

Serial to Ethernet communication without Virtual COM software

Setup guide

by Nordfield.com

for XS1000 on Windows 7, 32-bit

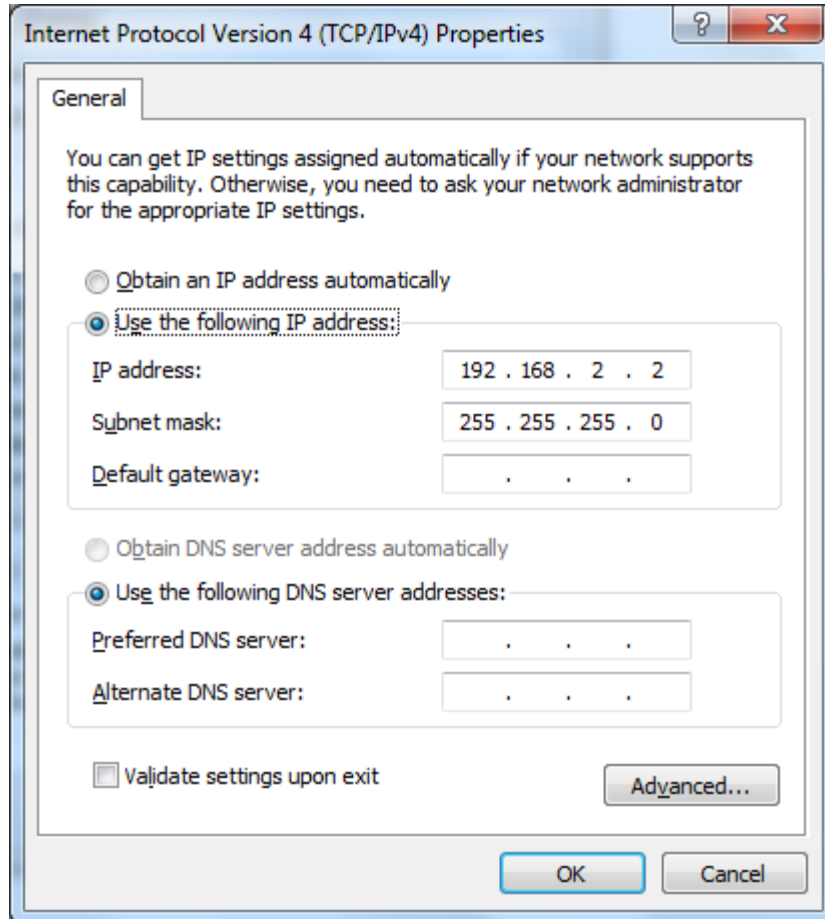
When using a serial to Ethernet Device Server a Virtual COM software is usually used for creating a COM port in Windows Device Manger. This is the easiest way of creating and establishing a communication link, however if you for whatever reason wish to create a communication link without using a Virtual COM software this can also be accomplished with most Serial Ethernet Device Servers.

This guide is created for Windows 7, 32-bit and the Serial to Ethernet Device Server part XS1000 from Nordfield.com, but same approach can be applied with other versions of Windows and other Device Servers.

- 1. Assign a static IP address**
- 2. Connect to the XS1000**
- 3. Setting up a serial device**
- 4. Putty**
- 5. AccessPort and test**

1. Assign a static IP address.

Assign a static IP address to the network connection on which you connect the XS1000:



2. Connect to the XS1000

Connect the XS1000 to your computer with a cross-over Ethernet cable and turn on the power to the unit. Open a web-browser, enter 192.168.2.1 and check that you successfully can connect and log-in to the XS1000 (user name: admin, password: system). Make sure the settings are as below (these are the default settings):

The screenshot shows the 'Administrator Setting' page in a web browser. The page title is 'Administrator Setting'. On the left, there is a navigation menu with links: Administrator Setting (selected), TCP Mode, UDP Mode, UART, and Reset Device. The main content area contains the following settings:

| | |
|---------------------------------------|--|
| Kernel Version | V1.42 2009/07/29 |
| MAC Address | 00:11:22:61:1D:0E |
| Nickname | NetUART |
| IP Setting | |
| IP Address | 192 . 168 . 2 . 1 |
| Subnet Mask | 255 . 255 . 255 . 0 |
| Gateway | 192 . 168 . 2 . 1 |
| IP Configure | <input checked="" type="radio"/> Static <input type="radio"/> DHCP |
| Password Setting | |
| Username | admin max:15 |
| Password | max:15 |
| Confirm | |
| <input type="button" value="Update"/> | |
| Load Default Setting to EEPROM | <input type="button" value="Load"/> |

Note:
Nickname only can use "0-9","a-z","A-Z","_","-","."

