How to setup the BIT COMMANDER US2000A Serial to Ethernet converter

(based on Windows 7, 32/64-bit)

This Step-by-step guide explains how to get started using the Bit Commander US2000A Serial to Ethernet converter.

Powering the converter 2

Configuring the parameters 3

Accessing the parameters by using a web browser 4

Accessing the parameters using the configuration utility 6

How to create a virtual COM port 8

Making a loop-back test 10

Powering the converter.

The US2000A converter can be powered by a 5 to 18VDC 1.5A (max) voltage by using a standard connector jack size of 5.5 x 2.1 x 11.5mm or through screw terminals.

When power is applied to the module the red “Power” LED should be solid ON and after the module has booted and is ready the green “Ready” LED should flash.

A standard 110VAC / 9VDC power adapter as shown below can be used to power the module.

Configuring the parameters.

There are two ways of configuring the parameters of the US2000A module:

- By connecting the converter to your computer using a standard Ethernet cable and then use a web browser to login to the converter. This will work locally or remotely over a network.

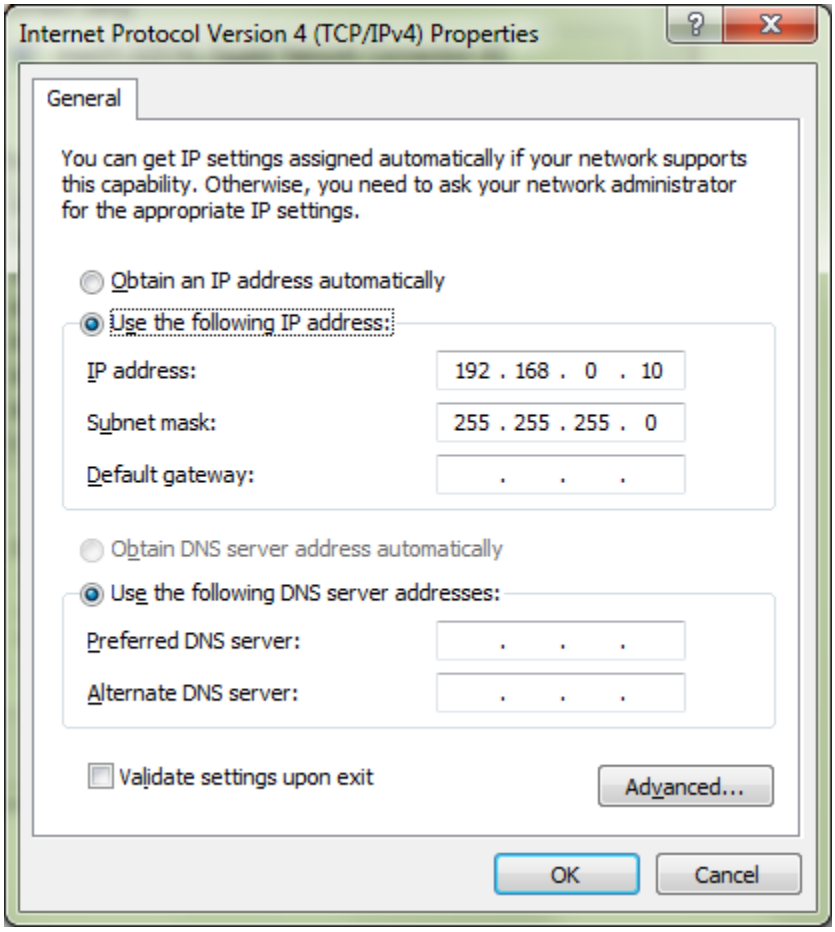
- By connecting the converter to your computer using a standard Ethernet cable and then use the configuration utility to configure the parameters. This will work locally only (Ethernet cable connected directly to your computer).

We will here describe these methods.

Accessing the parameters using a web browser.

Connect the converter to your computer using a standard Ethernet cable.

