

How to setup the USC-HF5122 Serial to Ethernet converter (based on Windows 10, 32/64-bit)

This Step-by-step guide explains how to get started using the USC-HF5122 Serial to Ethernet converter.

Configuring the parameters	2
Accessing the parameters by using a web browser	3
How to create a virtual COM port	6
Making a loop-back test	9
Troubleshooting / FAQ	12



Configuring the parameters.

There are two ways of configuring the parameters of the USC-HF5122 module:

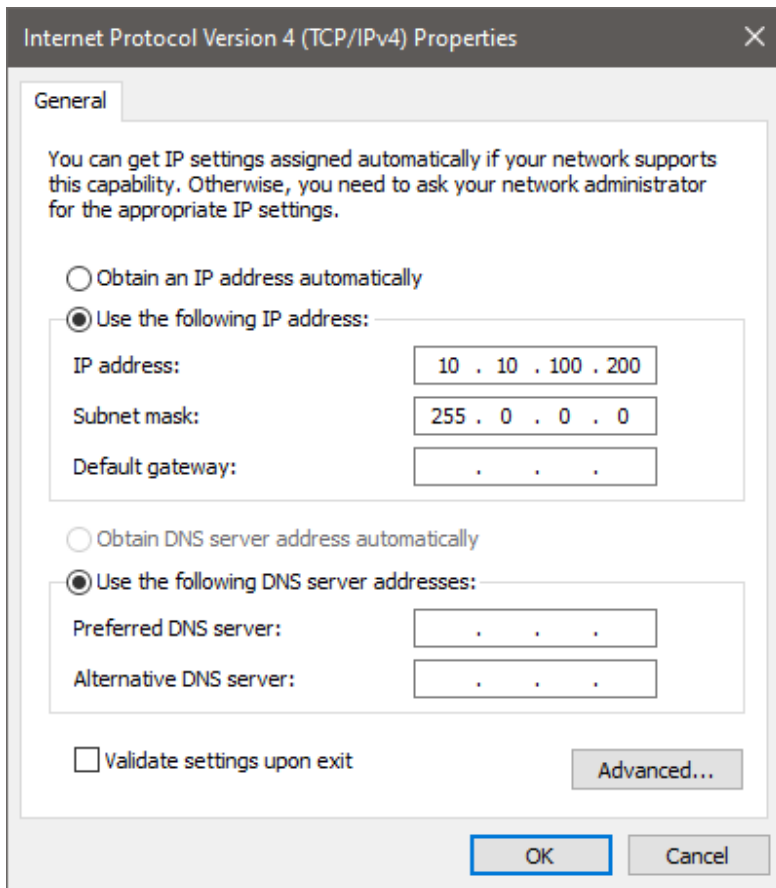
- By connecting the converter to your computer using a standard Ethernet cable and then use a web browser to login to the converter. This will work locally or remotely over a network.
- By connecting the converter to your computer using a standard Ethernet cable and then use the configuration utility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

We will here describe the first method as this is the most user-friendly way of configuring the converter.

Accessing the parameters using a web browser.

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

Make sure the network connection you connect the USC-HF5122 to is set to a static IP address in the same subnet as the USC-HF5122 such as 10.10.100.200 as shown below.

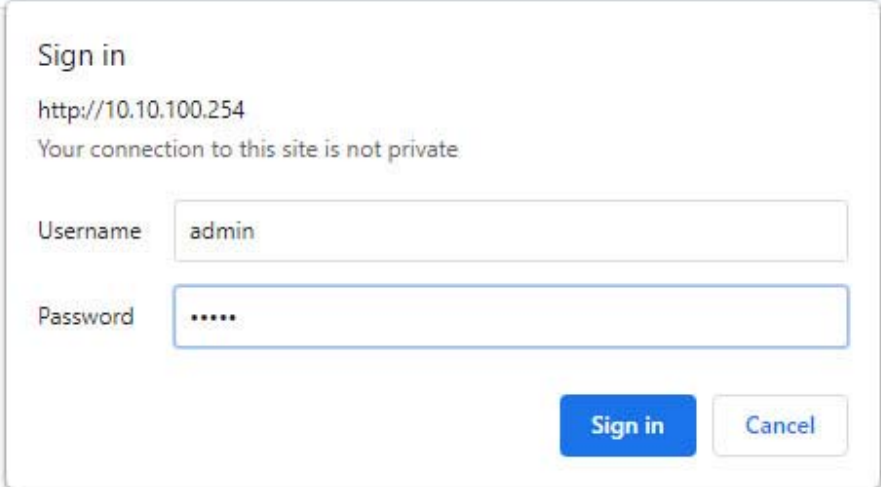


Open a web browser and enter the USC-HF5122's IP address which is 10.10.100.254

You will now see the login screen.

