

## 1 TCP Ports

OPC90 can directly address Lantronix UDS 2100 by its IP address. This is accomplished by setting up TCP port mapping and then referenced the mapped port in the OPC90 DEVICE block port settings.

Select “Edit | TCP Ports” to edit the 16 available OPC90 TCP ports. When this item is selected the following dialog is displayed:

Enter TCP/IP and Port		
TCP_1P	172.24.210.77	10001
TCP_1S	172.24.210.77	10002
TCP_2P	172.24.210.66	10001
TCP_2S	172.24.210.66	10002
TCP_3P	172.24.210.66	10003
TCP_3S	172.24.210.66	10004
TCP_4P	172.24.210.88	10001
TCP_4S	172.24.210.88	10002
TCP_5P	IP address here	Port ?
TCP_5S	IP address here	Port ?
TCP_6P	IP address here	Port ?
TCP_6S	IP address here	Port ?
TCP_7P	IP address here	Port ?
TCP_7S	IP address here	Port ?
TCP_8P	IP address here	Port ?
TCP_8S	IP address here	Port ?

As can be seen by this dialog, OPC90 supports definition of up to 16 predefined TCP names. Definition of each name needs the TCP address of the Ethernet to Serial device and port number to attach with on that device. The intention of the TCP\_xP and TCP\_xS names indicate primary and secondary ports. These are useful when using the DEVICE block redundant interface and dual interface communication scheme. Any TCP name can be used with any DEVICE block port. The important thing is to pick one that corresponds with the correct TCP address. The naming convention of using the ‘P’ and ‘S’ is only for organization purpose.

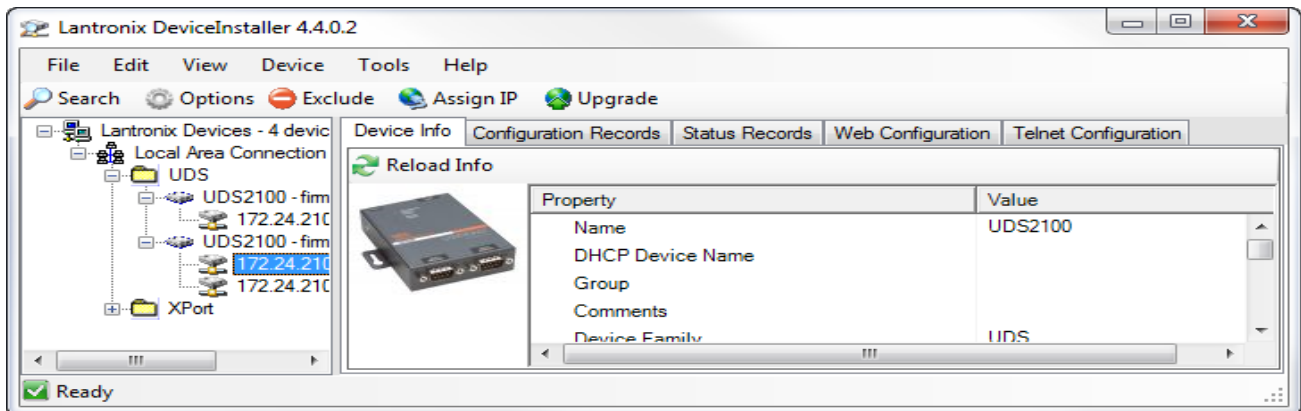
It is **important** to realize that OPC90 will setup a socket connection to the Ethernet to Serial device using the addressing information associated with the chosen TCP name.

The software provided with the Ethernet to Serial device sets up the addressing information. Specifically setup the following items.

