

How to setup part USCDR301/USCDR302 Industrial Serial to Ethernet converter (based on Windows 10, 64-bit)

This Step-by-step guide explains how to get started

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Powering the converter.

The USCDR301/USCDR302 converter can be powered by a 5 to 36VDC 1.0A (max) voltage by using a standard connector jack size of 5.5 x 2.1 x 11.5mm or through screw terminals. A power connector wire (barrel connector to stripped wires) is included with the converter.

When power is applied to the converter the red "PWR" LED should be solid ON and the green "WORK" LED should be flashing.

A standard 110VAC / 5VDC power adapter as shown below can be used to power the converter. Alternatively it can be powered via screw terminals.



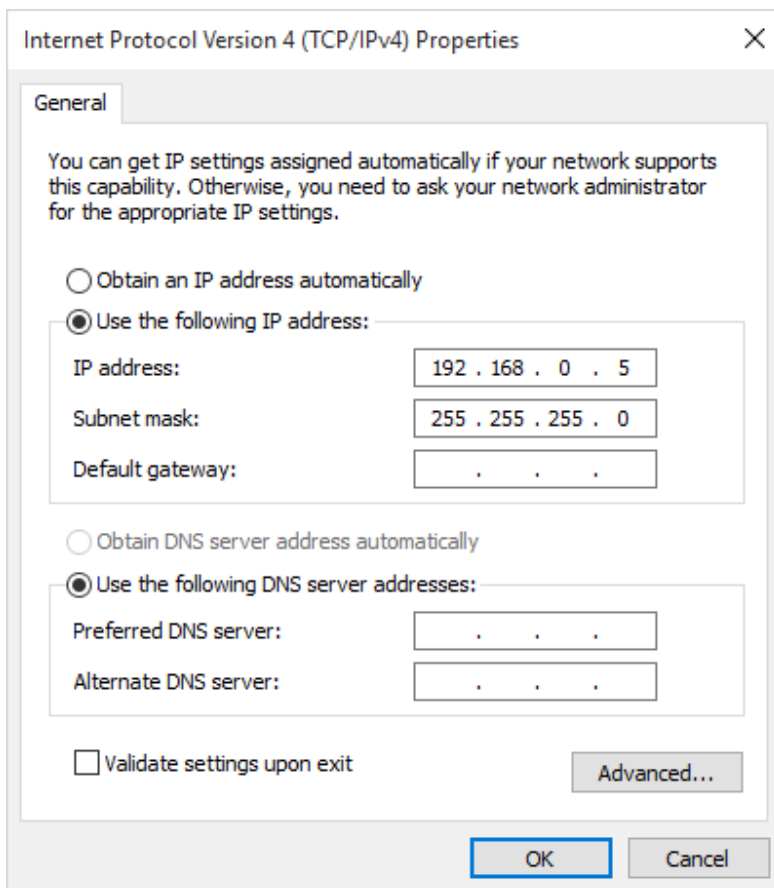
Configuring the parameters.

The converters parameters can be configured using a standard web-browser simply 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. Below we describe the procedure.

Accessing the parameters using a web browser.

Connect the converter to your computer using a standard Ethernet cable and turn on the power supply.

Make sure the network connection you connect the USCDR301/USCDR302 to is set to a static IP address in the same subnet as the USCDR301/USCDR302 such as 192.168.0.xxx as shown below.