User: **admin**

Password: **admin**



Sign in

http://10.10.100.254

Your connection to this site is not private

Username

Password

After the login screen the Status page should show up:

The screenshot shows a web browser window with the URL 10.10.100.254/index.html. The page title is 'Status' and the subtitle is 'System running status overview'. The left sidebar contains navigation options: STATUS, SYSTEM SETTINGS, SERIAL PORT SETTINGS, COMMUNICATION SETTINGS, ADVANCED SETTINGS, and OTHERS. The main content area is divided into two sections: 'System State' and 'Serial Port State-1'. The 'System State' section contains a grid of system parameters, and the 'Serial Port State-1' section contains a grid of serial port statistics.

System State	
Product Name HF5122	MAC 98D8635AA8C0
DHCP Enable	IP 0.0.0.0
Subnet Mask 0.0.0.0	Gateway 0.0.0.0
DNS 10.10.100.254	Firmware Version 1.40.2c
System Time NTP Disabled	Total Running Time 0-Day 0:5:28
Remaining RAM 1500160	Max Block Size 1500160
Configuration Protected Disable	

Serial Port State-'1'	
Received Bytes 2	Received Frames 1
Sent Bytes 0	Sent Frames 0
Failed Bytes 0	Failed Frames 0
Config 115200,8,1,NONE	

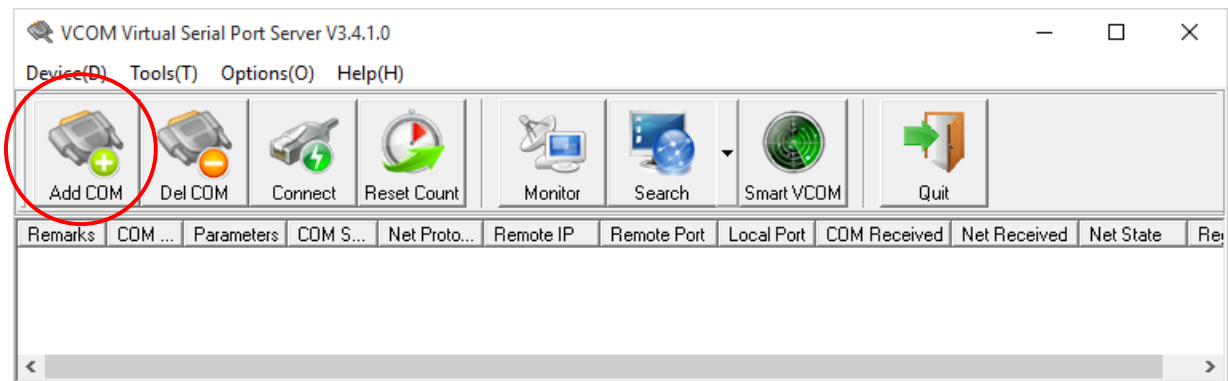
The admin pages can now be accessed and the parameters configured. Remember to save each page if you change a setting and after desired settings are configured the converter should be rebooted.

How to create a virtual COM port

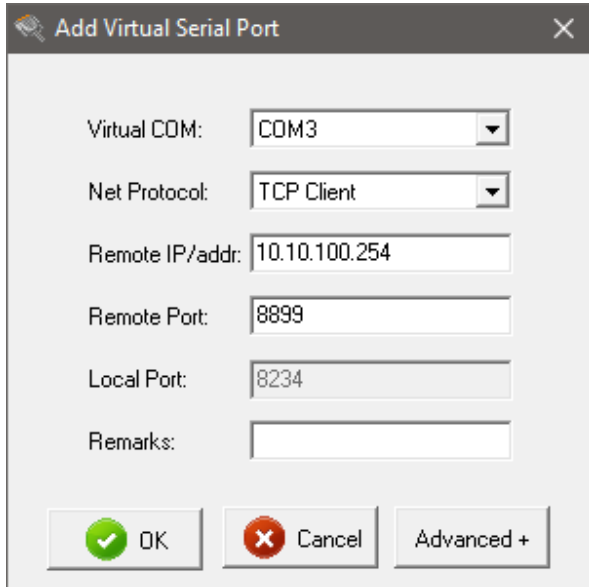
The USC-HF5122 has two serial ports (RS232, RS485 and RS422). All ports can be used as individual COM ports and transfer two separate data streams at the same time.

