

# 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

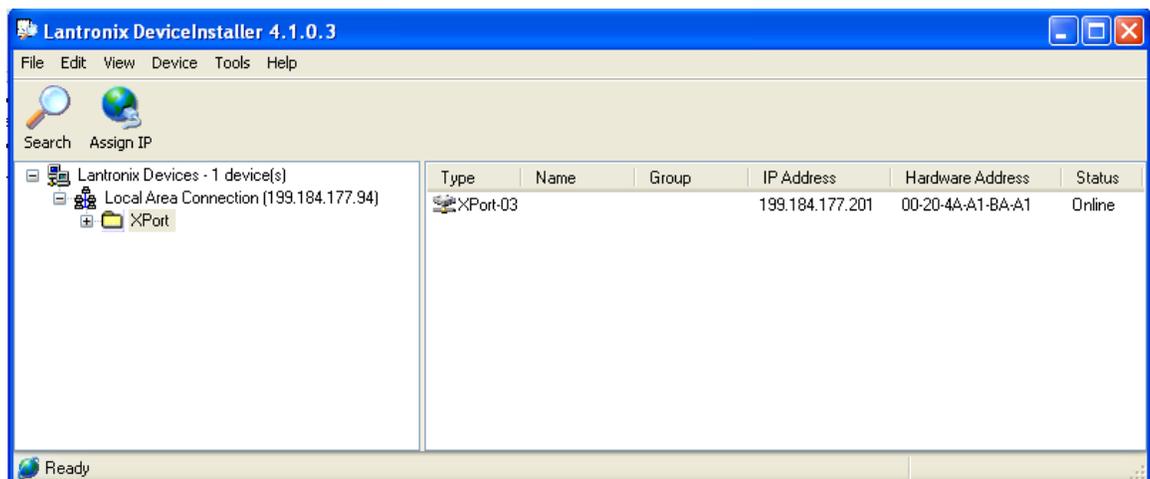
### SETUP

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.

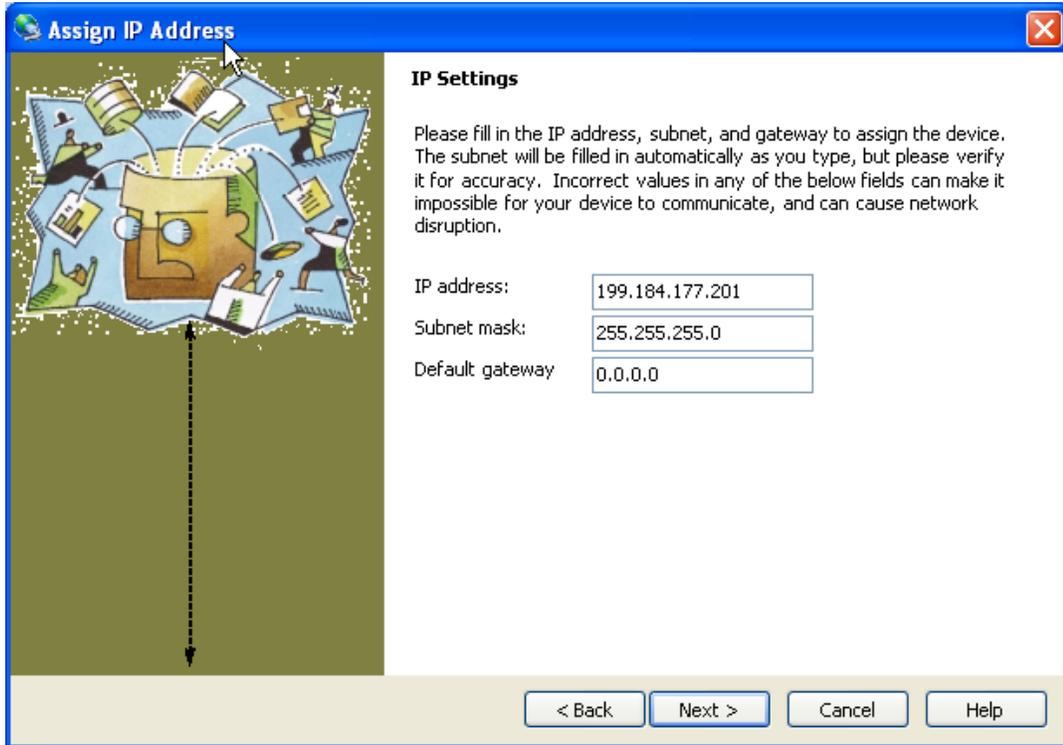
Connect an ethernet cable from the NET232 to the network.

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

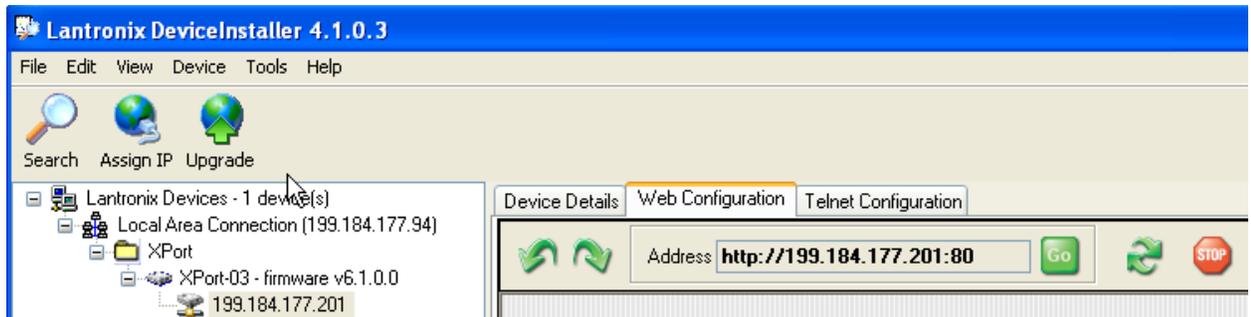


The dialog box is titled "Assign IP Address" and contains an illustration of puzzle pieces on the left. On the right, under "IP Settings", there is a text box with instructions: "Please fill in the IP address, subnet, and gateway to assign the device. The subnet will be filled in automatically as you 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 this 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 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 are icons for "Search", "Assign IP", and "Upgrade". The left pane shows a tree view of "Lantronix Devices - 1 device(s)", expanded to "Local Area Connection (199.184.177.94)", then "XPort", and finally "XPort-03 - firmware v6.1.0.0", with the IP address "199.184.177.201" selected. The right pane has tabs for "Device Details", "Web Configuration", and "Telnet Configuration". The "Web Configuration" tab is active, showing an "Address" field with the value "http://199.184.177.201:80" and a "Go" button. There are also refresh and stop icons.

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

Protocol:

Flow Control:

Baud Rate:

Data Bits:

Parity:

Stop Bits:

#### Pack Control

Enable Packing

Idle Gap Time:

Match 2 Byte Sequence:  Yes  No

Send Frame Only:  Yes  No

Match Bytes:    
(Hex)

Send Trailing Bytes:  None  One  Two

#### Flush Mode

##### Flush Input Buffer

With Active Connect:  Yes  No

With Passive Connect:  Yes  No

At Time of Disconnect:  Yes  No

##### Flush Output Buffer

With Active Connect:  Yes  No

With Passive Connect:  Yes  No

At Time of Disconnect:  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:

Password Required:  Yes  No

Password:

###### Active Connection:

Active Connect:

Start Character:  (in Hex)

Modem Mode:

Mdm Esc Seq Pass Thru:  Yes  No

##### Endpoint Configuration:

Local Port:   Auto increment for active connect

Remote Port:

Remote Host:

##### Common Options:

Telnet Mode:

Connect Response:

Terminal Name:

Use Hostlist:  Yes  No

LED:

##### Disconnect Mode

On Mdm\_Ctrl\_In Drop:  Yes  No

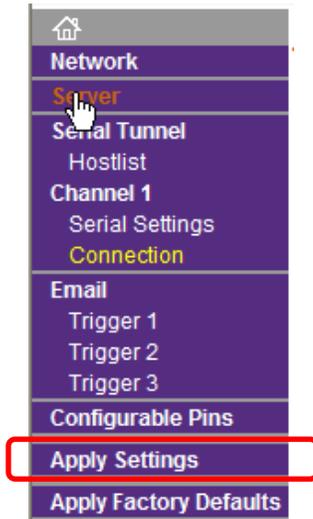
Hard Disconnect:  Yes  No

Check EOT(Ctrl-D):  Yes  No

Inactivity Timeout:  :  (mins : secs)

OK

**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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