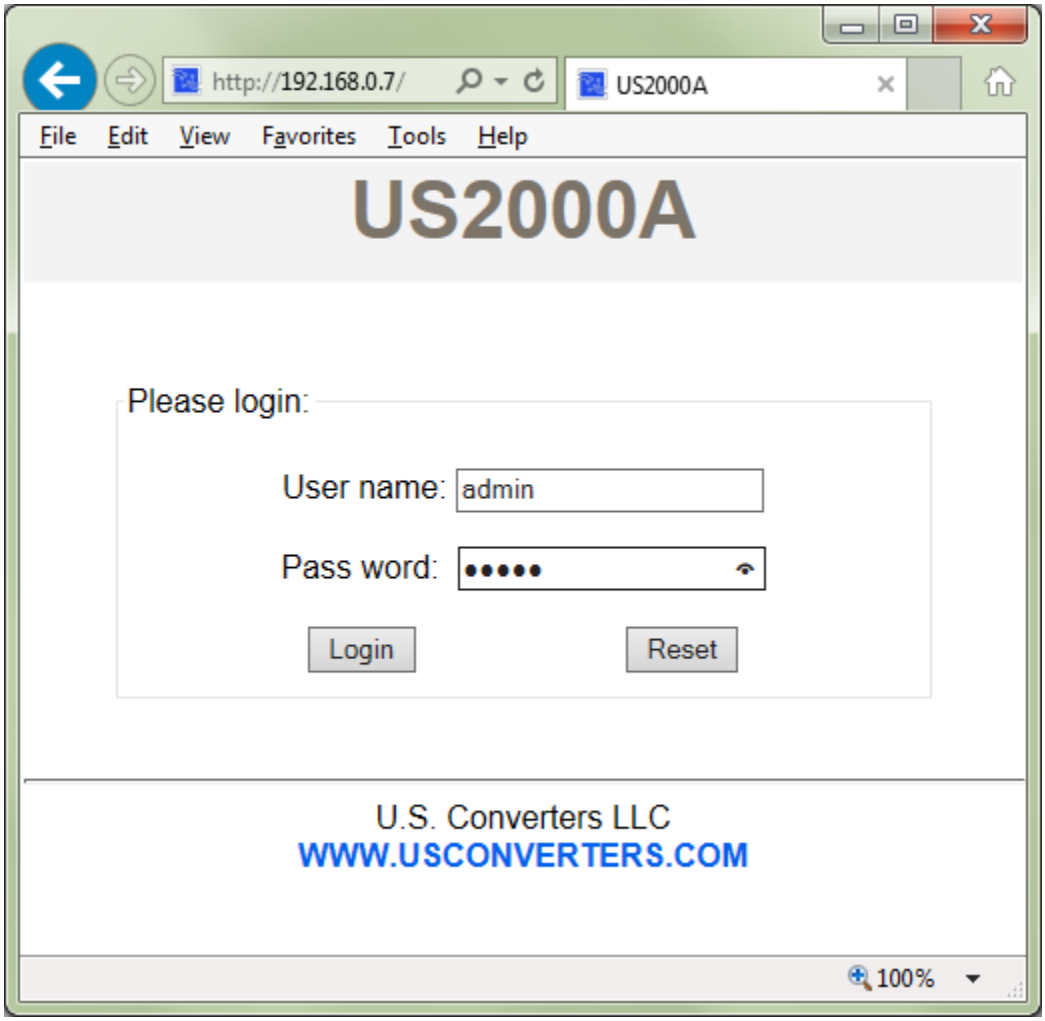
Make sure the network connection you connect the US2000A to is set to a static IP address in the same subnet as the US2000A such as 192.168.0.xxx as shown below.



Open a web browser and enter the US2000A's IP address which is 192.168.0.7

You will now see the login screen.