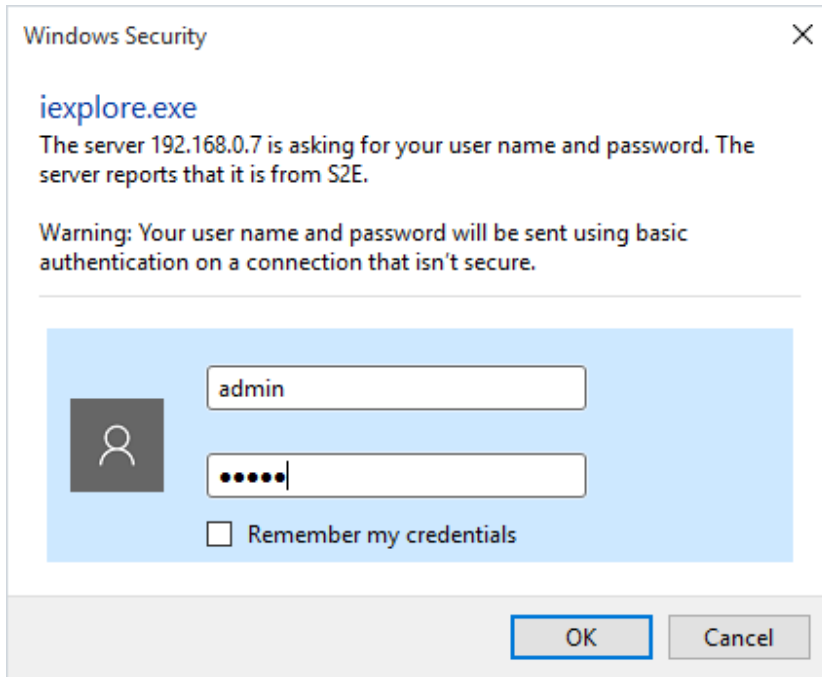


Open a web browser and enter the USCDR301/USCDR302's IP address which is 192.168.0.7

You will now see the login screen.


User: **admin**

Password: **admin**



After the login screen the Status page should show up:

Firmware Version:V5011

 **SERIAL ETHERNET CONVERTER**
PART NUMBER: USCDR301

Current Status	Status
Local IP Config	Module Name: USCDR301
Serial Port	Current IP Address: 192.168.0.7
Expanded Function	MAC Address: 9c-a5-25-9f-0a-53
Misc Config	TX Count/RX Count: 0/ 0 bytes
Reboot	Remote IP/TX/RX:

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How to create a virtual COM port

To create a virtual COM port for the USCDR301/USCDR302 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 USCDR301/USCDR302 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.

First login to the web admin using a web browser at 192.168.0.7 and change ‘Work mode’ to ‘TCP Server’, and enter a local port number (in this example we use port 2). Click ‘Save’ and ‘Restart Module’:

Firmware Version:V5011

SERIAL ETHERNET CONVERTER
PART NUMBER: USCDR301

Current Status
Local IP Config
Serial Port
Expanded Function
Misc Config
Reboot

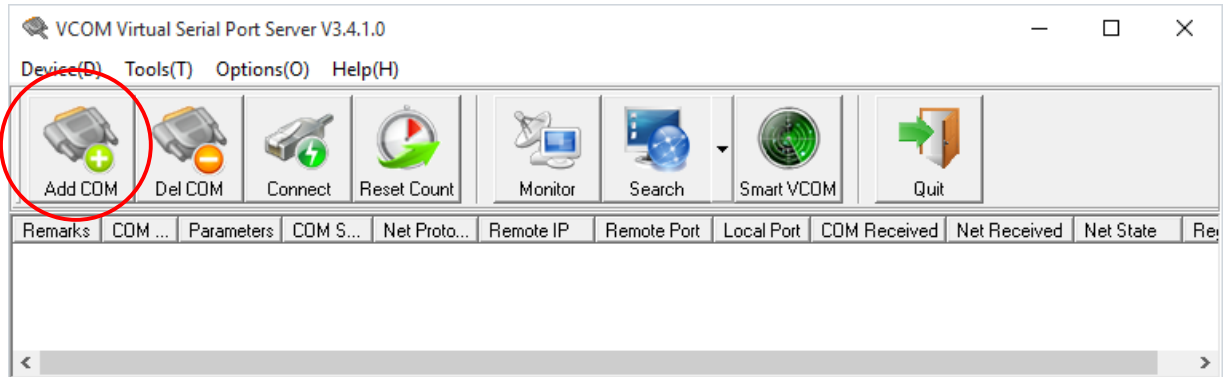
parameter

Baud Rate: 115200 bps(600~460.8K)
Data Size: 8 bit
Parity: None
Stop Bits: 1 bit
Local Port Number: 2 (1~65535)
Remote Port Number: 8234 (1~65535)
Work Mode: TCP Server
Remote Server Addr: 192.168.0.201 [192.168.0.201]
RESET:
LINK:
INDEX:
Similar RFC2217:

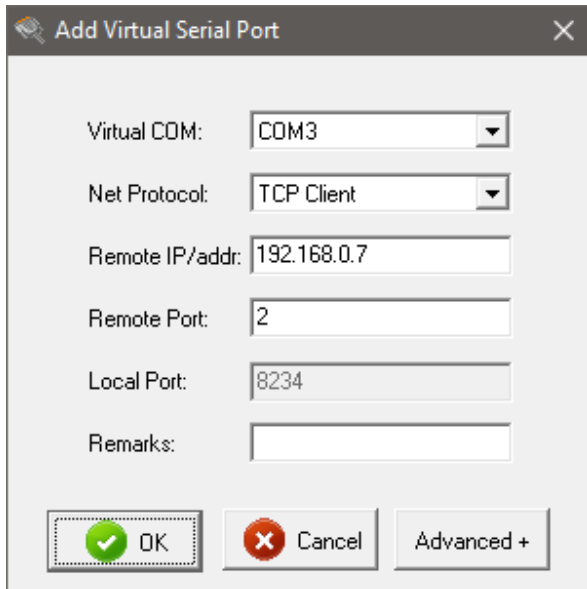
Save Cancel

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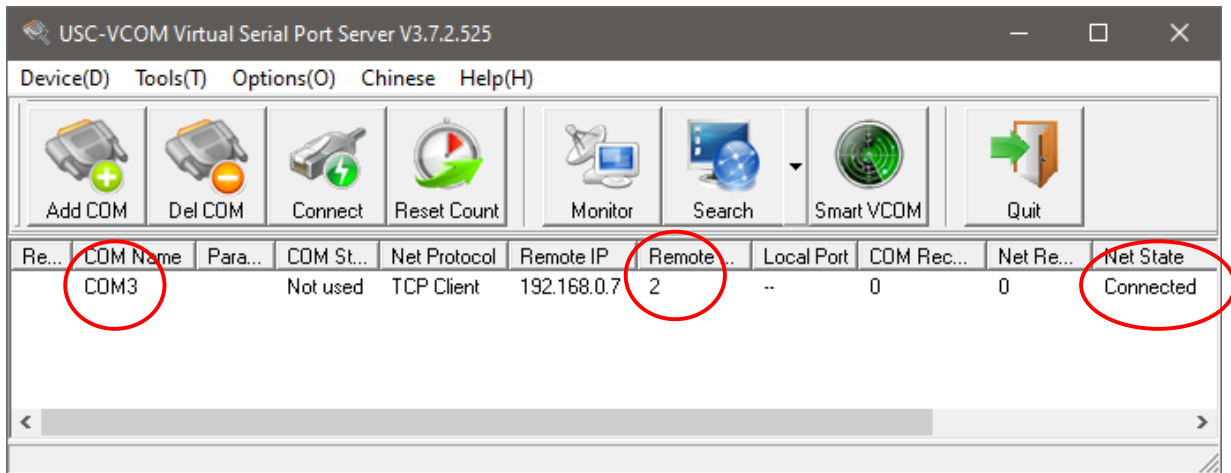
Start the VCOM software and click the “Add COM” button:



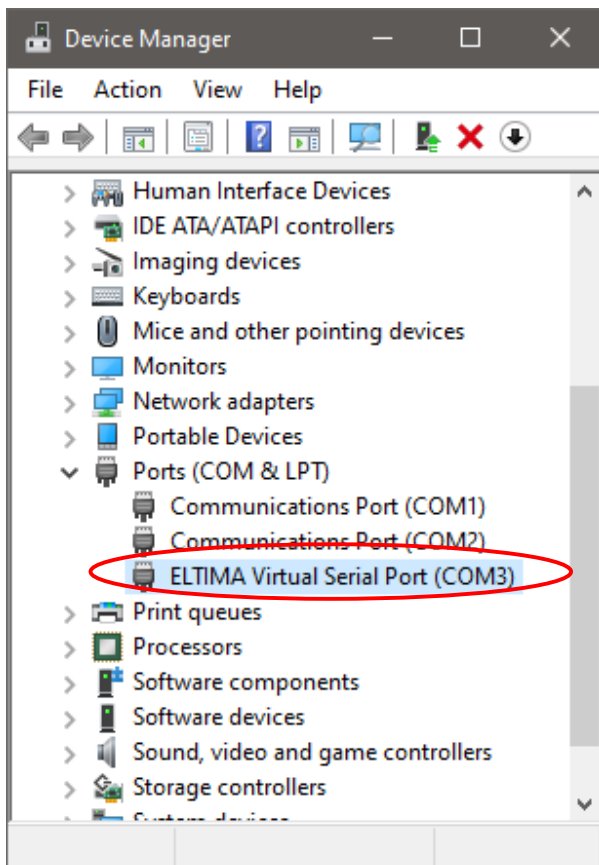
Select the COM port number you want to create and enter the IP address and LAN port number:



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 (USCDR301 ONLY)

To verify if the USCDR301 converter is working properly and the port has been successfully created you can make a loop-back test.