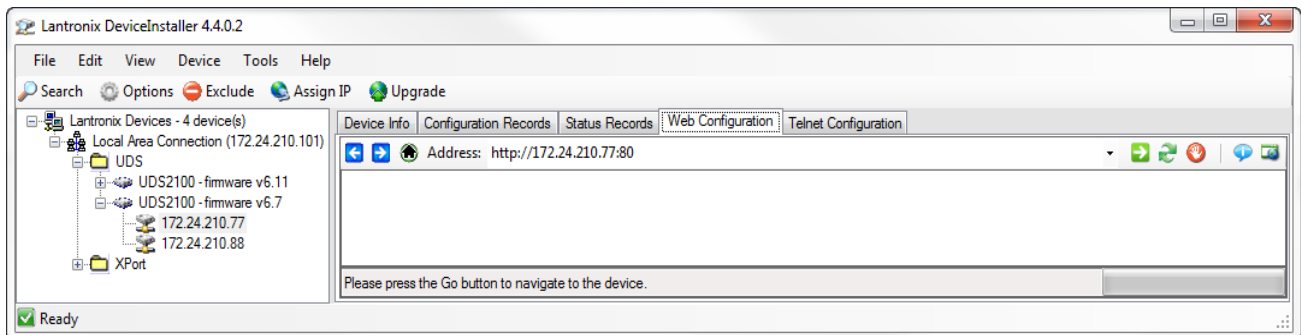
- Fixed IP address,
- Default baud rate of each serial port (must match CIU setting),
- Serial port set for 8 data bits, 1 stop bit, no parity and no flow control.

## 2 Setting Up Lantronix UDS 2100

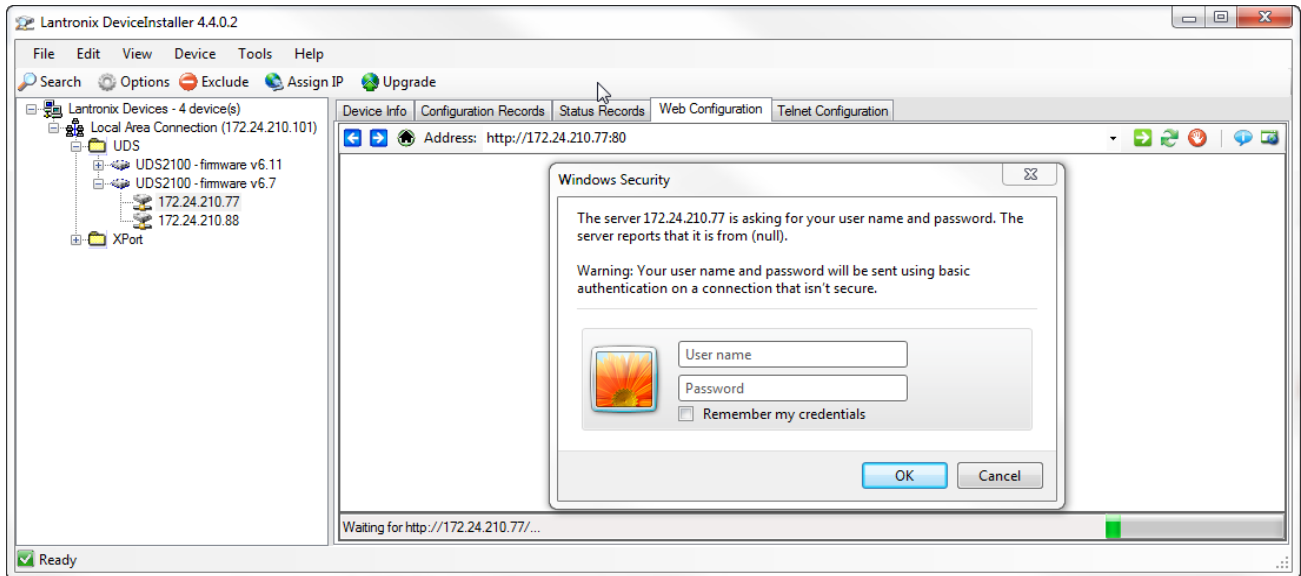
Setup of the UDS 2100 is accomplished using the Lantronix DeviceInstaller software. Run DeviceInstaller and click on the UDS 2100 device to be setup. It looks as follows.



