

Lantronix Application note to Connect the 2DI ThermaViewer to a UDS100

By utilizing a Lantronix UDS100 Device Server, the 2DI ThermaViewer can be connected to an Ethernet network for downloading, archiving or printing the temperature data to a remote computer. Ethernet allows you to connect to the ThermaViewer from Multiple Masters and it eliminates the need to be within 50 ft of the device.

To connect the 2DI ThermaViewer to a Lantronix UDS100, you will need a 25 pin to 9 pin adapter (male pins on both ends) and a 9 pin Null modem adapter. The standard 2DI serial cable can be connected to the NULL modem adapter which is then plugged into the 9 pin to 25 pin Adapter. The 9/25 pin adapter is connected to the UDS100. See Figure A.

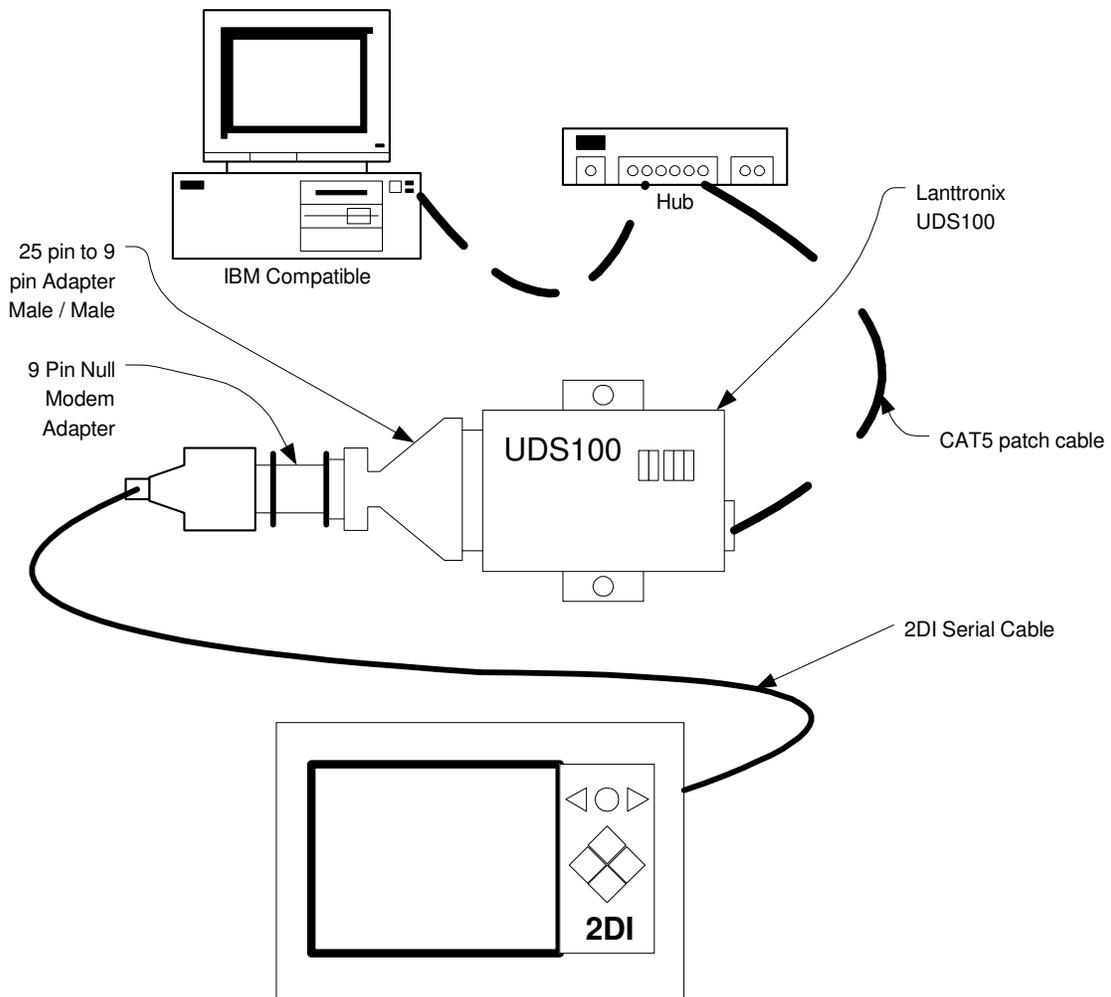


Figure A

UDS100 Setup

To connect any device to an Ethernet TCP/IP network, the device needs to have an IP address. With the UDS100, there are several ways to assign one. The default way is to use DHCP. On power up, the UDS100 will broadcast data to a DHCP server looking to lease an IP address. If the server is on the network, it will assign an IP address. If your network does not have a DHCP server, then you will need to assign one statically. The best way to do this is to follow the following procedure:

1. Start the HyperTerminal software application (available in windows under accessories->communications)
2. Type in name of connection
3. Connect using: select correct COM port, default COM1
4. In the Port Settings dialog box select the following parameters:
 - Bits per second: 9600
 - Data bits: 8
 - Parity: none
 - Stop Bits: 1
 - Flow Control: none

Then select OK. You now have a connected session and can view all ASCII data between the UDS100 and your PC.

5. Plug a serial cable from your PC into the UDS100, cycle power and hold down the lower case x key. After a few seconds, you should see the Lantronix Device Server Configuration Menu.
6. key/press 0 (zero) and then Enter to select Server Configuration
7. Type in the first octet of your IP address, press . (the period), the 2nd octet, press period, the 3rd octet, period, and the last octet.
