

# Application Note:

## Using the GridConnect™ NET232 Ethernet/RS232 Adapter to Add Serial Ports to a CTI 2500 Series™ Processor

CTI 2500 Series™ Processors include two serial ports. The first port is configurable for RS232/RS422, while the second port is reserved for USB connections. For installations needing 2 or more standard RS232 ports (example: connection of HMI panels), more ports can be added using the Gridconnect™ NET232 Adapter. This adapter uses the built-in Ethernet capability of the CTI processor to attach more serial ports. Besides being expanded to more than two ports, you can now locate the ports remotely from the 2500 Series™ Processor using Ethernet.

The GridConnect NET232 Ethernet/RS232 adapter allows the user to connect the serial port of a PC into an Ethernet network. This allows the user to connect to remote devices on the network such as the CTI2500 series CPU's and Ethernet adapters (2572 and 2572-A). This application note will outline the steps needed to connect a PC running 505 WorkShop to a CTI 2572-A card.

Keep in mind that the NET232 adapter, 2572-A, and the PC all have to be on the same network. For this example the following IP addresses are used:

CTI 2572-A	199.184.177.230
PC	199.184.177.200
NET232 Ethernet/RS232 adapter	199.184.177.201

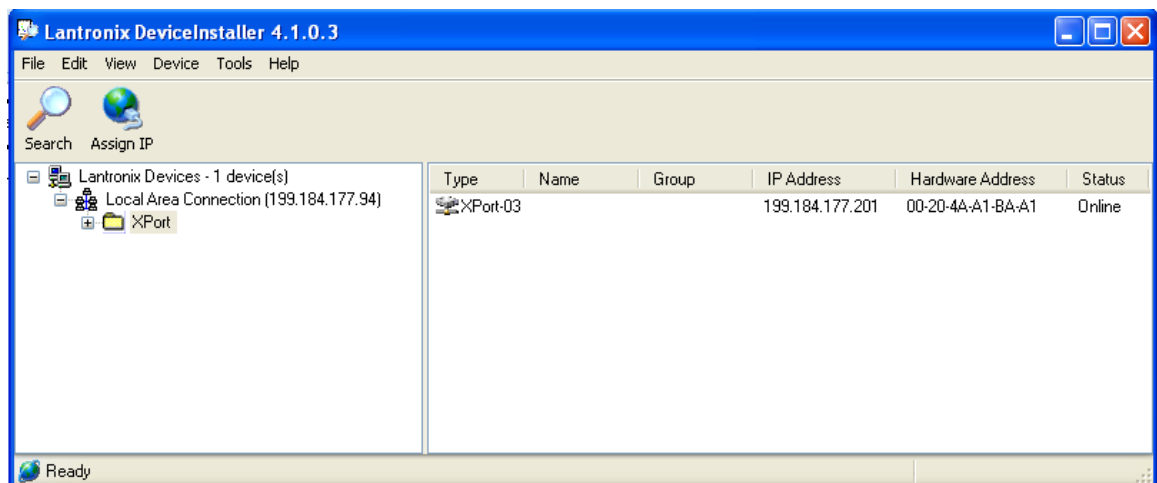
### SETUP

Install DeviceInstaller from the CD included with the NET232 adapter.


Connect the power supply to the NET232 and plug into the serial port of your PC.