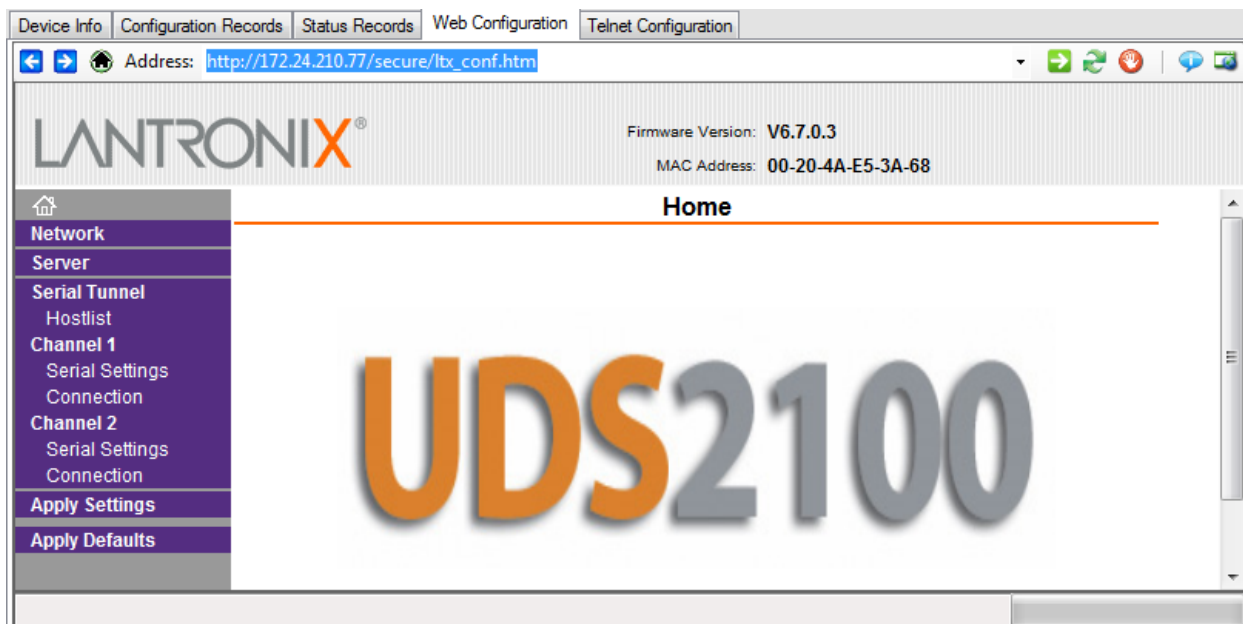
Its web interface tab is used for the setup. Click on the “Web Configuration” tab. It looks as follows.



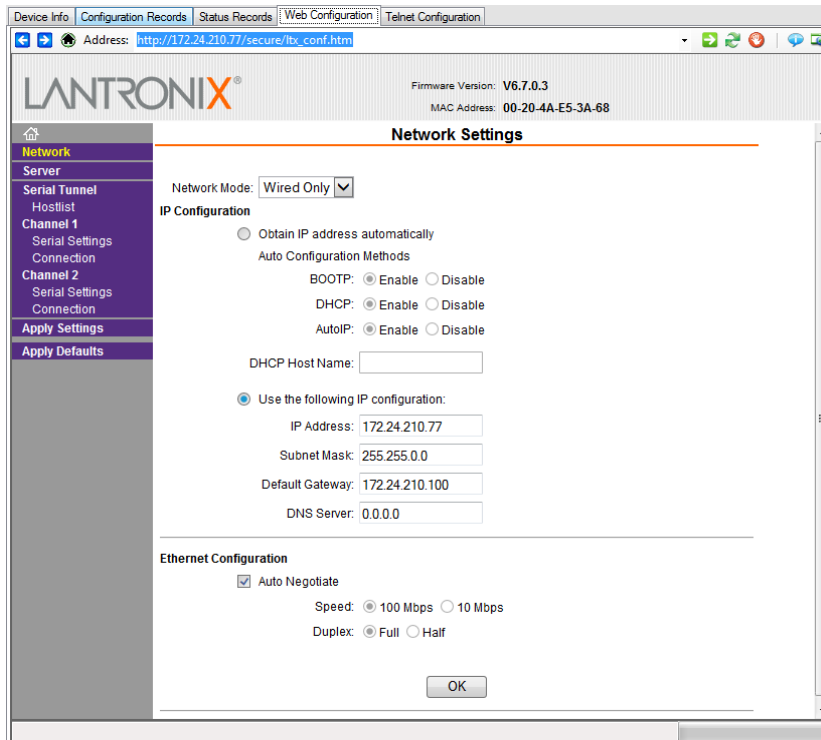
Click on the white arrow in the green box that is pointing to the right (in this example located right of the `http://172.24.210.77:80` URL). It looks as follows.