8. Set Gateway Address – type in Y to enter an IP address for the gateway if you want to establish communication to and from your local sub-net. Otherwise press enter to accept default.
9. Netmask – Press enter to accept default value
10. Change telnet config password – press enter to accept default N (for No)

You now have the IP address assigned.

To complete the UDS configuration, Please complete the following configuration.

1. key/press 1 (the number one) and then Enter to select Channel 1 Configuration
2. Baudrate: key in 19200
3. I/F Mode: 4C
4. Flow (0) ?
5. Port No (14001) ?
6. ConnectMode (C0) press enter to accept default value (do the same for remaining items)
7. Remote IP Address : (0) .(0) .(0) .(0)
8. Remote Port (0) ?
9. DisConnMode (0) ?
10. FlushMode (0) ?
11. DisConnTime (0: 0) ?:
12. SendChar 1 (0) ?
13. SendChar 2 (0) ?

Finally press 9 to Save and Exit. The UDS100 is now correctly configured to communicate with the ThermaViewer.

Configure the COM port Redirector

Since the 2DI TView software can only access a COM port from the PC, the Lantronix COM Redirector software is required to translate TView's COM serial data requests to a network connection. The data requests are shipped over the network to the Lantronix UDS100. The UDS100 strips off the network headers and sends the native serial data to the ThermaViewer. The ThermaViewer responds with the logged temperature data and the data flows back to the PC in the reverse order. See Figure A.

The following are general guidelines for using the UDS100 and Com Port Redirector. It also describes how to set up Com Port Redirector, and how to verify connectivity between the two.

Observe the following general guidelines when preparing the UDS100 for use with Com Port Redirector:

- The device server to which Com Port Redirector will connect must have an IP address.
- The PC running Com Port Redirector must have a good network connection to the device server.
- If redirecting over a Wide Area Network (WAN), both the PC and the device server must have a correct gateway address configured in their TCP/IP settings.

