XPress-DR+ Industrial Device Server

XPress-DR+ Quick Start Guide

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XPress-DR+ Industrial Device Server

XPRESS-DR+
QUICK START CONTENTS

WHAT'S IN THE BOX

Verify and inspect the contents of the package using the enclosed packing slip or the list below. If any item is missing or damaged, contact your place of purchase immediately.

- XPress-DR+
- CD (with protocols, utilities, and User Guide)
- Quick Start Guide
- P/N: 500-103 RJ45-DB9F serial cable
- Accessory Din-rail wall mount bracket
- 3 terminal screw connector for power input
- 5 terminal screw connector for serial port

The user must supply a 9-30 VDC or 9-24 VAC power source and a CAT 5 Ethernet cable.

OVERVIEW

The XPress-DR+ industrial automation device server provides a quick and easy method to network-enable multiple industrial automation devices and equipment. The embedded Ethernet switch and multiple serial ports enable real-time access for remote configuring, programming, monitoring, and control of PLCs, motor drives, process controls, power monitoring equipment, barcode scanners, or virtually any RS232, RS422, or RS485 factory floor device.

PINOUTS

The XPress-DR+ supports RS-232 via RJ45 connectors. It also supports RS-422/485 via screw terminals (Serial Port 2 only).

Note: Serial Port 2 supports RS232, RS422, and RS485, but only one mode at a time. This means you can use either the RJ45 connector or the terminal block, not both.

The serial RJ45 serial connectors support RS232, up to 230,400 bits per second.

The supplied Lantronix P/N: 500-103 serial cable can be used to connect port 1 of XPress-DR+ to a PC's com port for configuration using a terminal emulation application. Refer to the XPress-DR+ Users Guide for information on configuring the XPress-DR+ thought the serial interface.

RJ45 Serial Connector Pinouts

Pin	Direction	Name	Function
1	Output from DR+	RTS	Ready To Send
2	Output from DR+	DTR	Data Terminal Ready
3	Output from DR+	TXD	Transmitted Data
4	Ground	GND	Signal Ground
5	Ground	GND	Signal Ground
6	Input to DR+	RXD	Received Data
7	Input to DR+	DSR	Data Set Ready
8	Input to DR+	CTS	Clear To Send
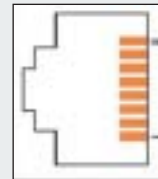
PINOUTS CONTINUED…

Screw Terminal Serial Connectors
Serial Screw Terminal Pinout for RS422 (4-Wire)

Pin	Direction	Name	Function
1	Output	TX+	Transmit Data +
2	Output	TX-	Transmit Data -
3	Ground	GND	Signal Ground
4	Input	RX+	Received Data +
5	Input	RX-	Received Data -

Serial Screw Terminal Pinout for RS485 (2-Wire)

| Pin	Direction	Name	Function
1	Bi-directional	TX+/RX+	Transmit Data + and Received Data +
2	Bi-directional	TX-/RX-	Transmit Data - and Received Data -
3	Ground	GND	Signal Ground
4	Not Applicable	Not Applicable	Not Used
5	Not Applicable	Not Applicable	Not Used

Serial Screw Terminal Pinout for RS485 (2-Wire)
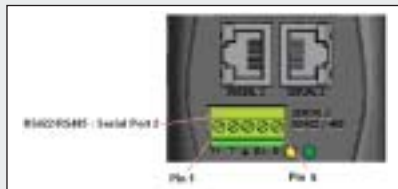
PINOUTS CONTINUED

Note: Termination resistors (R = 120 Ohm) are used to match impedance of a node to the impedance of the transmission (TX) line. Termination resistors should be placed only at the extreme ends of the TX data lines, and no more than two terminations should be placed in any single segment of an RS-485 network. The terminator resistors may not be needed for your application.

9-Pin RS-232 to Serial RJ45

The included Lantronix P/N (500-103) RJ45-DB9F serial cable assumes you are connecting a typical PC Com port to the XPress-DR+ serial port. This cable is pinned to provide full serial line control to an RS232 DTE device. Lantronix offers a comprehensive list of cables and adapters to simplify device connectivity to the XPress-DR+. See the User Guide for a full listing.

9-Pin RS-232 to Serial RJ45 Pinout Table
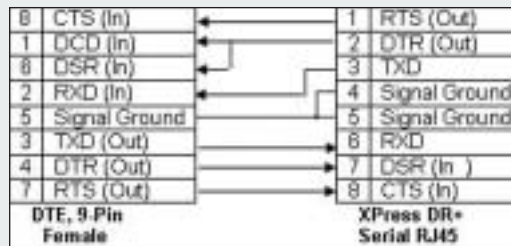
QUICK CONNECT

Warning: *Connecting a device to an active Ethernet network can disrupt communications on the network. Make sure the device is configured for your application before connecting it to an active network.*

1. Connect a serial device to your XPress-DR+.

2. Connect an Ethernet cable to the Ethernet port.

3. Supply power to your XPress-DR+ using a 9-30 VDC or 9-24 VAC (2.3 W maximum) source.

4. Supply power to the serial device.

5. Verify that the green Link LED is lit.

QUICK CONNECT CONTINUED

Typical Installation
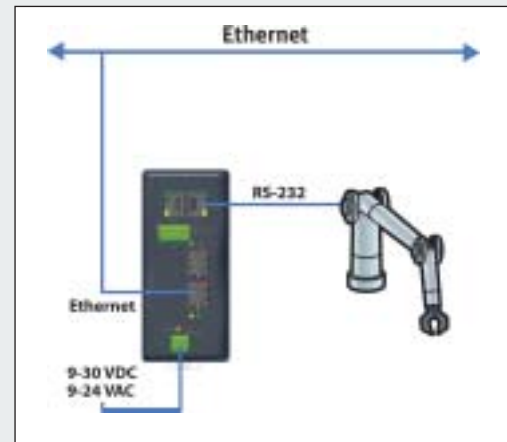
ASSIGNING AN IP ADDRESS

Your unit must have a unique IP address on your network. Two ways to assign an IP address are described below. Additional methods of assigning an IP Address and configuring the XPress-DR+ are described in the Users Guide.