To create a virtual COM port for the USC-HF5122 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 USC-HF5122 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.

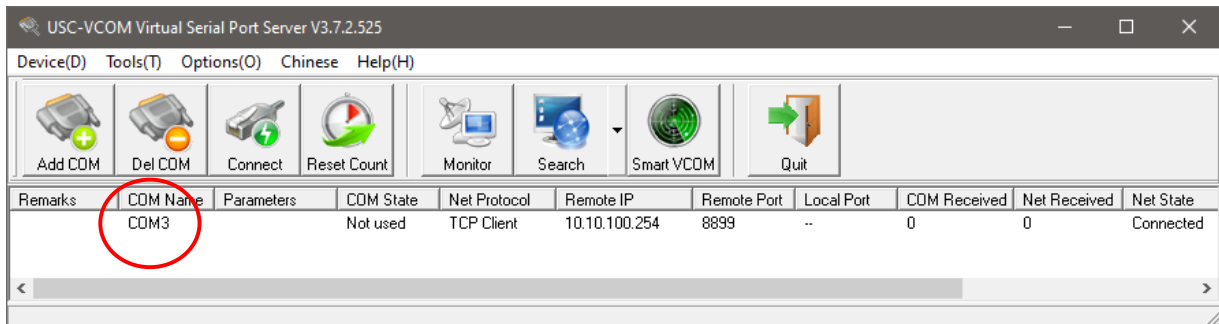
Start the VCOM software and click the "Add COM" button:



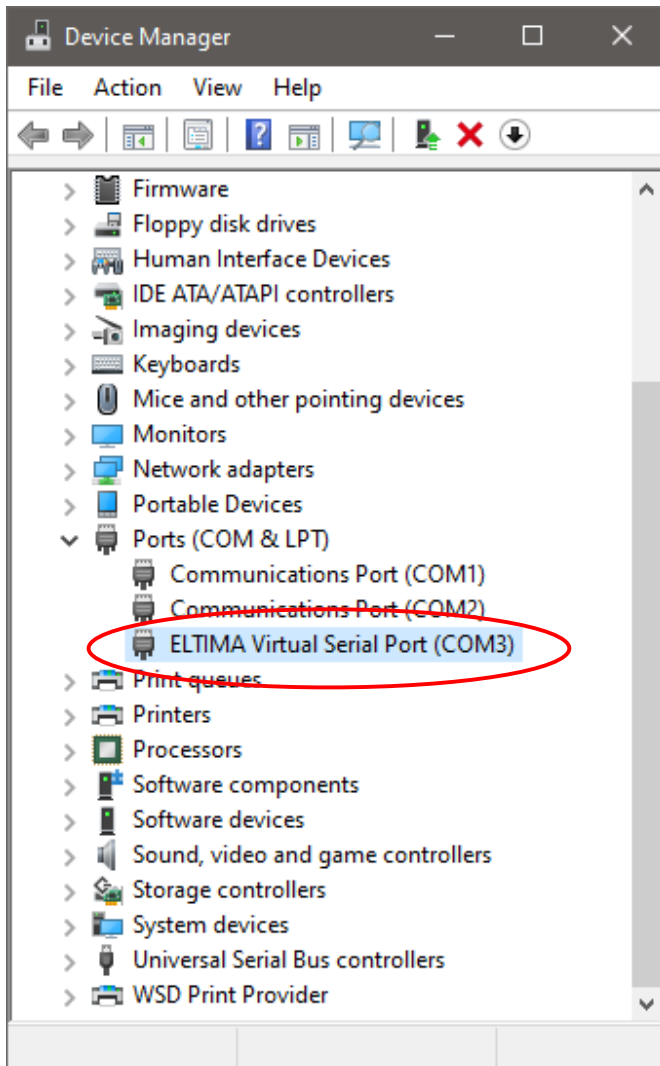
Select the COM port number you want to create and enter the IP address and LAN port number (8899) as shown below:



The port will now be created:



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



Making a loop-back test.

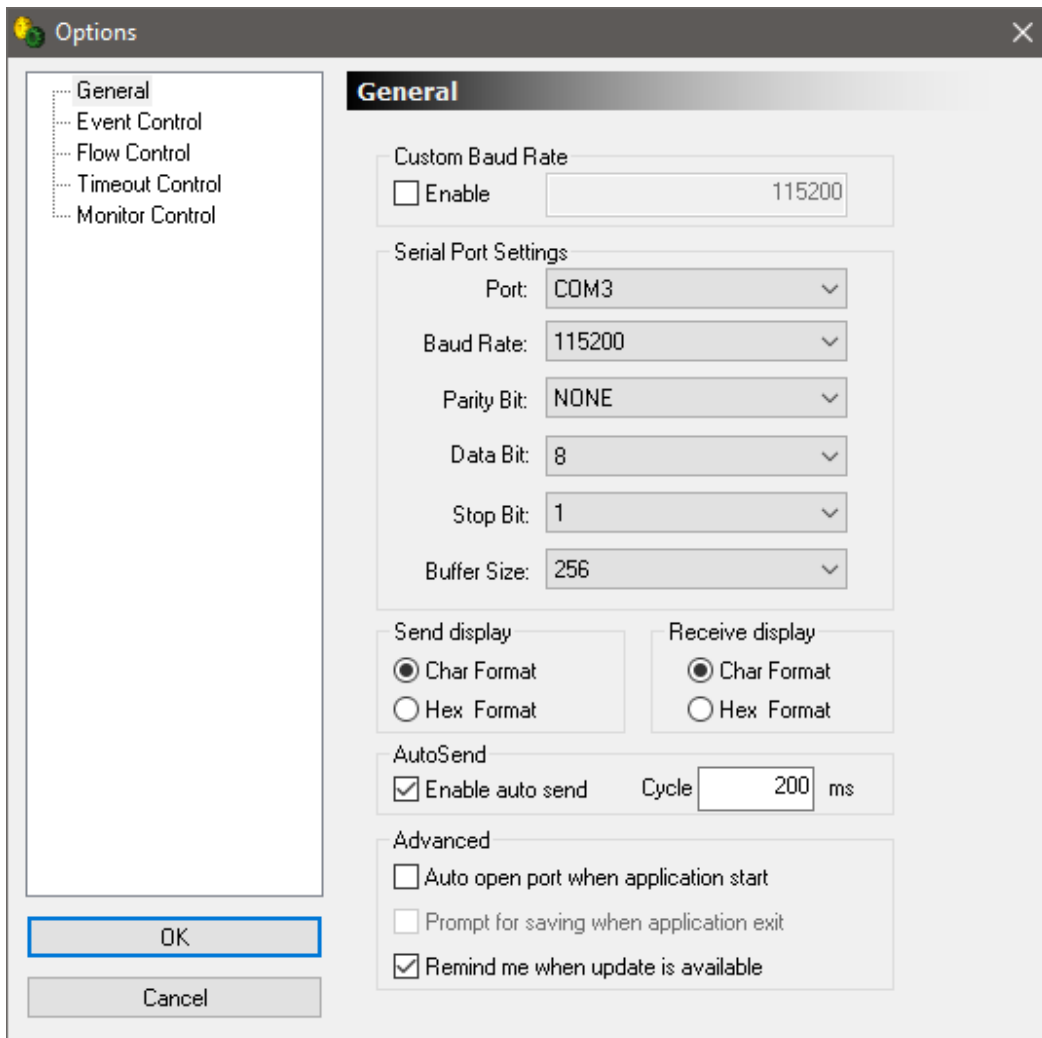
To verify if the USC-HF5122 converter is working properly and the port(s) has been successfully created you can make a loop-back test.

First carefully use a paper clip or similar to short the RX (pin 2) and TX (pin 3) pins in the USC-HF5122's DB9 port. If you have a serial cable or a screw terminal it is easier to short the pins.

