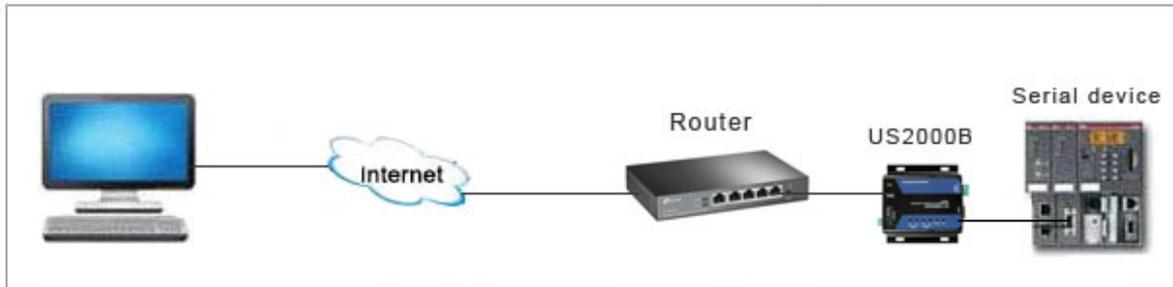


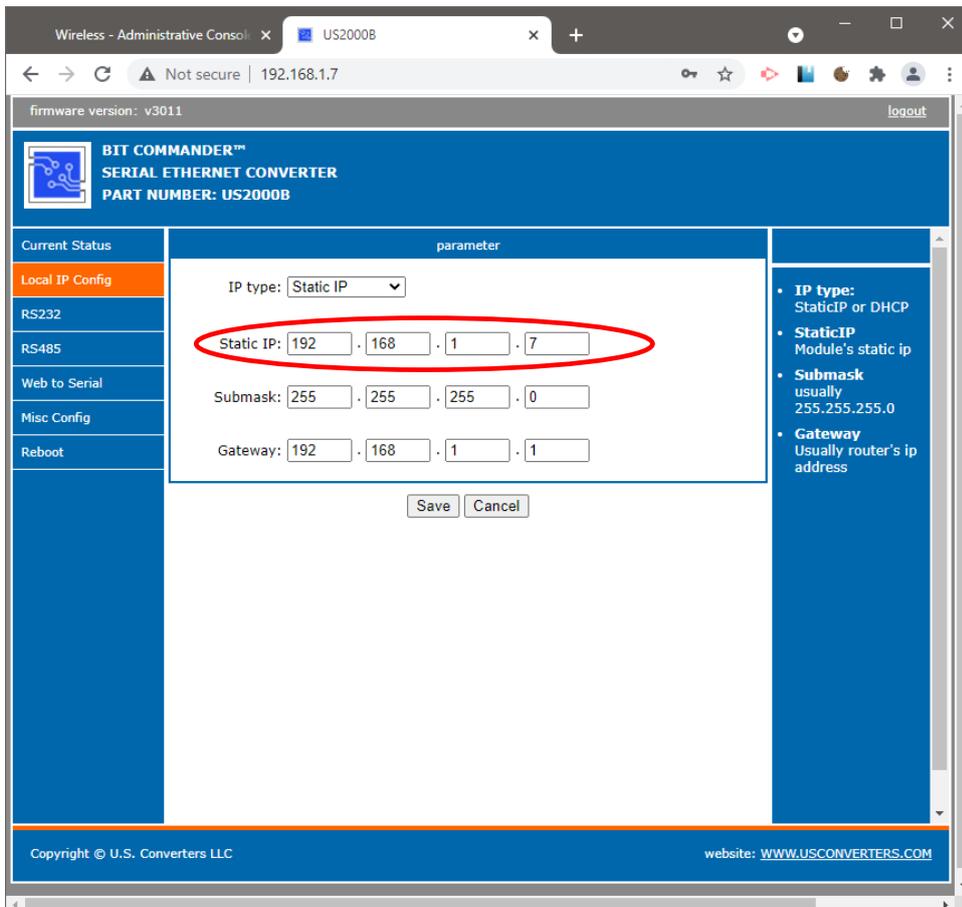
How to access a serial device over the Internet (using a wired router and noip.com)



First check what your router's IP address is. Many routers' default IP address is 192.168.1.1 so in this example we use that IP address for our router.

The US2000B's IP address is 192.168.0.7, we need to change that to match the router's subnet address, otherwise we can't communicate with the US2000B through the router.

So connect the US2000B to your PC using a standard Ethernet cable and login to the web admin at 192.168.0.7. Then change the IP to 192.168.1.7 on the "Local IP Config" page:



Remember to click the Save button.