DHCP
Many networks use an automatic method of assigning an IP address called DHCP. If you are unsure whether your network uses DHCP, check with your systems administrator.

The XPress-DR+ looks for a DHCP server when it first powers up. The unit has acquired an IP address if the red LED stops flashing and the green Status LED is on continuously. You can use the DeviceInstaller software (see below) to search the network for the IP your unit has been assigned by the DHCP server and add the unit to the list of Lantronix devices on the network.

If the unit does not acquire an IP address, or you do not use DHCP, you must assign a fixed IP address.

Note: The unit's IP address is set to 0.0.0.0 at the factory. The unit is DHCP– enabled as the default.

ASSIGNING AN IP ADDRESS CONTINUED

Fixed IP Address
In most installations, a fixed IP address is desirable. The systems administrator generally provides the IP address, subnet mask, and gateway.

The IP address must be within a valid range, unique to your network, and in the same subnet as your PC. You will need the following information before you set up the unit as described in **DeviceInstaller**, below.

IP Address: _____ _____ _____ _____

Subnet Mask: _____ _____ _____ _____

Gateway: _____ _____ _____ _____

You have several options for assigning an IP to your XPress-DR+. We recommend that you connect the unit to the network and assign the IP address using DeviceInstaller software, which is on the product CD. For information on other methods, see the XPress-DR+ User Guide.

DEVICEINSTALLER

Step 1: Install DeviceInstaller

To use the DeviceInstaller utility, first install it from the product CD.

1. Insert the product CD into your CD-ROM drive.

2. If the CD does **not** launch automatically:

    a. Click the **Start** button on the Task Bar and select **Run**.

    b. Enter your CD drive letter, colon, backslash, **Launch.exe** (e.g., **D:\Launch.exe**).

3. Click the **DeviceInstaller** button.

4. Respond to the installation wizard prompts. (When prompted to select an installation type, select **Typical**.)

Note: For more information about DeviceInstaller, see the DeviceInstaller online Help.

Step 2: Configure Network Settings

To assign an IP address manually:

1. Click **Start ➜ Programs ➜ Lantronix ➜ DeviceInstaller ➜ DeviceInstaller**. If your PC has more than one network adapter, a message displays. Select an adapter and click **OK**.

Note: If the unit already has an IP address (e.g., DHCP has assigned an IP address), click the Search icon and select the unit from the list of Lantronix device servers on the local network.

2. Click the **Assign IP** icon .

3. If prompted, enter the hardware address (on the product label) and click **Next**.

4. Select **Assign a specific IP** address and click **Next**.

DEVICEINSTALLER CONTINUED…

5. Enter the **IP address**. The **Subnet mask** displays automatically based on the IP address; if desired, you may change it. On a local network, you can leave the **Default gateway** blank (all zeros). Click **Next**.

IP Settings

Please fill in the IP address, subnet, and gateway to assign the device. The subnet will be filled in automatically as you type, but please verify it for accuracy. Incorrect values in any of the below fields can make it impossible for your device to communicate, and can cause network disruption.

IP address:	172.10.27.125
Subnet mask:	255.255.0.0
Default gateway:	172.19.0.11

6. Click the **Assign** button and wait several seconds until a confirmation message displays. Click **Finish**.

7. Select the device from the main window list and select **Ping** from the **Tools** menu. The Ping Device dialog box shows the IP address of the selected unit.

8. Click the **Ping** button. The results display in the Status window. Click the **Clear Status** button to clear the window so you can ping the device again.

Note: If you do not receive "Reply" messages, make sure the unit is properly attached to the network and that the IP address assigned is valid for the particular network segment you are working with. If you are not sure, check with your systems administrator.

9. Click the **Close** button to close the dialog box and return to the main window.

DEVICEINSTALLER CONTINUED

Step 3: Add the Unit to the Device List
Now add the unit to the list of similar Lantronix devices on the network so that you can manage and configure it. To perform this step, click the **Search** icon 🔍. DeviceInstaller locates the unit and adds it to the list.

Step 4: Complete the Configuration
Once the unit is in the device list, you can complete the configuration.
- To use a web interface (Web Manager), double-click the unit in the list and click the **Web Configuration** tab.
- To use Setup Mode (a command line interface), double-click the unit in the list and click the **Telnet Configuration** tab.

Note: Please see the XPress-DR+ User Guide for detailed instructions on configuration.

Upgrade the Firmware
To upgrade firmware or install other protocols such as ModBus refer to the XPress-DR+ Users Guide or the DeviceInstaller online help.

LEDS

LED	Meaning
Serial port - TXD LED (Yellow)	Off = No Transmit Data from XPress DR+. Blinking = Data being transmitted from XPress DR+.
Serial port - RXD LED (Green)	Off = No Received Data by XPress DR+. Blinking = Data being received by XPress DR+.
Ethernet port - 10/100 Link (Green)	Off = No Ethernet Link established. Steady On = Ethernet Link is established
Ethernet port – Activity (Yellow)	Off = No Data activity. Blinking = Data activity
Power/Diagnostic LED (Orange)	Steady On = Power OK. Blinking 2x = No DHCP response. Blinking 2x = Setup Menu active--startup

CONTACT
For questions and technical support, please check our online knowledge base at **www.lantronix.com/support**

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