General Com Port Redirector Usage Guideline

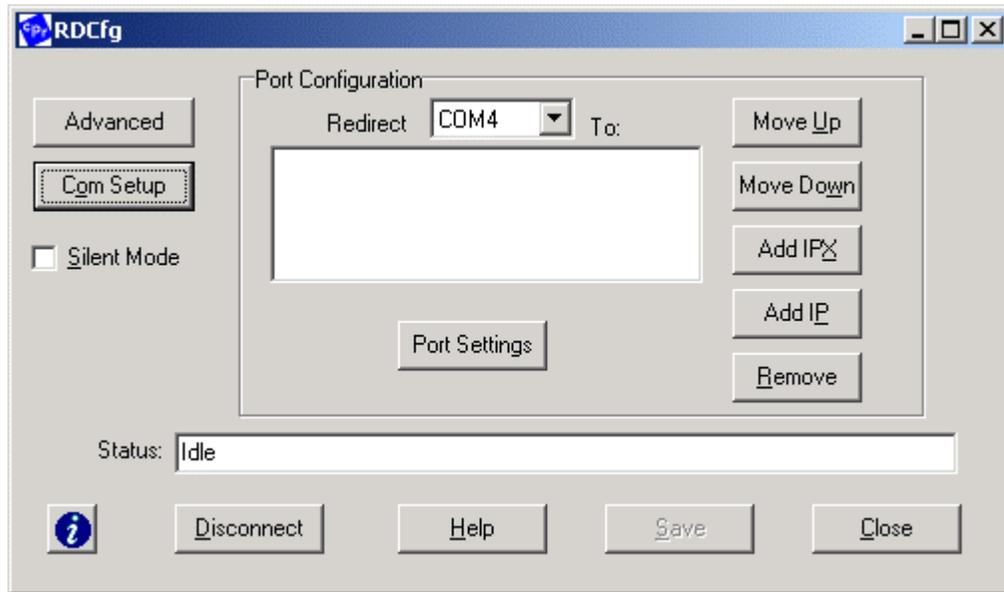
Observe the following general guidelines when using Com Port Redirector:

- Do not run Com Port Redirector with other software that installs a virtual com port.
- Do not run Com Port Redirector with other Comport Redirection software on the same PC.

Redirector Configuration

Click the **Start** button in the Windows Taskbar, point to **Programs**, point to **Lantronix Redirector**, and click **Configuration**. The Com Port Redirector Configuration window appears (see Figure 4-1).

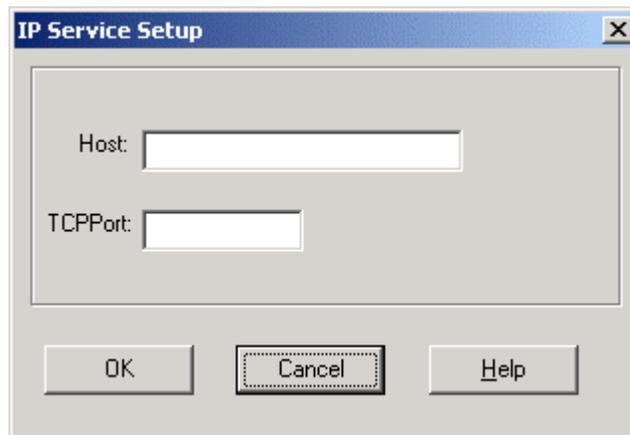
Figure 4-1. Com Port Redirector Configuration Window



- 1) Using the **Redirect To** drop-down list at the top of the Com Port Redirector Configuration window, click a redirected com port. **This must be the same COM port you will configure in TView. (under setup/port)** Click the **Add IP** button. The IP Service Setup dialog box appears (see Figure 4-2).

Figure 4-2. IP Service Setup Dialog Box

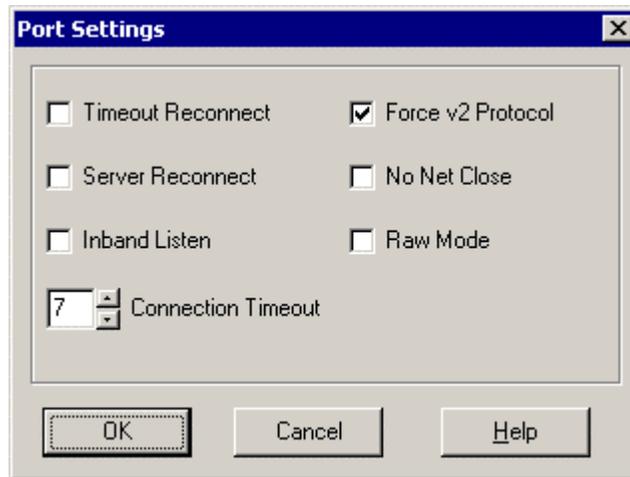
- 2)



In the **Host** field, enter the IP address of the Lantronix device server.
In the **TCPport** field, type **3001**.
Click the **OK** button.