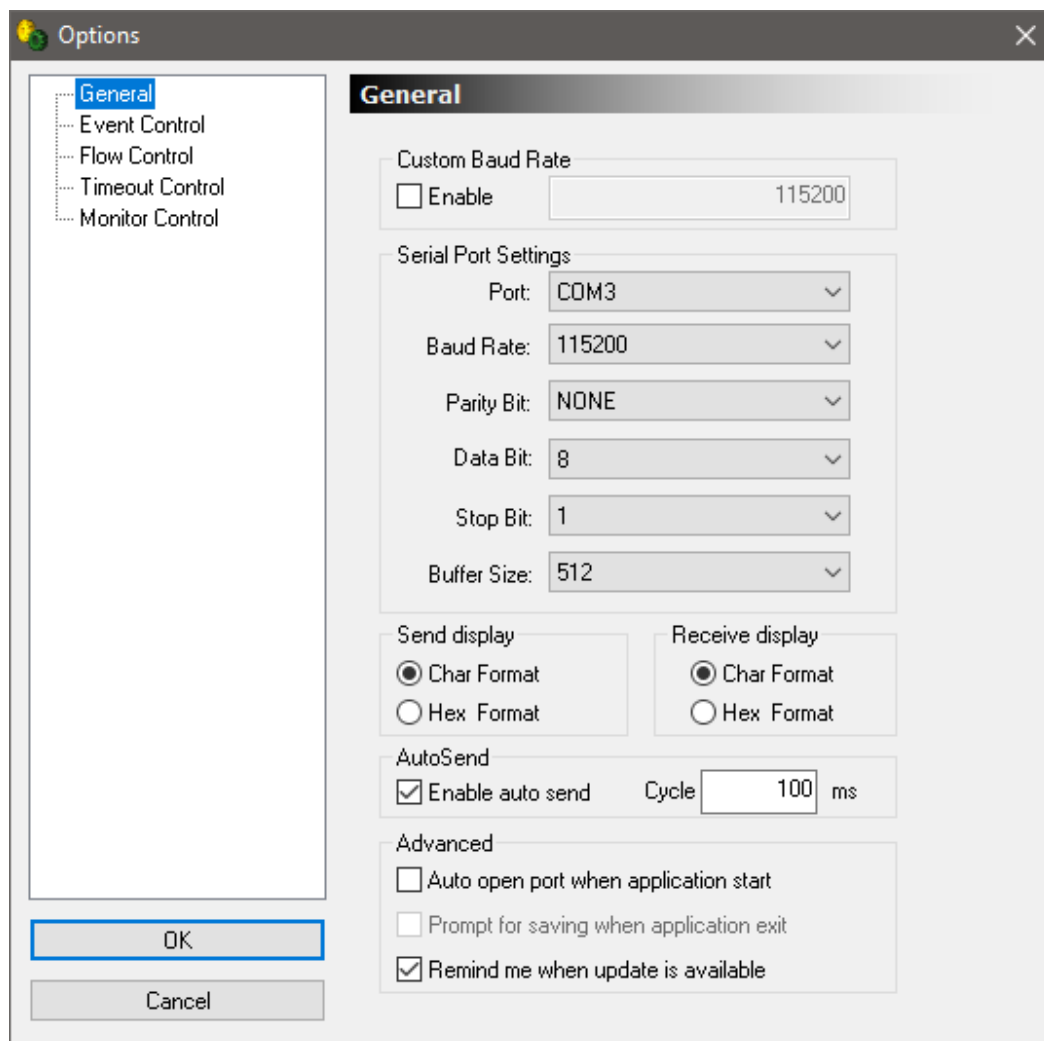
First carefully use a paper clip or small wire or similar to short the RX and TX screw terminals in the USCDR301s RS232 port.

NOTICE: THIS CAN ONLY BE DONE WITH THE USCDR301 WHICH HAS A RS232 PORT, NOT THE USCDR302 WHICH HAS A RS485 PORT.