No user name or password is required so just click the OK button in the login dialog and it will display the following setup information.

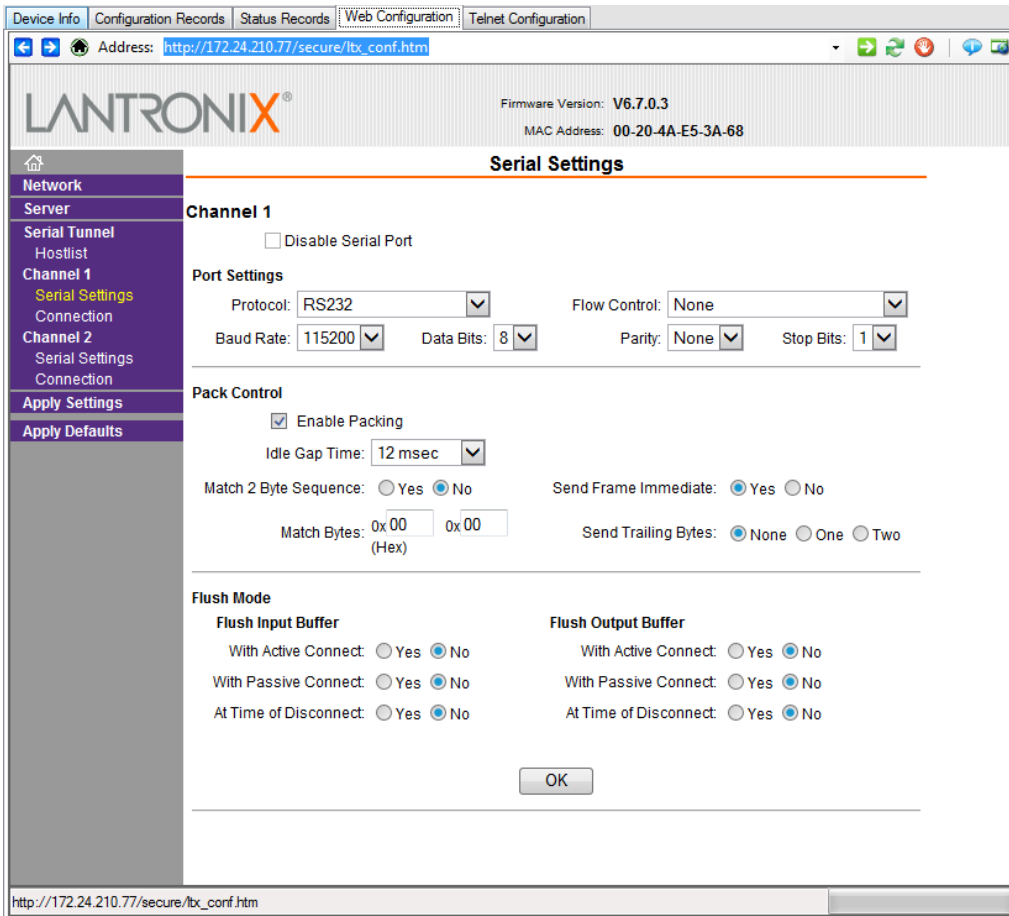


Click on “Network” to setup a fixed IP address for the UDS 2100. It will display the following information. Pick an IP address that is consistent with the network. Obtaining an IP address via DHCP is not recommended. It could change over time which would prevent OPC90 from accessing the device. Enter the data and click the OK button.



Now it's time to setup the serial configuration data. Click on "Serial Settings selection underneath Channel 1. Setup the port settings shown as follows. Note the "Baud Rate" must be set to match the baud rate of the CIU device. In this example its set for 115,200 which is the maximum setting supported by an IET800 CIU type. All other CIU types have a maximum supported setting of 19,200. For best throughput it is recommended to use whatever maximum baud rate setting the CIU device supports.

It's **important** to enable the "Enable Packing" and "Send Frame Immediate" parameters. This significantly improves throughput for high speed serial devices such as the IET800.



Click OK and then repeat this setup for “Serial Settings” under Channel 2.

Now it is the **important** moment to commit the configuration data to the UDS 2100. This is accomplished by clicking “Apply Settings” (just to the left where it says Pack Control). This causes the UDS 2100 to save the changes and reset itself to put them into operation.

Mission accomplished!