Micro Control Systems
APPLICATION NOTE
APP-037

Using a Lantronix UDS-10 to Allow PC-Connect to Communicate Over a LAN

Revision History

Date	Author	Description
10/25/03	Ron Andersen	Created Application Note
12/20/04	Ron Andersen	First Revision

Introduction

Local communication between a MCS microcontroller and PC-Connect is usually accomplished by connecting a MCS-PC9 cable directly from the serial port of a PC to the RS-232 port on a MCS-8, or to the RS-232 port of a MCS-485-GATEWAY when communicating to MCS-6 or multiple MCS-8 microcontrollers. However, by using a Lantronix UDS-10 Device Server (available from MCS) you can communicate with MCS microcontrollers via a local area network (LAN) instead. Special software installed on your PC redirects a serial port to the IP address of a UDS-10 over a LAN, creating a transparent RS-232 link between the microcontroller and PC-Connect.

Connecting the Lantronix UDS-10

Three connections are made to the UDS-10. The first is power, the second is an Ethernet cable connected to your LAN and the third is a standard 9-pin male to 25-pin male AT serial cable connected to a MCS microcontroller or MCS-485-GATEWAY.

Configuring the Lantronix UDS-10

PC-Connect requires that the UDS-10 have a static IP address set in order to communicate with it. The UDS-10 comes preconfigured from MCS to work with MCS microcontrollers and is set with the following default settings:

Static IP Address: 192.168.1.246
Subnet Mask: 255.255.255.0
Gateway Address: 0.0.0.0

If you need to change any of these settings you can do so through your web browser. Once the UDS-10 is connected to your LAN simply type in the above address and you will see the Lantronix Web-Manager that will allow you to make changes. **Note:** If the web page does not display properly it may be the result of an incompatibility between the java applet served out by the UDS-10 and the Java Runtime Environment installed on your PC. To help resolve the issue, go to the Lantronix website at www.lantronix.com and search under the Technical Support section for "Web interface on UDS/Cobox/Xport/Xpress device does not load."

Installing the Lantronix Software on Your PC

The next step is to install the Lantronix ComPort Redirector software onto your PC. This software is included with units shipped from MCS. You can also download it directly from the Lantronix website. **Note:** UDS-10 units that are preconfigured and shipped from MCS are designed to work with ComPort

Redirector (Version 2.2/2) software only. The following instructions assume you are using this version of software.

Once installed you need to configure the software to add a COM port that does not already exist. Click on **C<u>o</u>m Setup** and place a check mark next to the COM port that you want to redirect. You must select a COM port between 1 and 9. Then in the **Port Configuration** window select the correct COM port in the **Redirect** drop-down box, click on the **Add I<u>P</u>** button and in the **IP Service Setup** screen, enter the static IP address of the UDS-10 in the **Host** field and the number 3001 in the **TCPPort** field. Then save your settings and reboot your PC.

Using PC-Connect to Access the UDS-10

Now that all the software is in place you need to make a small change in PC-Connect. First, however, make sure you have the latest version of PC-Connect. You can visit us on the web at www.mcscontrols.com to download the latest version.

Once you have PC-Connect running, simply click on **Setup** and change the Local COM port to the redirected port you selected for the UDS-10. Now exit this screen and click on **Local** to search for a MCS microcontroller. The screen will tell you that the COM port is being redirected to an IP address. Depending on the speed of the initial connection and the address of the first MCS microcontroller you may have to rescan the network a second time. From this point on PC-Connect functions as if it was directly connected to the MCS microcontroller.

Technical Support

In addition to support from MCS, the Lantronix website at www.lantronix.com has a very extensive website that contain a great deal of technical support. Please be sure to read the UDS-10 User Guide as it will answer many questions.