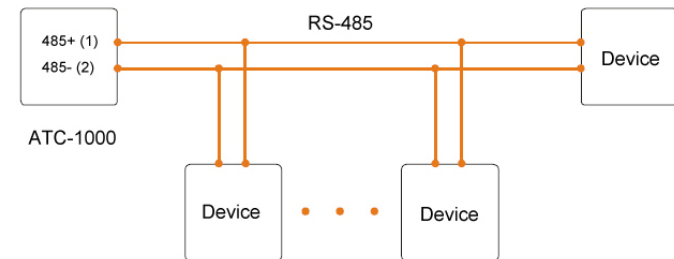
RS-232 Connection



RS-422 Connection



RS-485 Connection



4. Configuration and Operation

A. Assign a static IP address to your computer in the **192.168.2.2 to 192.168.2.254** range. Subnet mask 255.255.255.0. This is necessary to ensure that your computer can communicate with your XS1000. Your computer must have an Ethernet card and TCP/IP installed.

B. The **default IP address of the XS1000 is 192.168.2.1**.

Open your web browser and enter this IP address to connect to the XS1000.

C. Default user name is 'admin' and the password is 'system'.

Click "OK". The setup screen will then appear, and you can now configure the settings.

D. Create a new COM port using VCOM.exe.



4.1 The menu features as below:

Administrator:

[Authentication](#)

[System IP](#)

[System Status](#)

[Load default setting](#)

Functions:

[TCP Mode](#)

[UDP Mode](#)

[UART](#)

[ADC](#)

[DIDO](#)

[Reset Device](#)

Menus explained:

4.2 Administrator Setup

Main admin window.

4.3 Authentication

The user can change the username and password to prevent unauthorized access.

Login ID and password authentication, the maximum number of characters is 15, (characters and numbers).

User Name: default **admin**

Password: default **system**

Authentication Configuration

Setting	Value
Username	<input type="text" value="admin"/> max:15
Password Confirm	<input type="password" value="*****"/> max:15

4.3 System IP

The XS1000 support two IP connection types: Static IP and

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DHCP. These types are listed in the Web page for the IP Configuration settings. Each setup screen and available features will differ depending on what kind of IP connection types you select. Default is Static IP

System IP Configuration

Setting	Value
IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="2"/> . <input type="text" value="1"/>
Subnet Mask	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="2"/> . <input type="text" value="254"/>
DNS	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="2"/> . <input type="text" value="253"/>
IP Configure	<input checked="" type="radio"/> Static <input type="radio"/> DHCP

Static (or Fixed) IP

IP Address: default **192.168.2.1**

Subnet mask: default **255.255.255.0**

Gateway: default **192.168.2.254**

Primary DNS: default **192.168.2.253**

If you are connecting through a static or fixed IP from your network environment, perform these steps :

Step 1: Enter IP address

Step 2: Enter Subnet mask

Step 3: Enter Gateway IP address

Step 4: Enter Primary DNS IP address

Step 5: click Update button

4.6 DHCP

Host Name (Optional): default **NETUART**, maximum length **15** characters.

If there is a DHCP Server existing in your network environment, you can set the IP configuration to DHCP to get a dynamic IP address. The **Host Name** is an *optional* item, depending on your DHCP Server setting.

5.0 System Status

This screen shows the XS1000's current status. All of the information provided is read-only.

Kernel Version: the installed version of the kernel.

MAC Address: The present device MAC Address.

Nickname: the product's NetUART model name.

System Status

MAC Address	00:00:11:33:FF:00
Nickname	NetUART <input type="text"/> <input type="button" value="Update"/>
System Version	V3.0.060110

5.0 Load default setting

Allows the user to reset the XS1000 to default settings. The MAC Address will not be updated.

Load Default Setting to EEPROM

5.1 Telnet

Currently not supported.

5.2 Operation mode

The XS1000 supports four operation modes: TCP Server, TCP Client, UDP Server and UDP Client. These modes are listed in the Web page for the Operation Mode setting. Each setup screen and available features will differ depending on what kind of operation mode you select. Default is TCP Server.

5.3 TCP Server

Port Number: default **23**, range **0** to **65535**

If your device is acting as a passive device to accept commands from a remote device and the data needs to be

guaranteed to be received by the peer is your concern, then you can set the XS1000 as TCP Server. Be sure the value of the setting **Port Number** is same as your remote control application using.

Client mode inactive timeout (minutes): default **20** (0=Disable)

If you want to keep the connection between XS1000 and your remote control application always on, then set the value of item **Client mode inactive timeout (minutes)** to 0, otherwise, when the inactive time of 'no traffic' on the line reach the configured value, the XS1000 will terminate the connection.

5.4 TCP Client

Remote Connection Port Number: default **23**, range **0** to **65535**

Remote Host IP Address: default **210.200.181.102**

If your device is acting as an active device to report real-time status to remote devices and the data needs to be guaranteed to be received by the peer is your concern, then you can set the XS1000 as TCP Client. Be sure the value of the setting **Remote Connection Port Number** is same as your remote control application using the correct value of **Remote Host IP Address**.

5.5 UDP Server

Local Port Number: default **21**, range **0** to **65535**

If your device is acting as a passive device to accept commands from a remote device and the data needs to be guaranteed to be received by peer is *not* your concern, then you can set XS1000 as UDP Server. Be sure the value of item **Local Port Number** is same as what your remote application is using.