- 3) Click the **Port Settings** button. The Port Settings dialog box appears. Check **Force v2 Protocol** (see Figure 4-3).

Figure 4-3. Port Settings Dialog Box with Raw Mode Enabled



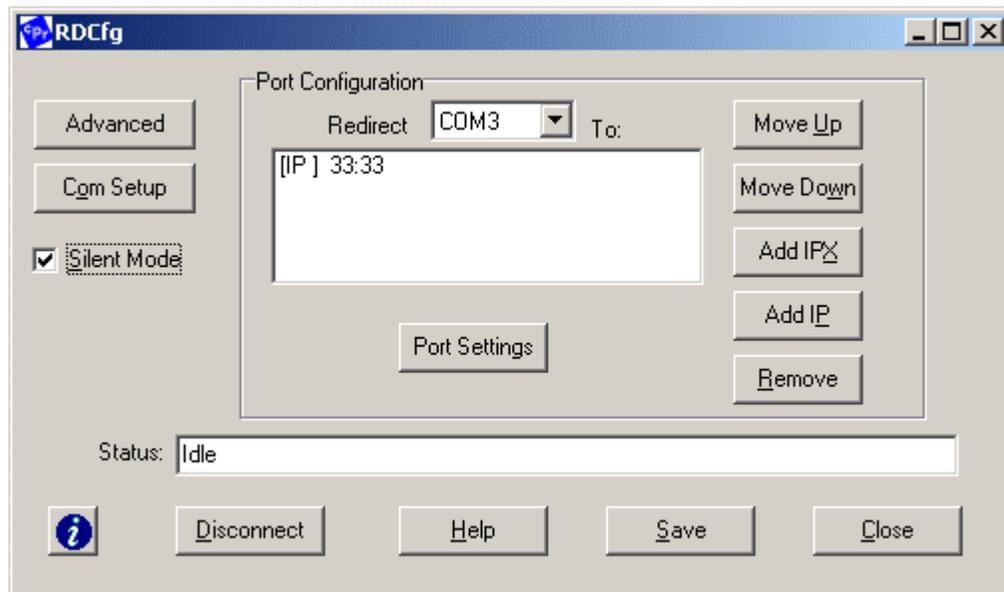
- Click **OK**.
- Click the **Save** button.
- Click the **Close** button.
- Proceed to [Verifying Connectivity with the Device](#).
- After selecting the port settings, click **OK**.

Verifying Connectivity with the Device Server

After configuring the Com Port Redirector and the UDS100, use a terminal-emulation program such as HyperTerminal to verify connectivity from the Com Port Redirector to the device server. To verify connectivity between Com Port Redirector and the device server using HyperTerminal:

Click the **Start** button in the Windows Taskbar, point to **Programs**, point to **Accessories**, point to **Communications**, and click **HyperTerminal**. Open a new session to the virtual com port configured to connect to the device server. When the HyperTerminal window opens, a pop-up window displays, *Attempting to connect to service*. If this message is replaced by: *Successfully redirected to service*, the connection from the Com Port Redirector to the device server was successful. *Failed to connect to any service*, the connection failed. Ensure your settings are correct (refer to the appropriate configuration section in this chapter for setup procedures for your device server). To hide the pop-up window, check **Silent Mode** on the Com Port Redirector Configuration window.

Figure 4-12. Enabling Silent Mode



Run TView

You are now configured to connect to ThermaView. Run the TView application, select menu setup. Then select port. **Select the same COM port** that you configured the ComPort Redirector to. Then select Upload data. After a few seconds, the status line should say Receiving data.....

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