User: **admin**
Password: **admin**



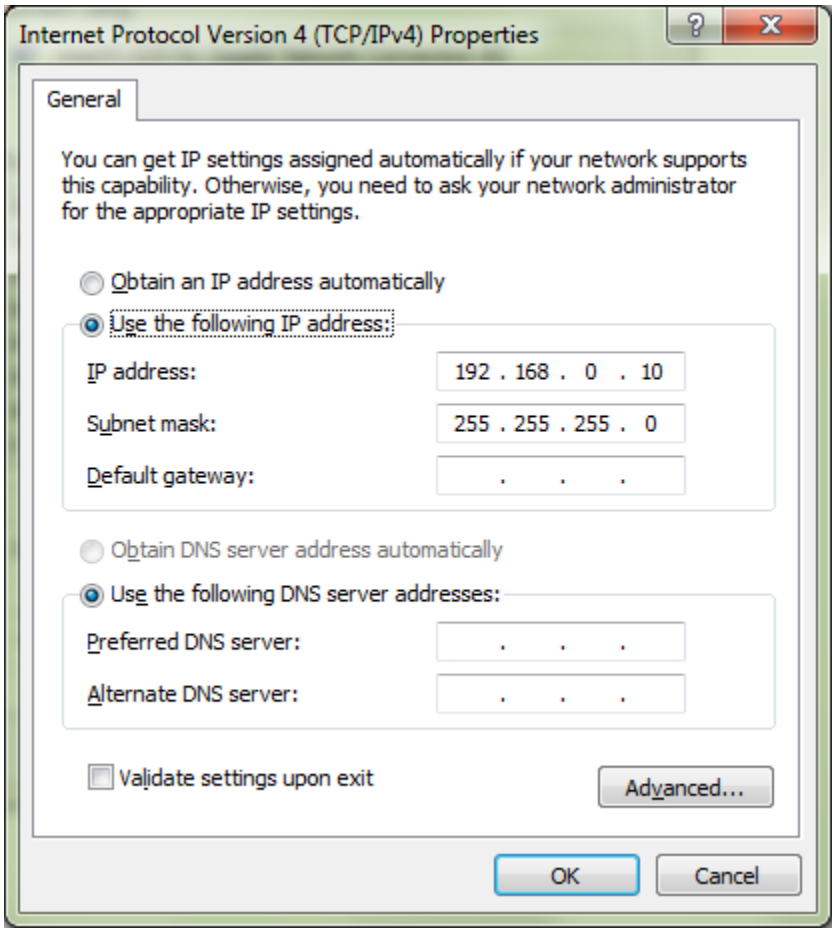
Accessing the parameters by using the configuration utility

The US2000A's parameters can be configured by using the configuration utility. This will only work locally (not over a network). We recommend using a web browser for configuring the parameters and only using this configuration utility for firmware updates.