The screenshot shows the 'TCP Control' page in a web browser. The page title is 'TCP Control'. On the left, there is a navigation menu with links: Administrator Setting, TCP Mode (selected), UDP Mode, UART, and Reset Device. The main content area contains the following settings:

| Item | Value |
|---------------------------------------|--|
| Telnet Server/Client | <input checked="" type="radio"/> Server <input type="radio"/> Client <input type="radio"/> Disable |
| Port Number | 23 |
| Remote Server IP Address | 210 . 200 . 181 . 102 |
| Client mode inactive timeout | 20 minute (1~99,0=Disable) |
| Server mode protect timeout | 60 minute (1~98,0=Disable,99=Can't replace) |
| <input type="button" value="Update"/> | |

http://192.168.2.1/login.htm - Windows Internet Explorer

http://192.168.2.1/login.htm

File Edit View Favorites Tools Help

Administrator Setting
[TCP Mode](#)
[UDP Mode](#)
[UART](#)
[Reset Device](#)

UDP

| Item | Value | |
|----------------|---|------|
| Status | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Local Port | 21 | |
| Remote Address | IP | Port |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |
| | 0 . 0 . 0 . 0 | 0 |

Update

Done

Internet | Protected Mode: Off

http://192.168.2.1/login.htm - Windows Internet Explorer

http://192.168.2.1/login.htm

File Edit View Favorites Tools Help

Administrator Setting
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[UART](#)
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UART Control

| Item | Setting |
|-----------------------|---|
| Mode | RS232 |
| Baudrate | 57600 |
| Character Bits | 8 |
| Parity Type | none |
| Stop Bit | 1 |
| Hardware Flow Control | none |
| Delimiter | <input type="checkbox"/> Character 1: 00 <input type="checkbox"/> Character 2: FF |
| | <input type="checkbox"/> Silent time: 5 (1-255)*200ms |
| | <input type="checkbox"/> Drop Character |

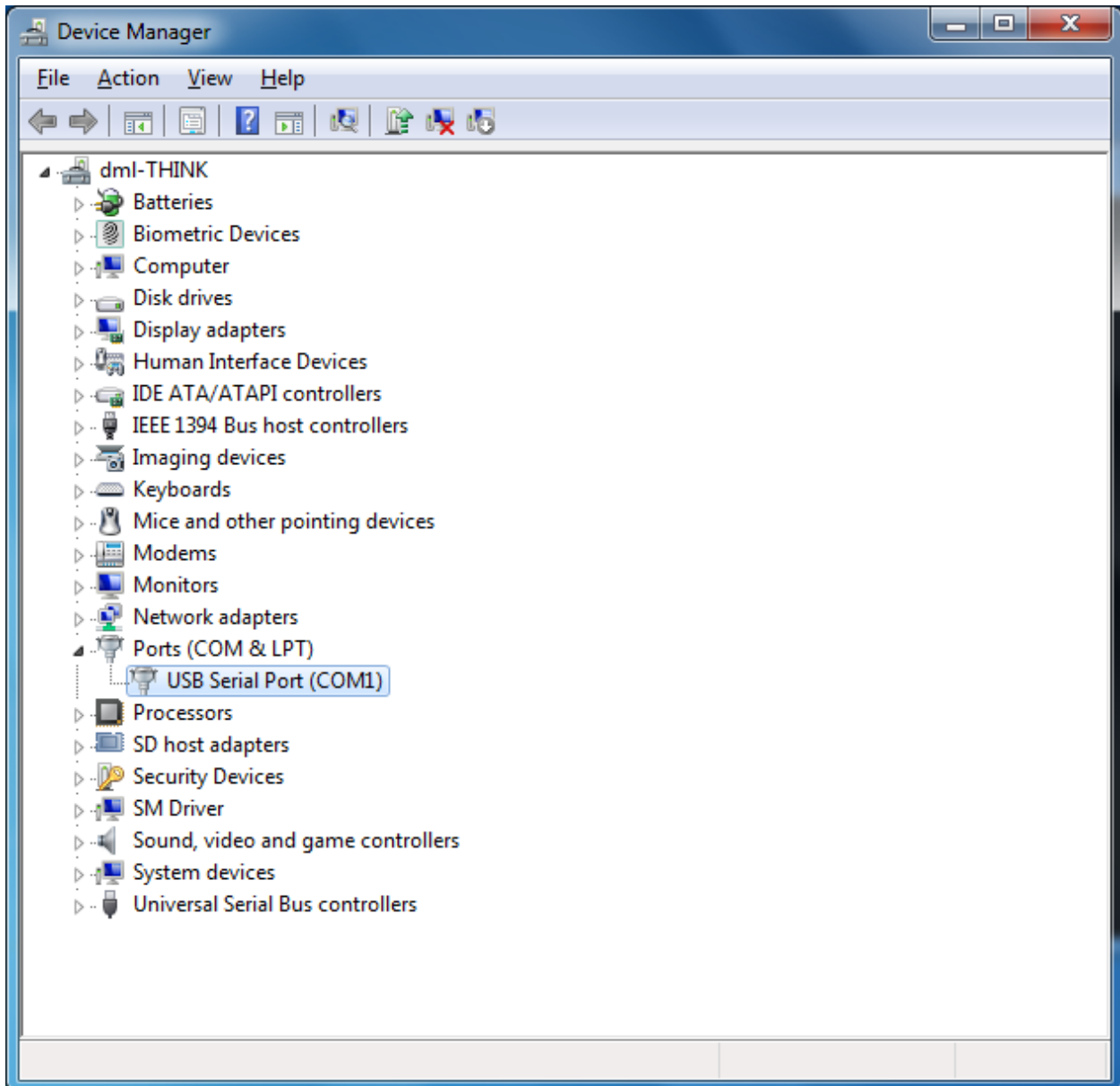
Update

Internet | Protected Mode: Off

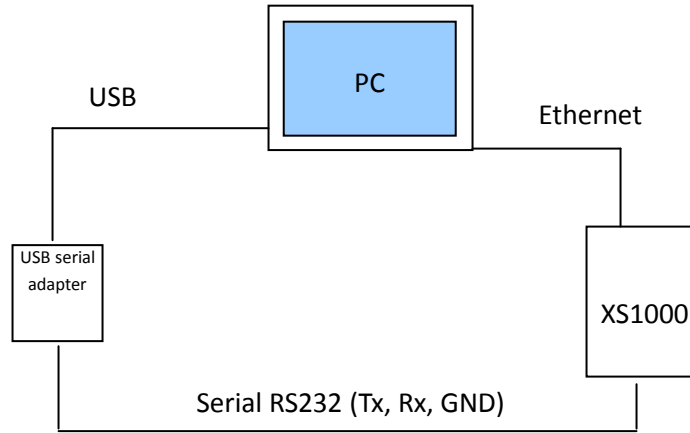
3. Setting up a serial device.

To be able to properly test this setup we connect a USB to RS232 serial adapter to the computer's USB port, install the drivers for this and connect it to the XS1000's COM port, (we can find the created COM port in Windows Device Manger as below image shows).

This COM port simulates a serial device connected to the XS100's COM port.



We have now created a loop going from your computer's Ethernet port to the XS1000's Ethernet, out of the XS1000's COM port, into the serial port of the USB to serial adapter which is connected to your computer's USB port.