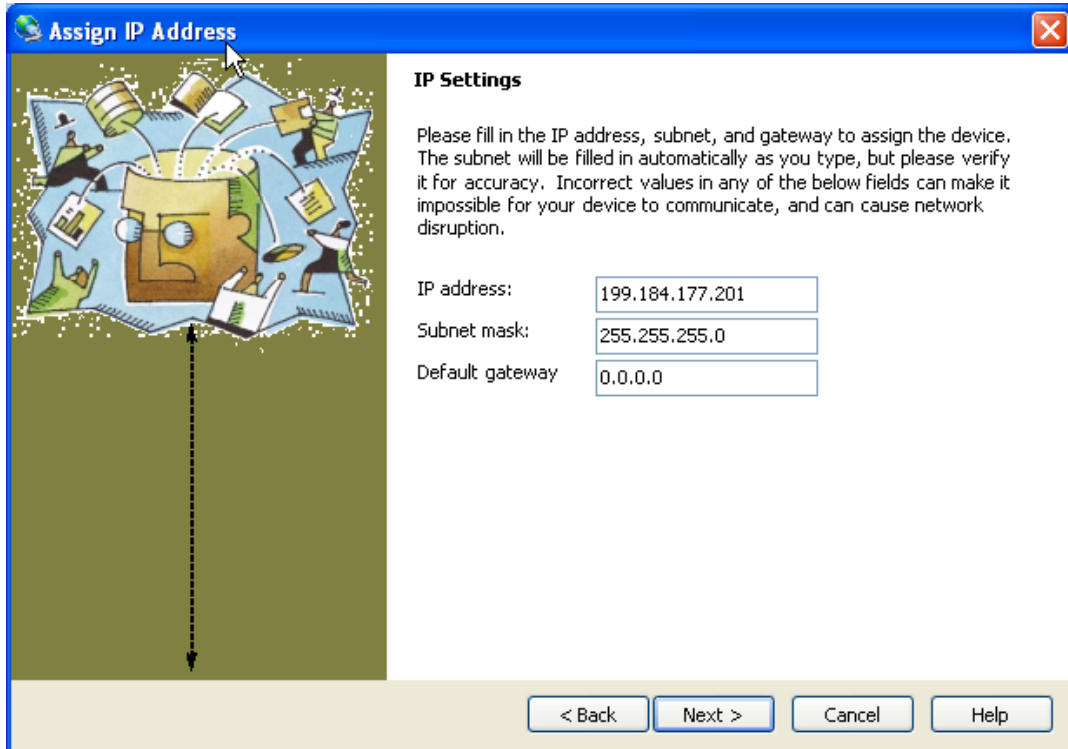
Connect an ethernet cable from the NET232 to the network.

Run DeviceInstaller and notice that the NET232 shows up as Xport-03.





Click on the device Xport-03 and then click the ASSIGN IP icon . Select the assignment method, either assign automatically or assign a specific IP. This example assigns a specific IP. Click NEXT. On this screen enter the IP Settings. And click NEXT

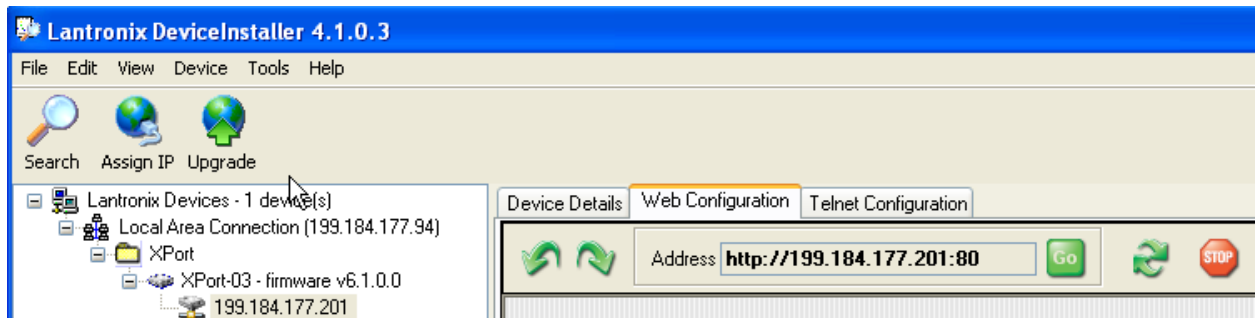


The dialog box is titled "Assign IP Address" and has a close button (X) in the top right corner. On the left side, there is an illustration of puzzle pieces being assembled, with a dashed arrow pointing downwards. On the right side, under the heading "IP Settings", there is a text box with the following instructions: "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." Below the text are three input fields: "IP address:" with the value "199.184.177.201", "Subnet mask:" with the value "255.255.255.0", and "Default gateway:" with the value "0.0.0.0". At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Now click the ASSIGN button and then FINISH.