Disconnect the US2000B from your PC and connect it instead to your Internet router using a standard Ethernet cable. You should now be able to access the US2000B from your local PC at 192.168.1.7.

To be able to access the US2000B through the Internet from a remote PC you will need a static IP address. If you don't have that (most consumer and small businesses doesn't) then you can use a dynamic DNS (DDNS) service such as noip.com. Without getting into details of how a DDNS service works, it basically makes an ever-changing dynamic IP address point to where you need it.

Start by creating an account at <https://www.noip.com>.

Once you have created the account you will need to create a hostname. Enter the name of your choice in the 'Hostname' field, select 'DNS Host (A)' and enter your public IP address in the 'IPv4 Address' field. You can find your public IP address by going to Google and enter 'my ip', or use one of the IP search websites.

Click the 'Create Hostname' button.

The screenshot shows the 'Create a Hostname' interface on the noip.com website. The form is titled '+ Create a Hostname'. It contains the following elements:

- Hostname:** A text input field containing 'US2000B-Test'.
- Domain:** A dropdown menu showing 'ddns.net'.
- Record Type:** A radio button selection area with 'DNS Host (A)' selected. Other options include 'AAAA (IPv6)', 'DNS Alias (CNAME)', and 'Web Redirect'.
- IPv4 Address:** An empty text input field.
- Wildcard:** A section with a link to 'Upgrade to Enhanced' to enable wildcard hostnames.
- MX Records:** A section with a link to '+ Add MX Records'.
- Buttons:** 'Cancel' and 'Create Hostname' buttons at the bottom right.

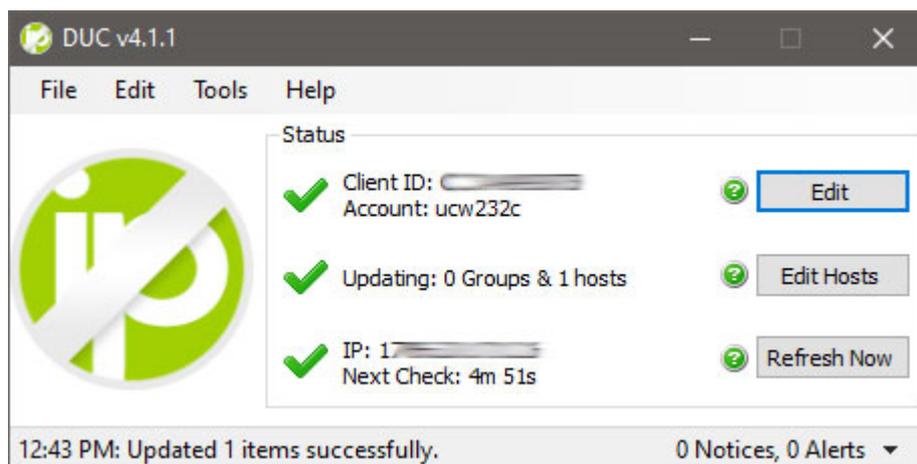
Red circles are drawn around the 'Hostname' field, the 'DNS Host (A)' radio button, and the 'IPv4 Address' field in the original image.

Now download the Dynamic Update Client (DUC) utility from noip.com. This utility will keep your public IP address in sync with your domain/the device you need to connect to.

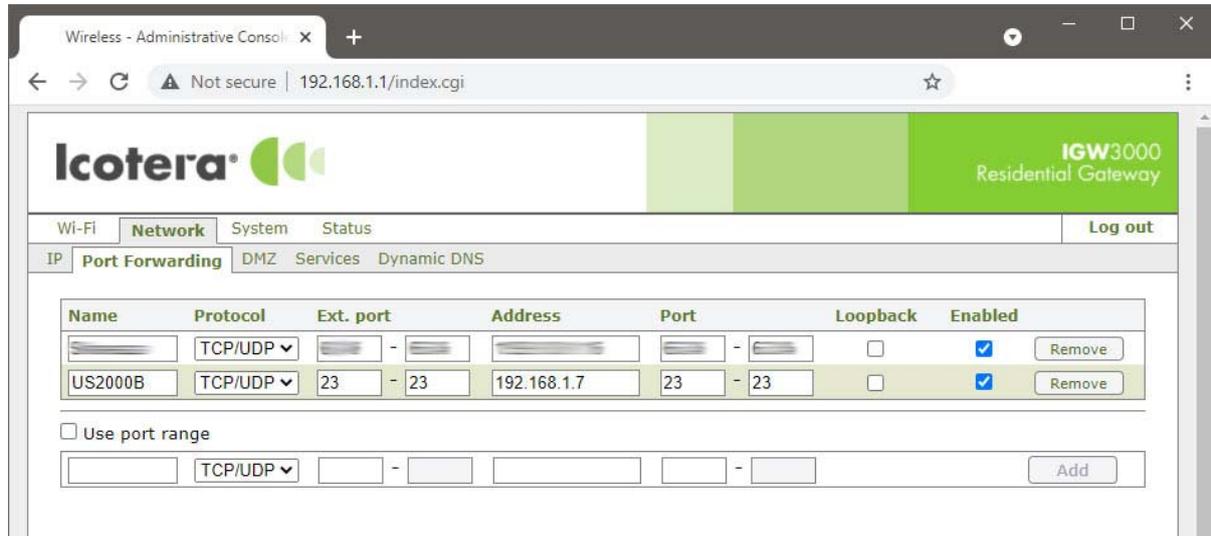
In the utility you will need to select the Hostname you created on noip.com:



The utility keeps the IP in sync:



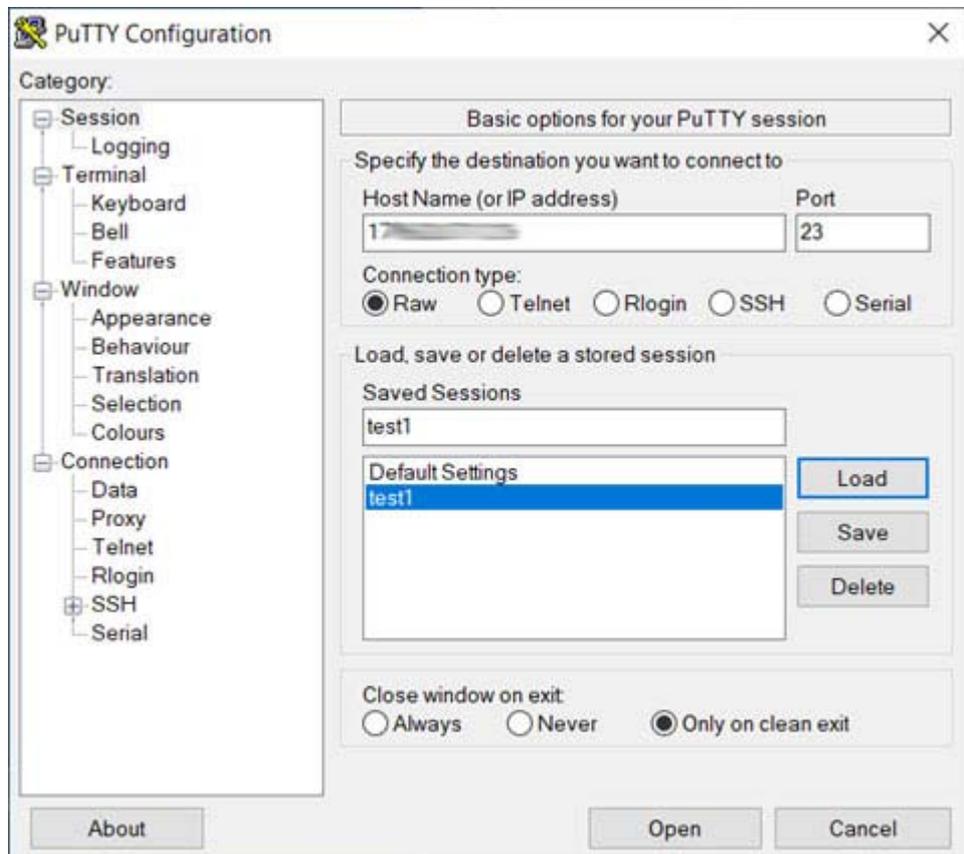
To be able to access the US2000B through the router you need to forward the ports. Log into your router’s admin panel look for the ‘Port forwarding’ page. In a Icotera IGW3000 router it looks like this:



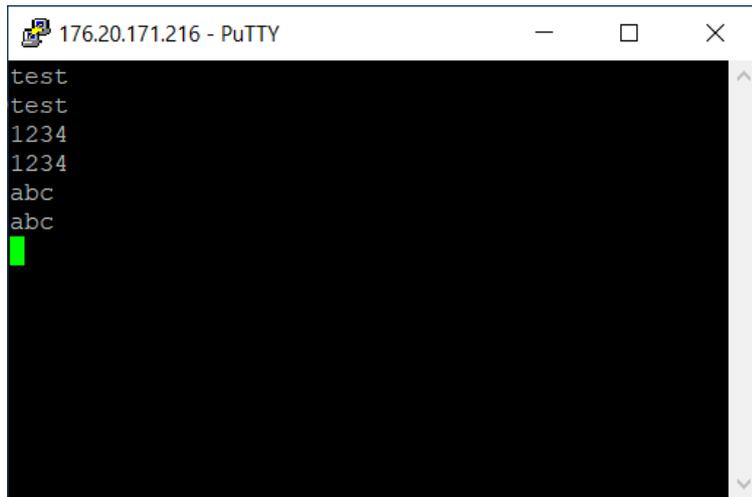
Enter the US2000B’s IP address (192.168.1.7) and port number (23 for RS232, and 26 for RS485. Each COM port has it’s own IP port number).