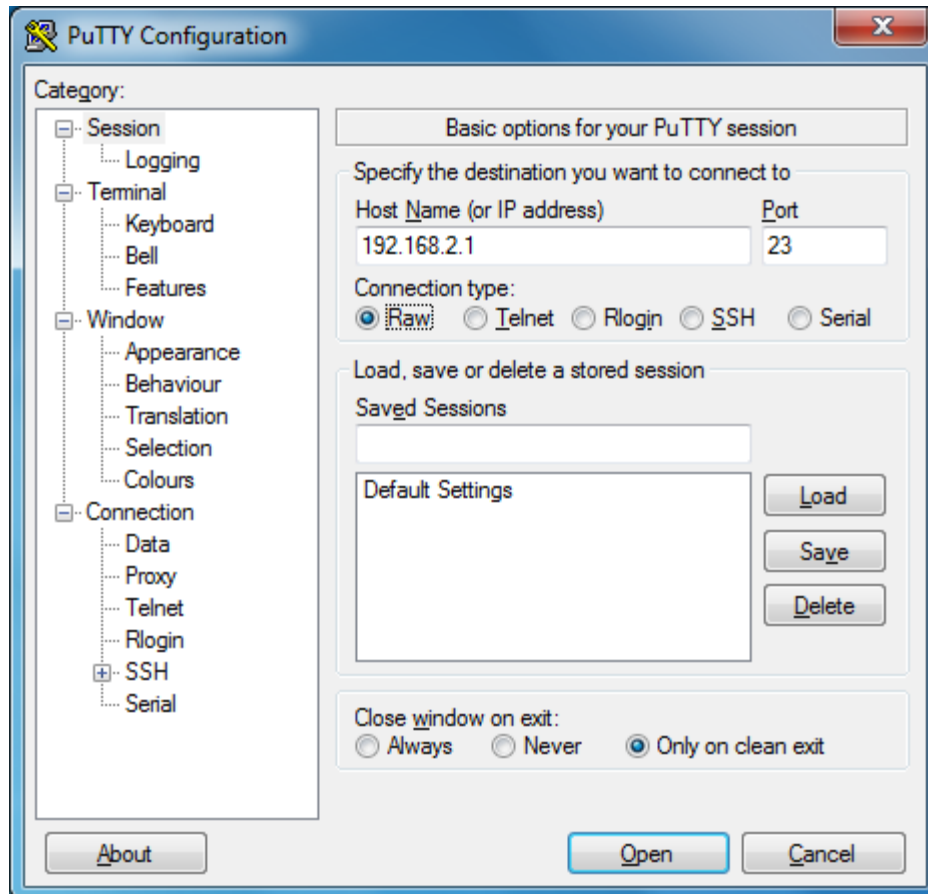
TX, RX and GND must be properly connected between the XS1000 and the USB serial adapter

4. Putty

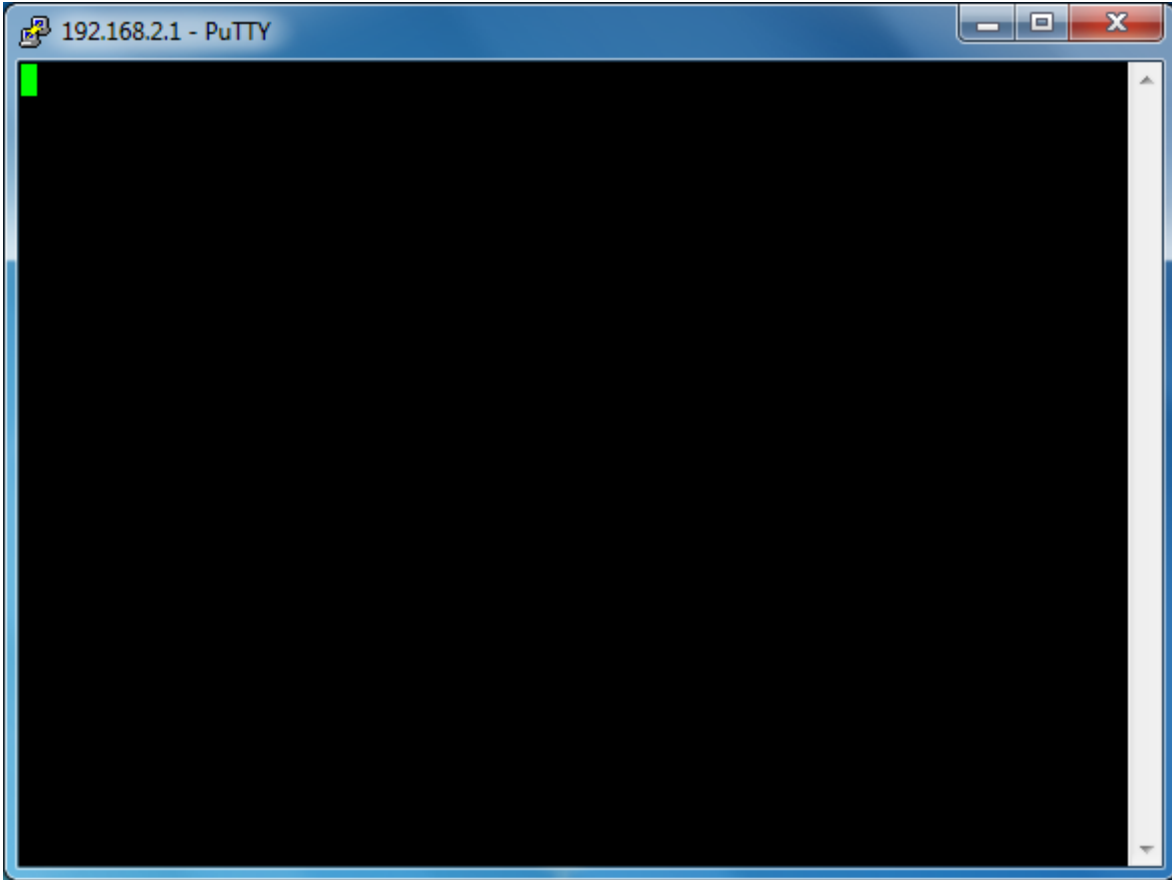
For sending and receiving data via Ethernet you will need the software called Putty, you can download it at www.Nordfield.com or at the official website:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Install and start Putty, make sure the setting are as shown in below image and click Open:



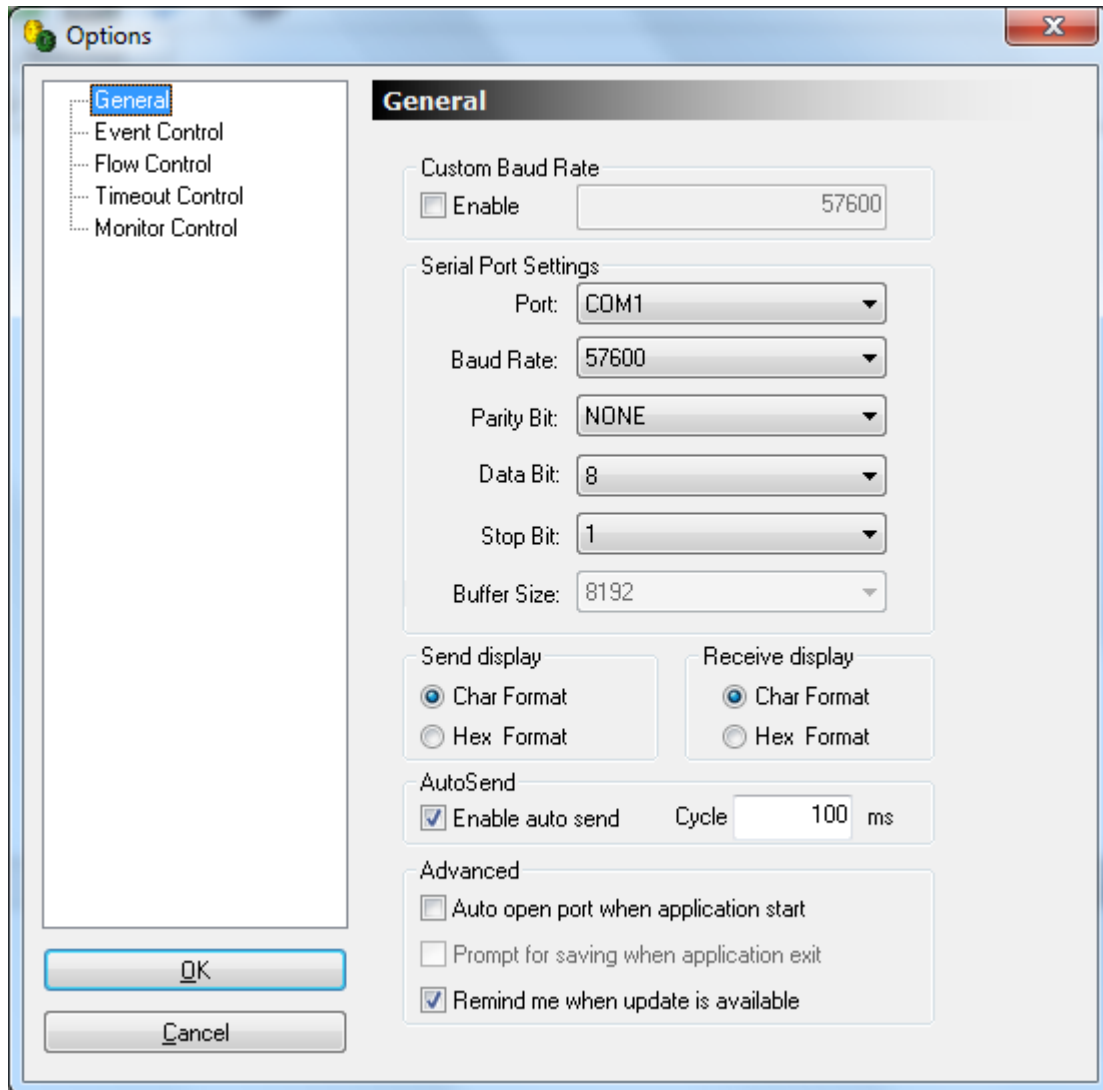
Putty will open a connection to the XS1000, standing by with a ready prompt:



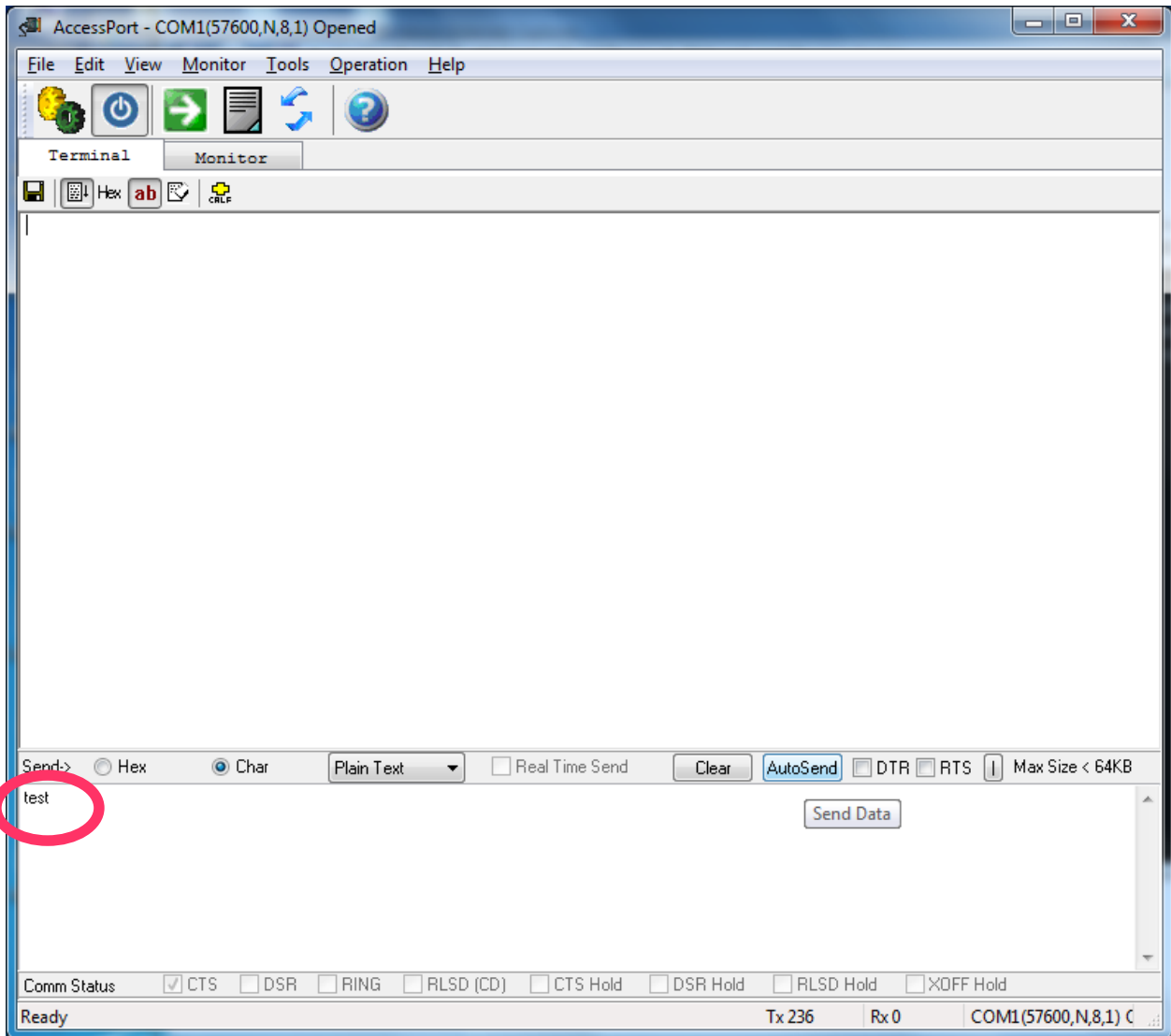
5. AccessPort

To be able to send and receive data via the serial side of this setup you will need the software called AccessPort which can be downloaded at www.Nordfield.com.