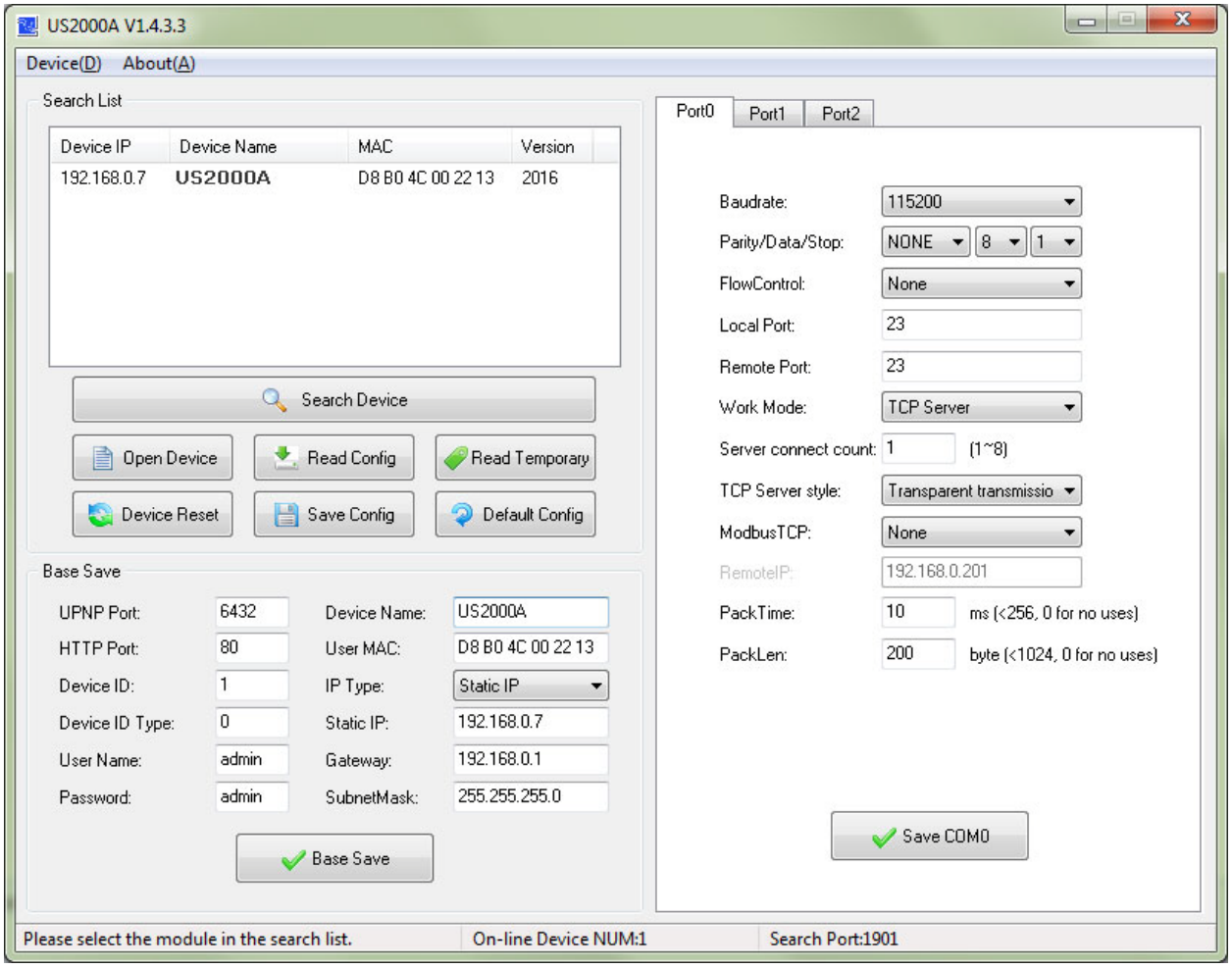
To use the configuration utility simply run the program called "US2000A Config.exe" and click the "Search" button.

If the configuration utility cannot find the US2000A when you click the "Search" button then try the following:

1. **Make sure the network connection you connect the US2000A to is set to a static IP address in the same subnet as the US2000A such as 192.168.0.xxx as shown below.**
2. **Disable ALL other wired and wireless network connections (including Internet connection) for the configuration software to be able to fine the US2000A on the network.**
3. **Disable antivirus and firewall software.**



Configuration main screen:

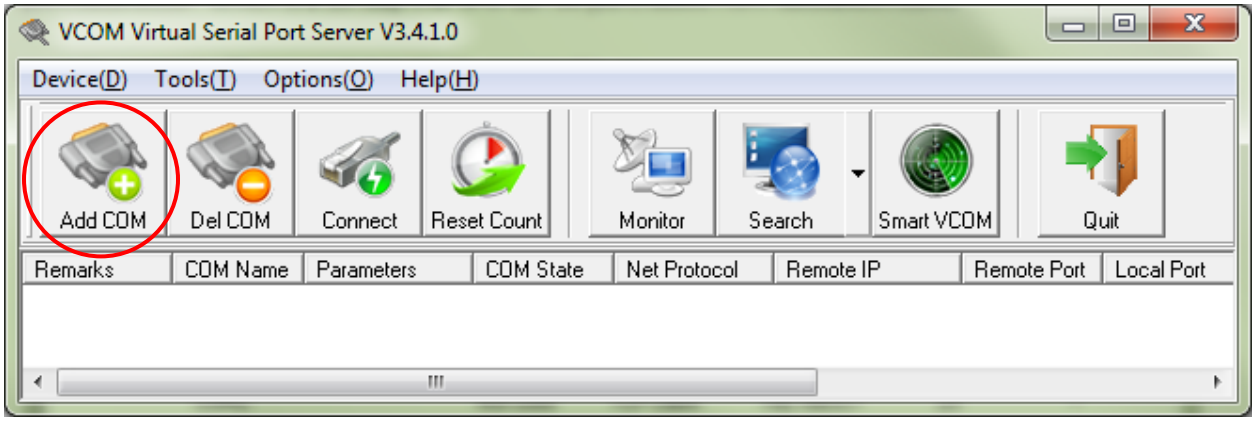


How to create a virtual COM port

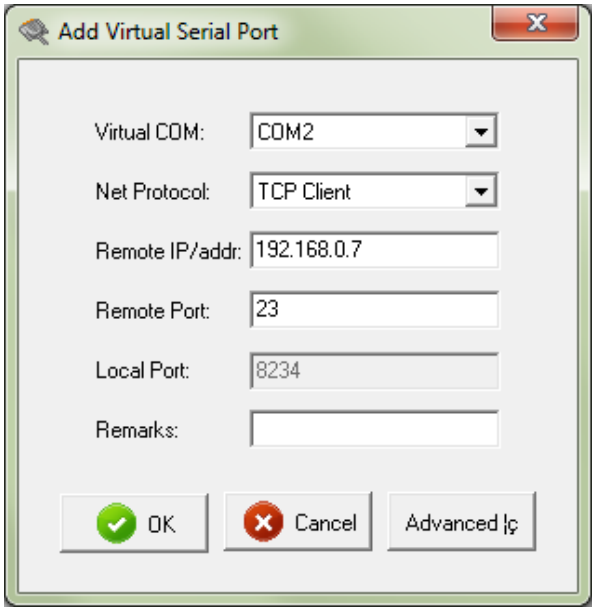
This converter has two serial ports, one RS232 port and one RS485 port, both ports can be used as individual COM ports and transfer two separate data streams at the same time.

To create a virtual COM port for the US2000A converter which can be used by a serial application or serial device you need to use a COM port redirector. You can either use the VCOM software included with the US2000A or a 3rd party VCOM software such as "PortShare" which is free or "Fabulatech COM port Redirector" which is a 15-day trial and can be purchased from fabulatech.com.

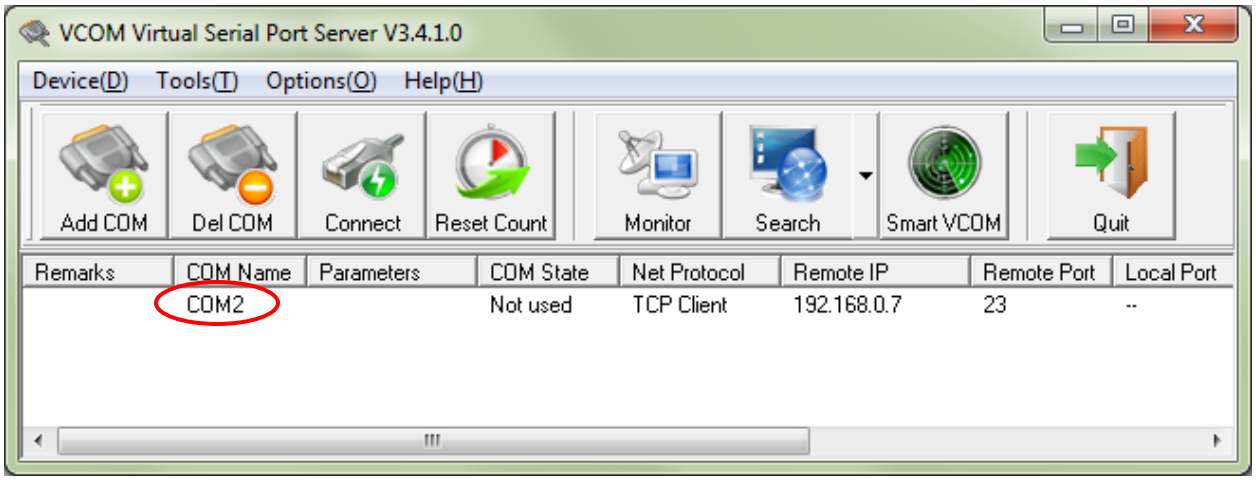
Start the VCOM software and click the "Add COM" button:



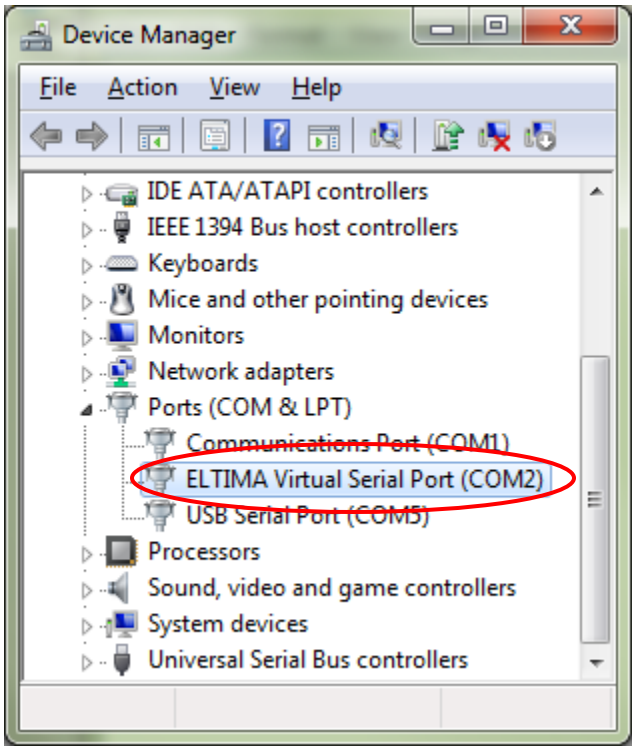
Select the COM port number you want to create and enter the IP address and LAN port number (COM port 0 = LAN port 23, COM port 1 = LAN port 26) as shown below:



The port will now be created:



Check in Windows Device Manager to see if the COM port has been successfully created:



To create another COM port simply follow the same procedure but instead of entering LAN port “23” you need to enter LAN port “26” which are the defaults for each COM port.

Making a loop-back test.