You are now ready to attempt to access the US2000B from a remote PC. The PC you are testing from should obviously be on a different network than what the US2000B is connected to.

If you want to communicate using a terminal over TCP you can connect using Putty:

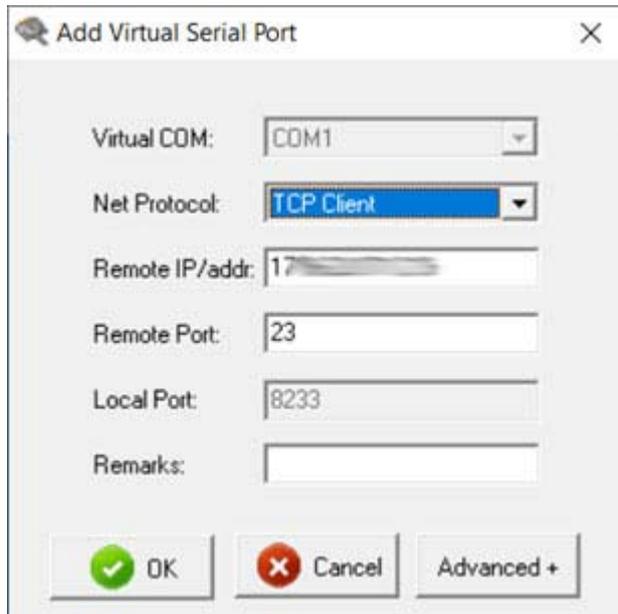


If you connect the TX pin to the RX pin in the US2000B's DB9 connector then you will see that you receive back what you send:

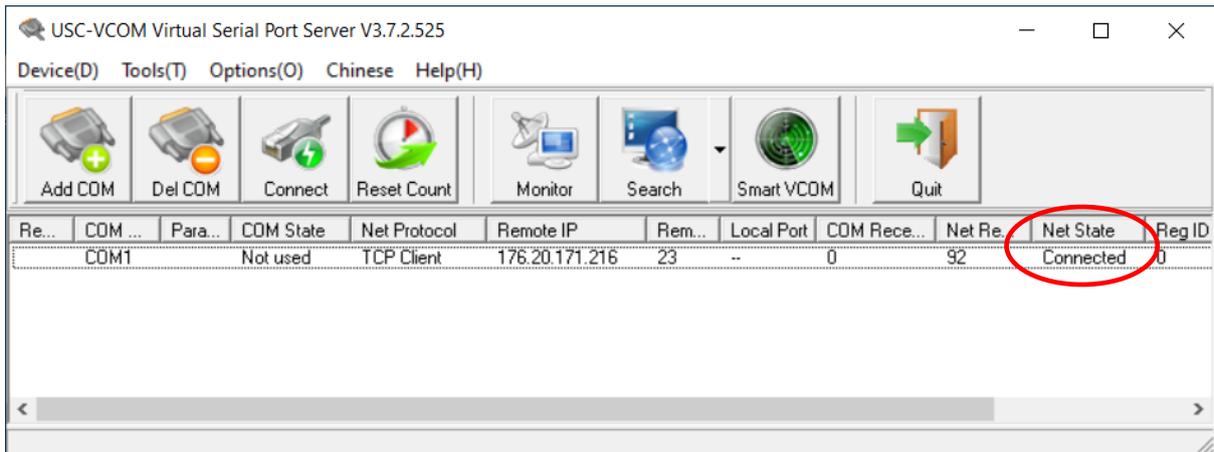


If you want to communicate with the US2000B through a virtual COM port, you can use the USC-VCOM software included with the US2000B.

First create a COM port by entering the US2000B's IP address and port number. The IP address must be the public IP address which the noip.com utility is using:



If the VCOM software connects successfully it will show 'Connected' under 'Net State':



To check if the virtual COM port is working properly and can communicate, you can use AccessPort to send and receive data. Enter the US2000B's port parameters and click OK:

