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:

TCP Por	t Addresses	×	
Enter TCI	P/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_45	172.24.210.88	10002	
TCP_5P	IP address here	Port ?	
TCP_5S	IP address here	Port ?	
TCP_6P	IP address here	Port ?	
TCP_65	IP address here	Port ?	
TCP_7P	IP address here	Port ?	
TCP_7S	IP address here	Port ?	
TCP_8P	IP address here	Port ?	
TCP_85	IP address here	Port ?	
OK Cancel			

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.

2 Lantronix DeviceInstaller 4.4.0.2					<u></u> Ξ <u>Σ</u>	3
File Edit View Device Tools Help						
🔎 Search 🛯 Options 🤤 Exclude 🛭 🗞 Assign IP	🚷 Upgrade					
E Lantronix Devices - 4 device(s)	evice Info Configuration Records Status Records Web Configuration Telnet Configuration					
Eocal Area Connection (1/2.24.210.101) E→ UDS	🗄 🔁 🛞 Address: http://172.24.210.77:80	- [2 2	0	🗭 🕻	3
🖶 🦇 UDS2100 - firmware v6.11						
□						
172.24.210.88						
E APort	ease press the Go button to navigate to the device.					
Ready			_	_		

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.

File Edit View Device Tools Help Search Options Exclude Assign IP Upgrade Image: Search Devices - 4 device(s) Image: Search Device Irfo Configuration Records Status Records Web Configuration Image: UDS2100 - Immware v6.7 UDS2100 - Immware v6.7 Image: Search XPot Image: Search Im	Real Lantronix DeviceInstaller 4.4.0.2) X
Search Options Exclude Asign P Upgrade Image: Search Connection (17224210.10) Image: Search Connection (17224210.17) Image: Search Connection (1722410.17) <td< td=""><td>File Edit View Device Tools Help</td><td></td><td></td><td></td></td<>	File Edit View Device Tools Help			
Icad Area Connection (172.24.210.010) UDS UDS2100 - finnware v6.71 T2 24.210.77 T2 24.210.88 XPot Windows Security Windows Security Windows Security Windows Security Windows Security Watton for Introv/172.24.210.77 Windows Security Watton for Introv/172.24.210.88 Watton for Introv/172.24.210.77	🔎 Search 🛛 Options 🤤 Exclude 🔌 Assign	IP 🚷 Upgrade		
Local Area Connection (172.24.210.101) UDS UDS2100 - fimware v6.7 172.24.210.77 172.24.210.77 SPot Windows Security Windows Security Warning: Your user name and password. The server reports that it is from (null). Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure. Wating for http://172.24.210.77/ Wating for http://172.24.210.77/	Lantronix Devices - 4 device(s)	Device Info Configuration Records Status Records Web Configuration Telnet Configuration		
Windows Security Image: Security Image: T22.42.10.77 Image: Security Image: T22.42.10.78 Image: Security Image: Security Image: Security	E Local Area Connection (172.24.210.101)	C S & Address: http://172.24.210.77:80	2 🎅 🚫 🛛	()
	UDS2100 - firmware v6.11	Windows Security XX The server 172.24.210.77 is asking for your user name and password. The server reports that it is from (null). Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure. User name Password Remember my credentials		
		Making for http:// 1/2.24.210.777		

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.

Device Info Configuration F	Records Status Records Web Configura	tion Telnet Configuration	
🗲 🔁 🏵 Address: htt	tp://172.24.210.77/secure/ltx_conf.htm		- 🔁 🎅 🔮 💷
LANTRO	2NI <mark>X</mark> °	Firmware Version: V6.7.0,3 MAC Address: 00-20-4A-E5-3A-68	
ຜ		Network Settings	
Network	_		
Serial Tunnel	Network Mode: Wired Only		
Hostlist	IP Configuration		
Channel 1	Obtain IP address	automatically	
Serial Settings Connection	Auto Configuration	n Methods	
Channel 2	BOOTP	Enable Disable	
Serial Settings	DHCP		
Connection	AutoIR		
Apply Settings	Autor:	C Enable O Disable	
Apply bendunts	DHCP Host Name:		
	Lise the following	IP configuration:	
	IR Address:	170.04.010.77	E
	IF Address.	172.24.210.77	
	Subnet Mask:	255.255.0.0	
	Default Gateway:	172.24.210.100	
	DNS Server:	0.0.0.0	
	Ethernet Configuration		
	Auto Negotiate		
	Speed:	100 Mbps 10 Mbps	
	Duplex:		
	Duplox.		
		ОК	

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.

Device Info Configuration F	Records Status Records Web Configuration Telnet Configuration	
< 🄁 🋞 Address: htt	p://172.24.210.77/secure/ltx_conf.htm 🔹 🚽 😌 🕴 🖤 🕻	ø
LANTRO	Firmware Version: V6.7.0.3 MAC Address: 00-20-4A-E5-3A-68	
命	Serial Settings	
Network		
Serial Tunnel Hostiist	Channel 1	
Serial Settings Connection Channel 2 Serial Settings	Protocol: RS232 Image: RS232 Flow Control: None Baud Rate: 115200 Data Bits: 8 Parity: None Image: RS232	
Connection Apply Settings	Pack Control	
Apply Detaults	Idle Gap Time: 12 msec 🔽	
	Match 2 Byte Sequence: O Yes O No Send Frame Immediate: Yes No	
	Match Bytes: 0x 00 0x 00 Send Trailing Bytes: None One Two (Hex)	
	Flush Mode	
	Flush Input Buffer Flush Output Buffer	
	With Active Connect: O Yes O No With Active Connect: Yes No	
	With Passive Connect. O Yes O No With Passive Connect. O Yes No	
	At Time of Disconnect: O Yes O No At Time of Disconnect: Yes No	
	ОК	
http://172.24.210.77/secure	/bx_conf.htm	

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!