5.6 UDP Client

Remote Connection Port Number: default **21**, range **0** to **65535**

Remote Host IP Address: default 192.168.2.2

If your device is acting as an active device to report real-time status to a remote device and the data be guaranteed to be received by the peer is *not* your concern, then you can set XS1000 as TCP Client. Be sure the value of item **Remote Connection Port Number** is same as your remote control application using the correct value of **Remote Host IP Address**.

Telnet Control

Item	Value
Telnet Server/Client	<input checked="" type="radio"/> Server <input type="radio"/> Client
Port Number	<input type="text" value="23"/>
Remote Server IP Address	<input type="text" value="210"/> <input type="text" value="200"/> <input type="text" value="181"/> <input type="text" value="102"/>
<input type="button" value="Update"/>	

6.0 UART Control (RS-232)

Use VCOM for creating a new COM port.

The XS1000 support three serial types: RS232, RS422 and RS485.

Baud Rate: default 57600, range 300bps to 230.4Kbps.

Character Bits: 5, 6, 7, 8 (default).

Parity Check: None (default), even, odd, space, mark.

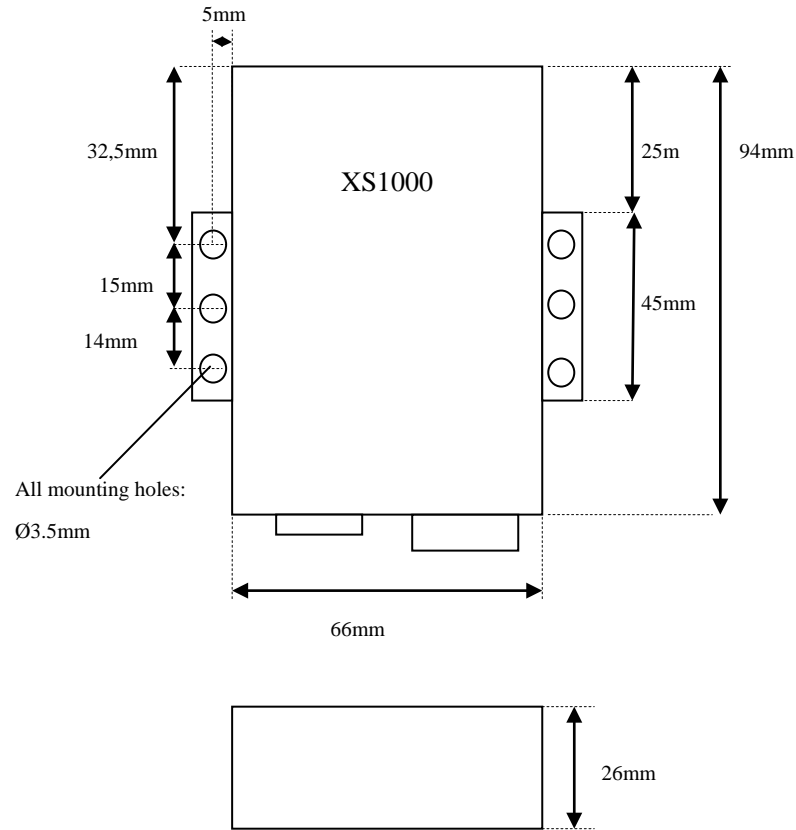
Stop Bits: 1 (default), 1.5 or 2.

Hardware Flow Control: None (default) or Hardware.

UART Control

Item	Current value	Setting
Baudrate	57600	<input type="text" value="57600"/>
Character Bits	8	<input type="text" value="8"/>
Parity Type	none	<input type="text" value="none"/>
Stop Bit	1	<input type="text" value="1"/>
Hardware Flow Control	none	<input type="text" value="none"/>
<input type="button" value="Update"/>		

Mechanical dimensions



Note to Admin Panel's UART Control advanced settings:

Character 1 and 2: These are HEX numbers. Default value: 00FF. When sending data from serial to TCP the data is first stored in the cache, not until the value of character 1 or 2 is received from the serial side the data is released from the cache and sent to TCP.

Silent time: If there is no data sent or received for the number of milliseconds specified the connection is dropped.

Drop character: Drops the delimiter character of the serial port when sending to TCP, (the receiver doesn't display the character).

How to hardware reset XS1000

1. Disconnect the Ethernet cable.
2. Disconnect the serial cable.
3. Disconnect the power supply.
5. Locate the small hole next to the power supply jack. The reset button is inside the hole.
6. Press the reset button (using a paperclip or small screwdriver) and hold the reset button.
7. While pressing/holding the reset button connect the power supply.
8. The red Power LED light will come on and the green Link LED light will light up dimly for about 1 second.
9. Hold the reset button for about 10 seconds and release it. No LED light indication will show when the unit has been reset, you just have to hold the button for 10 seconds.
10. The XS1000 now has been reset to factory settings.

Notice: the unit can also be reset from the web interface.

To access technical support, please visit the U.S. Converters website at:

www.USconverters.com

Here you will find:

- Latest drivers and updates for download
- Technical tips
- Documentation
- Configuration support
- and much more...

Feel free to contact our technical support team at mail@usconverters.com with any issues.

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