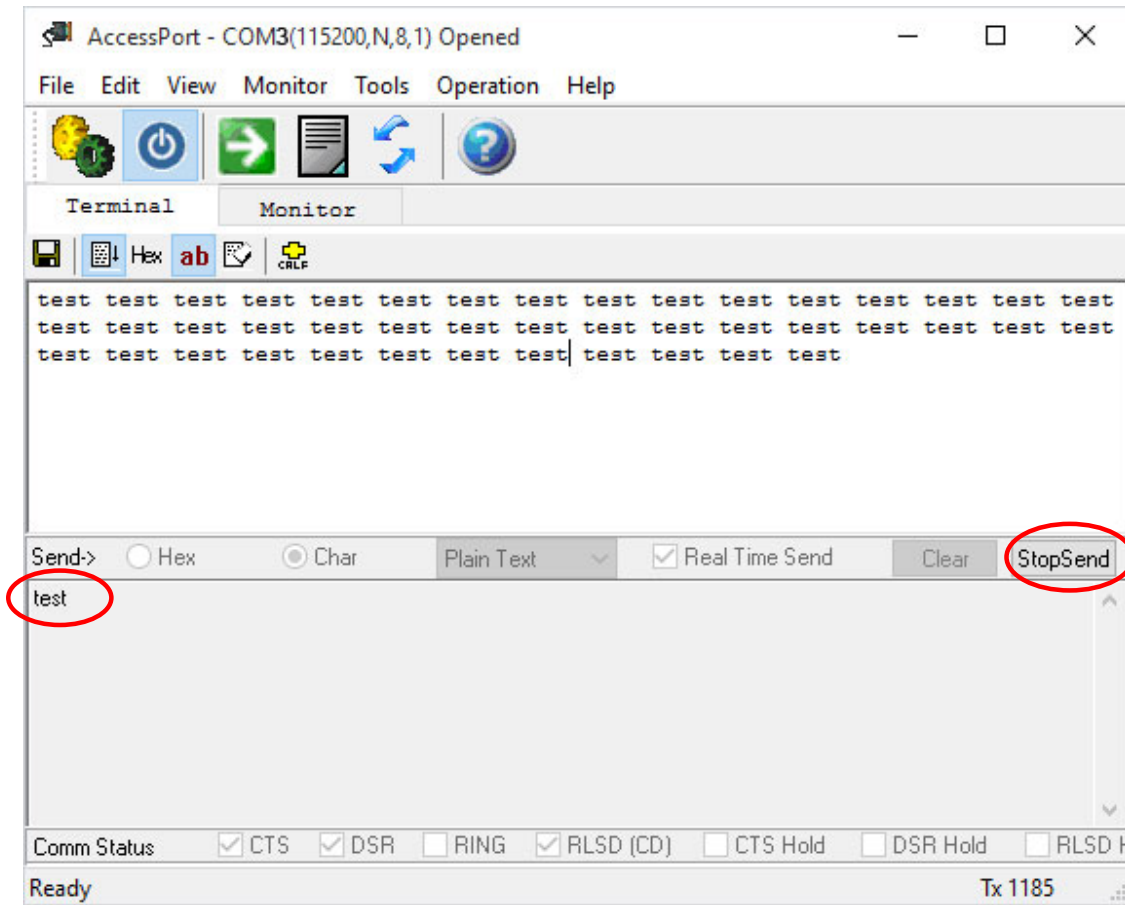
Connect the converter to your computer with an Ethernet cable and create a virtual COM port as described above.

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.

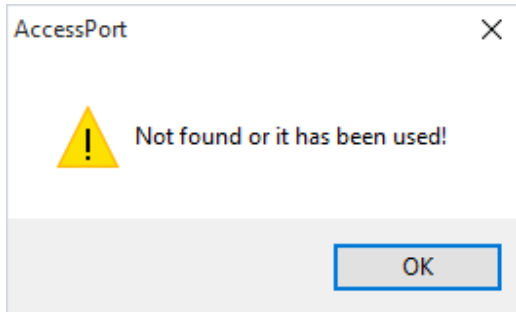


Enter a text string in the lower (send) window in AccessPort and click the AutoSend button. The characters should now be sent via virtual COM 3, out through the network cable to the USCDR301/USCDR302 module, out on the TX channel, back into the RX channel, back through the Ethernet cable, back into virtual COM port 2 and should appear in AccessPorts upper (receive) window.

If you remove the jumper from the TX / RX channels the data flow should stop.

Making this loopback test will confirm that the COM port has been successfully created and that the USCDR301 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 USCDR301/USCDR302 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 to be set to Modbus RTU protocol.