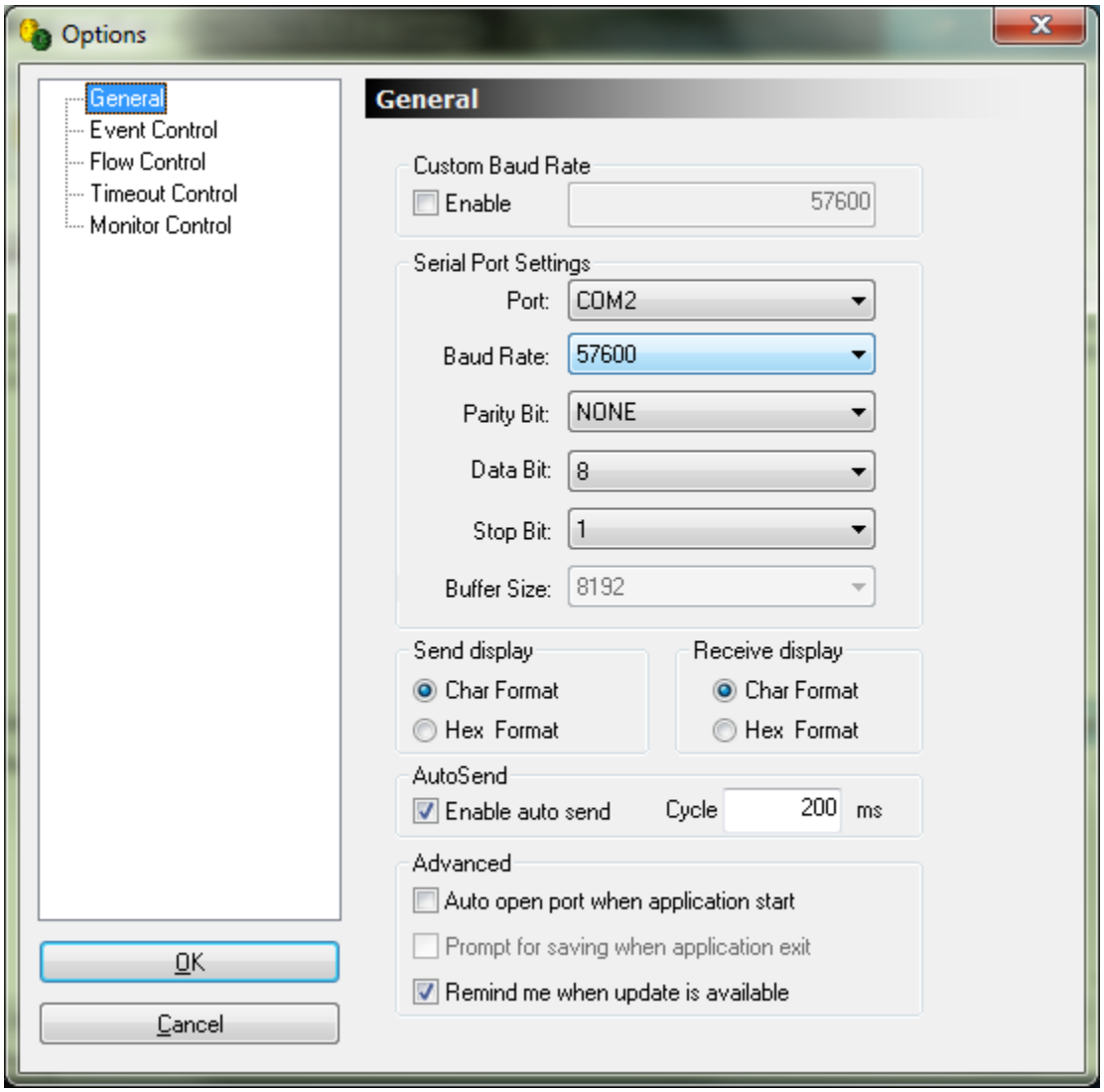
To verify if the US2000A converter is working properly and the port(s) has been successfully created you can make a loop-back test.

First carefully use a paper clip or similar to short the RX (pin 2) and TX (pin 3) pins at the end of the included Ethernet cable and connect the cable to the US2000A module's DB9 connector.

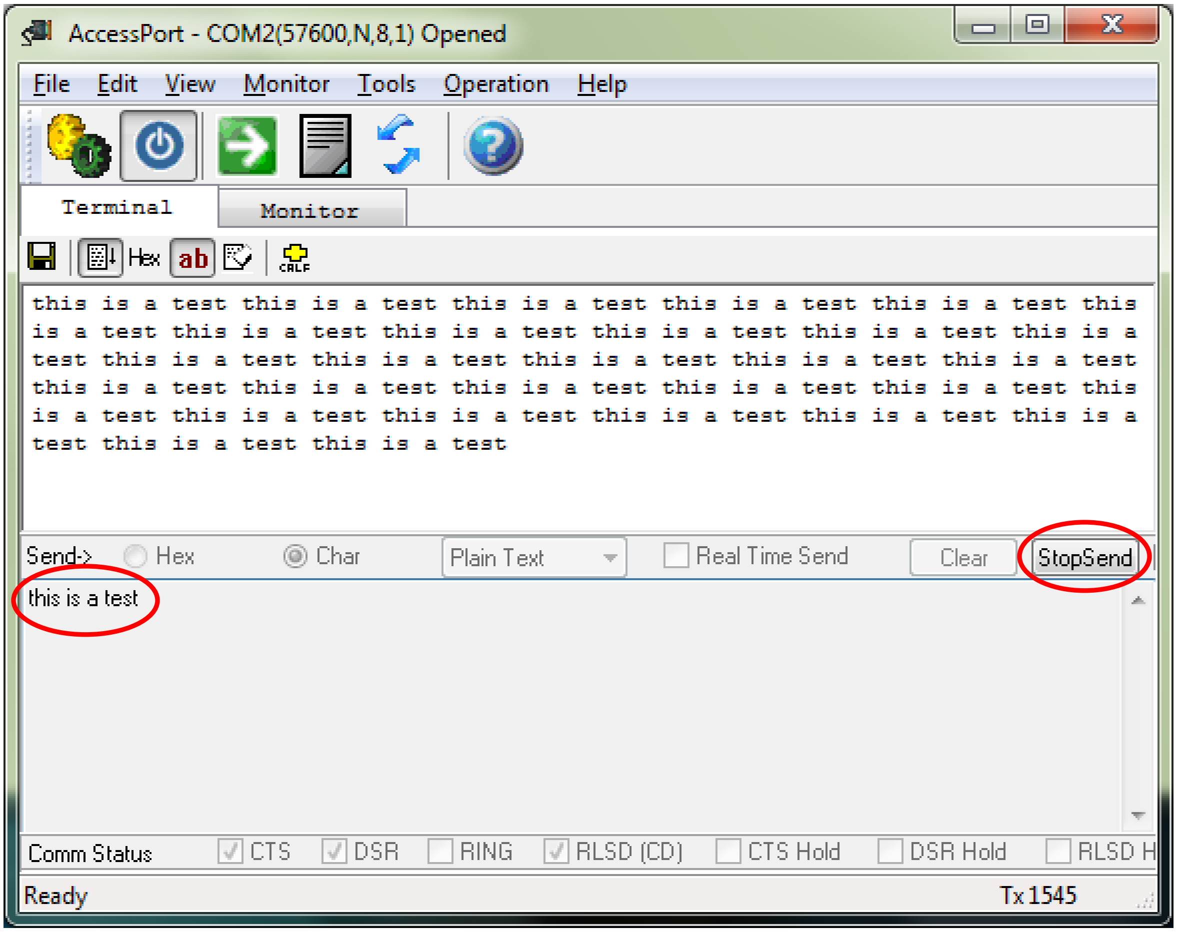
Connect the converter to your computer and create a virtual COM port as described above.

Open AccessPort (can be downloaded for free from http://www.usconverters.com).

Configure AccessPort's parameters to match the virtually created COM port (the COM port created by the VCOM software), in this example COM 2, and click the OK button:



The port will now open.



Enter a text string in the lower (send) window in AccessPort and click the AutoSend button. The characters should now be sent via virtual COM 2, out through the network cable to the US2000A module, out on the TX pin, back into the RX pin, back through the Ethernet cable, back into virtual COM port 2 and should appear in AccessPorts upper (receive) window.

If you remove the jumper at the end of the serial cable connected to the US2000A the data flow should stop.

Making this loopback test will confirm that the COM port has been successfully created and that the US2000A can send and receive data, ensuring that the module has been setup correctly.

If you try to open the port but it is already in use or otherwise occupied by the operating system you will get the following error message from AccessPort. Using a different port is the easiest solution.