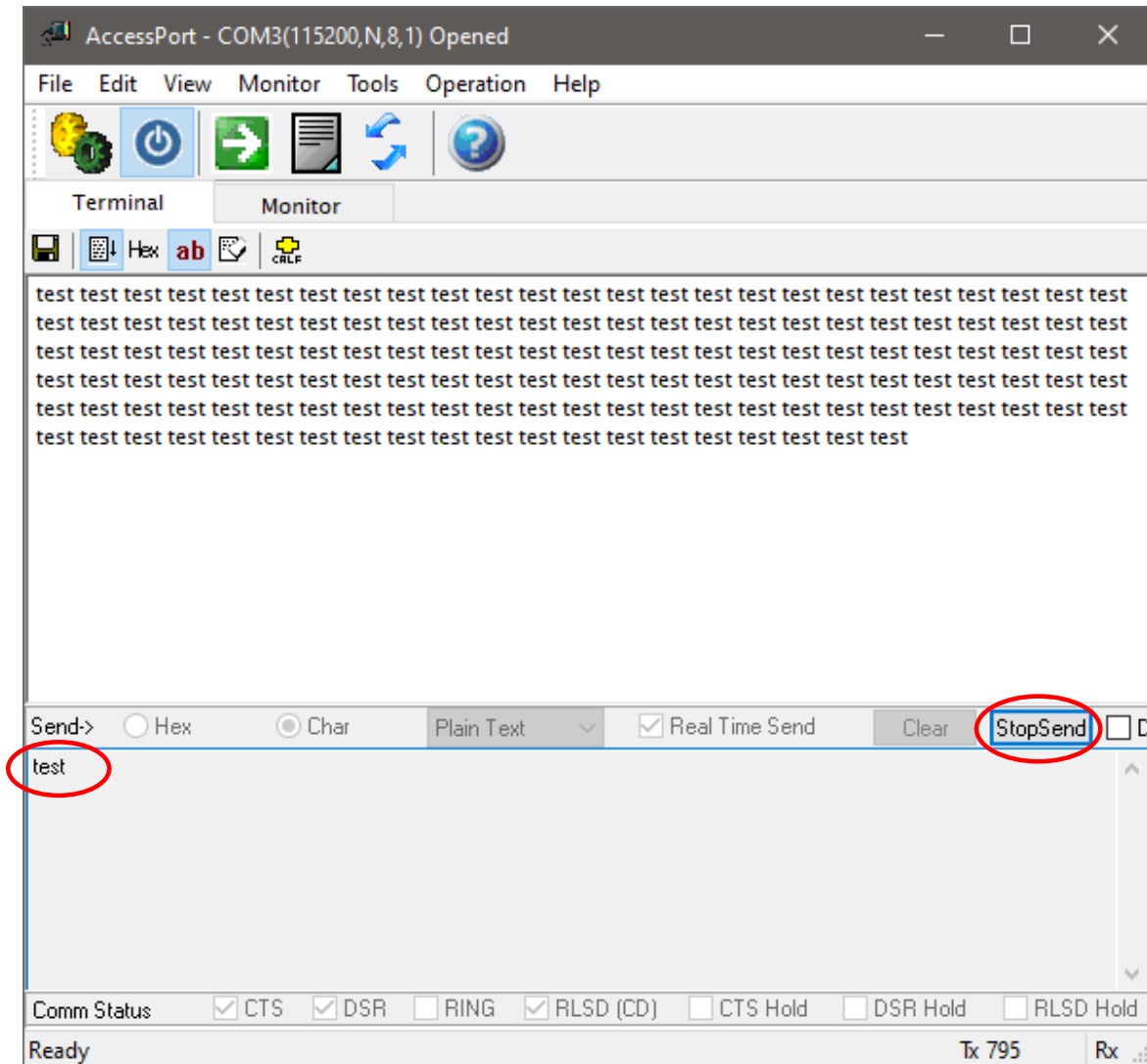
Connect the converter to your computer with an Ethernet cable and create a virtual COM port as described above.

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 3, and click the OK button:



The port will now open.

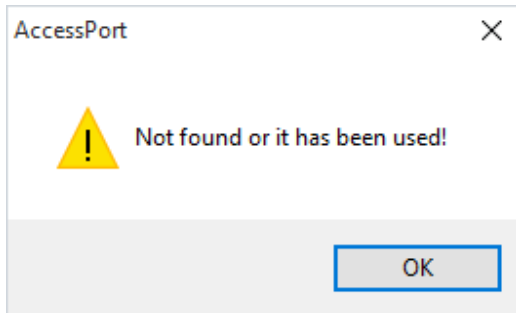


Enter a text string in the lower (send) window in AccessPort and click the AutoSend button. The characters should now be sent via virtual COM 3, out through the network cable to the USC-HF5122 module, out on the TX pin, back into the RX pin, back through the Ethernet cable, back into virtual COM port 3 and should appear in AccessPorts upper (receive) window.

If you remove the jumper at the end of the serial cable connected to the USC-HF5122 the data flow should stop.

Making this loopback test will confirm that the COM port has been successfully created and that the USC-HF5122 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.



Troubleshooting / FAQ

When using the USC-HF5122 with Modbus we recommend setting the connected devices to the following:

Ethernet side device needs to be set to Modbus TCP/IP protocol.

Serial side device should be set to Modbus RTU protocol.