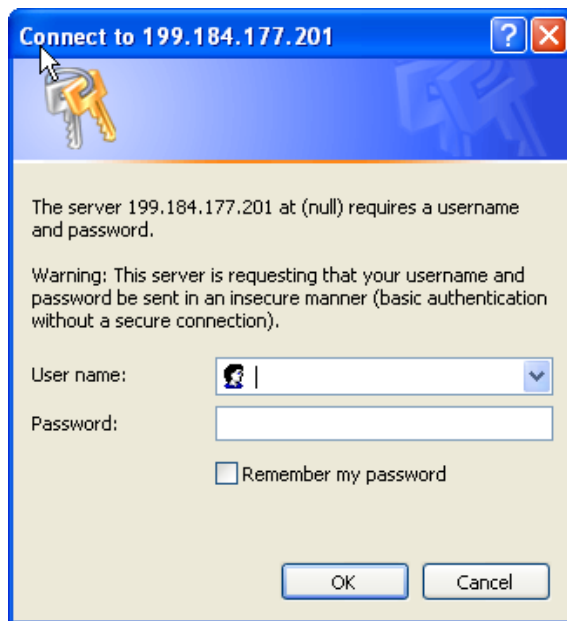
### Configuring the Serial Port

In the left pane expand the directories out to the IP address. Select the IP address and three tabs will appear in the right pane. Select **Web Configuration** and then Click GO



The screenshot shows the "Lantronix DeviceInstaller 4.1.0.3" application window. The menu bar includes "File", "Edit", "View", "Device", "Tools", and "Help". Below the menu bar are three icons: a magnifying glass labeled "Search", a globe labeled "Assign IP", and a globe with an upward arrow labeled "Upgrade". The left pane shows a tree view of "Lantronix Devices - 1 device(s)", expanded to show "Local Area Connection (199.184.177.94)", "XPort", "XPort-03 - firmware v6.1.0.0", and "199.184.177.201". The right pane has three tabs: "Device Details", "Web Configuration" (which is selected), and "Telnet Configuration". Below the tabs, there is a "Address" field containing "http://199.184.177.201:80", a "Go" button, a refresh button, and a "STOP" button.

When asked for a password the defaults are blank so just click OK.



Now you should see this window. Click on **Serial Settings**.



Setup your serial connection here. These are the settings we used.

## Serial Settings

### Channel 1

Disable Serial Port

#### Port Settings

Port: COM1  
Baud Rate: 19200  
Data Bits: 8  
Parity: None  
Stop Bits: 1

#### Pack Control

Enable Packing

Idle Gap Time: 12 msec

Send Frame Only:  Yes  No

Match 2 Byte Sequence:  Yes  No

Send Trailing Bytes:  None  One  Two  
Match Bytes: 0x00 0x00

#### Flush Mode

##### Flush Input Buffer

yes  No

With Active Connect:  Yes  No

yes  No

With Passive Connect:  Yes  No

##### Flush Output Buffer

With Active Connect:  Yes  No

With Passive Connect:  Yes  No

OK

### Configuring the connection to the 2572-A

Select Connection and the following screen will appear.



Here you will enter the information for the connection to the 2572-A. Under Endpoint Configuration is where you setup the Remote Port and Remote Host. The Remote Port is the port number of the 2572-A, this is always 1505. The Remote Host is the IP address of the 2572-A. When finished click OK.

### Connection Settings

**Channel 1**

Connect Protocol  
Protocol:

Connect Mode  
Passive Connection: Accept Incoming:   
Active Connection: Active Connect:   
Password:  Yes  No Start Character:  (in Hex)

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**Endpoint Configuration**  
Local Port:   
Remote Port:   
Remote Host:

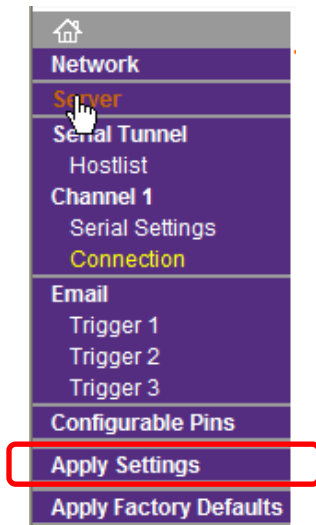
**Common Options:**  
Telnet Mode:   
Terminal Name:   
Connect Response:   
Use Hostlist:  Yes  No LED:

**Disconnect Mode**  
On Mdm\_Ctrl\_In Drop:   
Check EOT(Ctrl-D):   
Hard Disconnect:  Yes  No  
Inactivity Timeout:  :  (mins : secs)

No

No

**IMPORTANT:**  
**BE SURE TO CLICK APPLY SETTINGS WHEN YOU ARE FINISHED**  
**CONFIGURING EVERYTHING!!!**



Now you should be able to connect to the 2572-A via 505 Workshop using your comport.



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