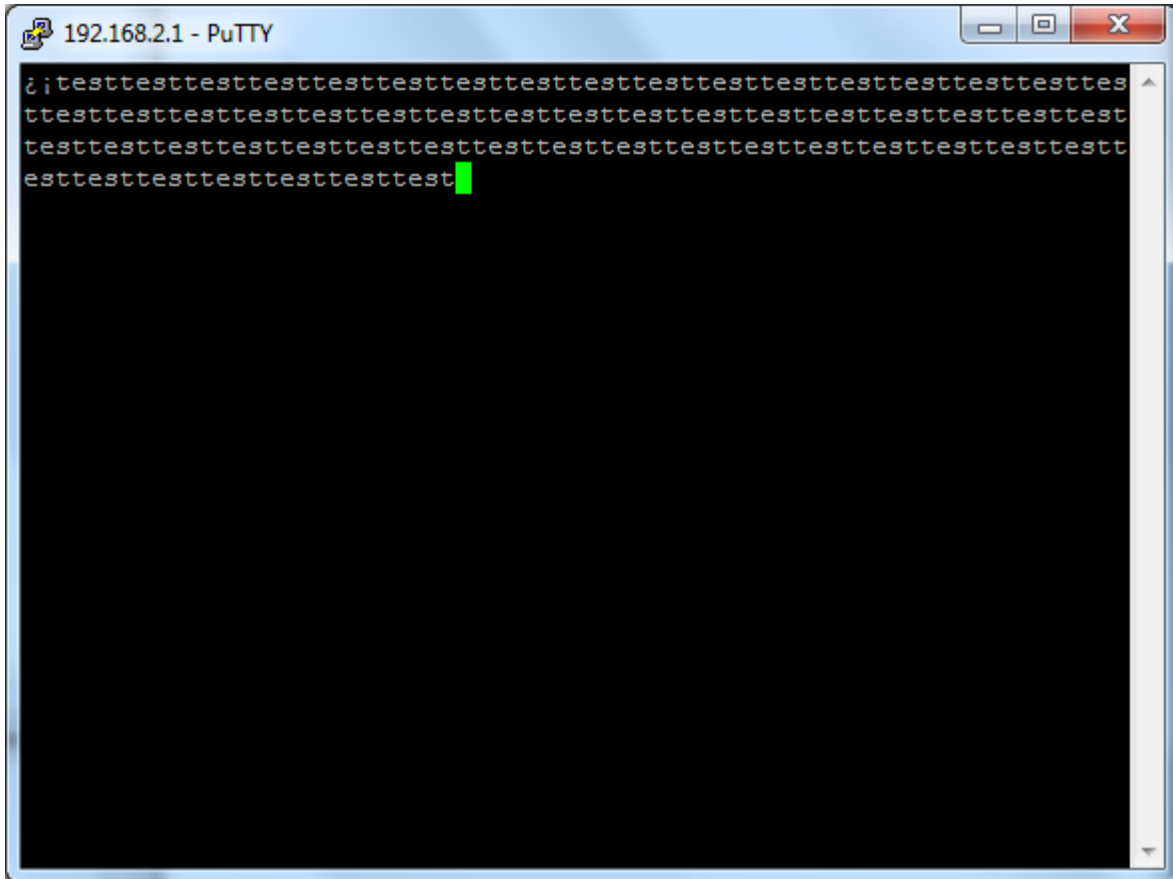
Start AccessPort and click on Tools → Configuration, make sure the settings are as shown below (these are the default settings of the XS1000) and click OK:



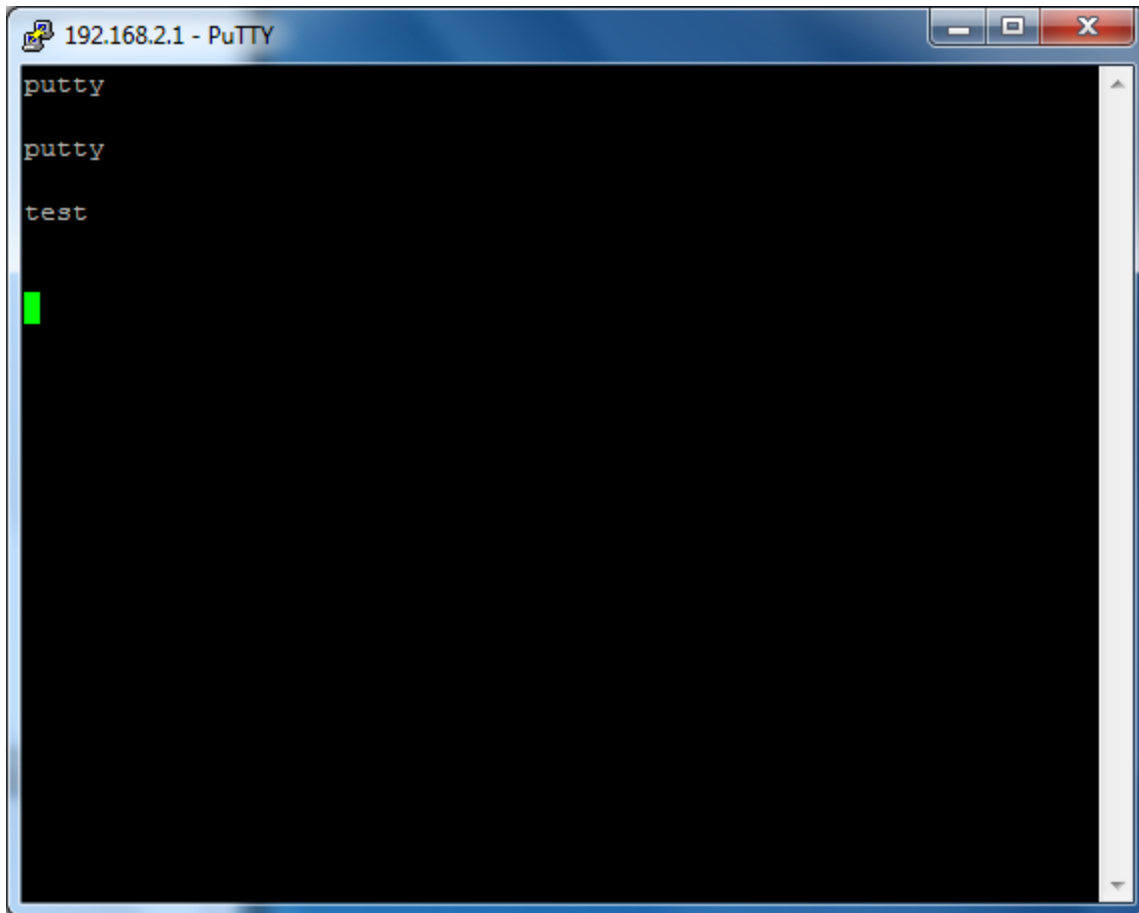
Open the COM port created by the USB serial adapter (COM 1) by clicking Tools → Port Switch in AccessPort . You should now be able to enter a data string in the 'Send' window (lower window) and click the 'AutoSend' button where after you should be able to see the sent data being received by Putty.



Data being received by Putty:



The same scenario works the other way around. Enter data strings at the Putty terminal and press Enter:



and you will receive the sent data strings in AccessPort's receive window:

