

USB Driver:

In order for Windows to recognize the device the USB driver must first be installed, after which it appears as an additional COM port on the computer.

1. Copy the file "cdc_NTXPV764.inf" from the supplied CD to the hard drive.
2. Plug the unit into a free USB port. When the hardware installation wizard asks for the driver location, browse to the "cdc_NTXPVista.inf" file on the hard drive.
3. After the driver has been installed right click "my computer" and select "properties". In the properties window select the "hardware" tab. Click on "device manager" and expand the "Ports (COM & LPT)" item. Locate the "Spectronix, Inc." entry and note the assigned COM number, (ie "COM4"). This is the COM port that the software will use to communicate with the Quad Cell Viewer.

Note, on some operating systems such as Window 7, manual USB driver installation may be necessary. If the hardware installation wizard fails, go to "My Computer" > "Properties" > "Hardware" > "Device Manager", and find the "Spectronix" or "SERIAL DEMO" entry under "Other Devices" and select "Update Driver". At this point you will be able to browse to the location of the driver.

Ethernet:

Some devices allow communication over an Ethernet port. The default IP address is 192.168.1.160, port 2101. The commands below can be used over USB or Ethernet.

Commands:

The device uses ASCII data to communicate with a host computer; the tables below list the individual commands, parameters, and responses from the unit.

Notes:

1. All communication is initiated by the host.
2. Text is not case sensitive.
3. A space should be inserted between the command and any parameters.
4. All commands should be terminated with <CR>, <LF>, or both.
5. Responses from the Laser Pulse Generator (LPG) are framed using a binary 0x00 character (start) and terminated with 0x0D0AFF (<CR><LF>0xFF). These framing bytes are not shown in the tables below.
6. Response parameters are variable width, may contain additional white spaces or <CR><LF>, and are separated by commas.
7. For the descriptions below, values inside quotations ("") are literal ASCII values, text inside brackets ([]) are variable ASCII values, and values inside <> are binary values.

Example Command / Response:

Command to set the amplitude of laser 7 to 4:

Command: **SetAmp 7 4<CR><LF>**

Commands

Get Unit Information	
Command:	Description:
"?"	
Response:	Description, "example":
"?"	Echo command
"100550A-[XXXX]"	Model number where "XXX" represents the specific model number and options
[major.minor]	Firmware version
[IP address]	IP address, all zeros if not installed "192.168.1.160"
[MAC address]	MAC address, all zeros if not installed "00:80:A3:78:28:51"
[period]	Pulse period with units (nS,uS,mS) "5000nS"
[width]	Pulse width with units (nS,uS,mS) "123.4uS"
[Wavelength 1]	First wavelength (nm) "1311"
[State 1]	First laser on/off state (0=off, 1=on)
[Amplitude 1]	First laser "on" amplitude (1:15)
	Wavelength, state, and amplitude for lasers 2 through 8
<i>Example:</i>	
<i>Notes:</i>	

Set period	
Command:	Description:
"SetPeriod"	
[period]	Pulse period string containing up to 5 numeric places including a decimal plus unit (nS, uS, or mS). If units are not provided, the current units are assumed. "800.2uS", "50000nS", "10.25mS"
Response:	Description:
"SetPeriod"	Echo command
[period]	New period "1000uS"
<i>Example: "SetPeriod 1000uS" (sets the period to 1000uS).</i>	
<i>Notes:</i>	
<ul style="list-style-type: none"> • If the value is out of range the command will be rejected • Minimum resolution is 10nS, single digit nS will be truncated 	

- *If the period is less than the pulse width it will be set equal to the pulse width.*

Set pulsewidth	
Command:	Description:
"SetPW"	
[pulsewidth]	Pulsewidth string containing up to 5 numeric places including a decimal plus unit (nS, uS, or mS). If units are not provided, the current units are assumed.
Response:	Description:
"SetPW"	Echo command
[period]	New period "500nS"
<i>Example: "SetPW 500nS" (sets the pulsewidth to 500nS).</i>	
<i>Notes:</i>	
<ul style="list-style-type: none"> • <i>If the value is out of range the command will be rejected</i> • <i>Minimum resolution is 10nS, single digit nS will be truncated</i> • <i>If the pulse width is greater than the period it will be set equal to the period.</i> 	

Set the laser on amplitude	
Command:	Description:
"SetAmp"	
[channel]	Channel number (0 to 6)
[amplitude]	0=turn off laser, 1:15=set amplitude and store value, >15=set to stored amplitude
Response:	Description:
"SetAmp"	Echo command
[channel]	Channel number (0 to 6)
[amplitude]	Current amplitude
<i>Example: "SetAmp 1 0" (turns the second laser off).</i>	
<i>Notes: Amplitude is stored in NV memory</i>	

Ethernet Interface Configuration Commands

The following commands require the internal controller to place the XPort module in CLI mode. During command execution the Ethernet interface will disconnect from the host and not send responses via the Ethernet. In some cases the interface will automatically reboot or require a power cycle as noted below.

These commands are intended to be executed from the USB interface but can be also be executed via the Ethernet with the above limitations. The only exception is that the “XPortTerm” command cannot be executed from the Ethernet interface.

Before executing any of the following command, the XPort interface should be allowed to fully start which takes approximately 30 seconds after powerup.

Configure the Ethernet port to factory defaults and format flash file system	
<u>Command:</u>	<u>Description:</u>
“XPortConfig”	
<u>Response:</u>	<u>Description:</u>
[status]	Plain text status from XPort during configuration and reboot (USB only).
<p><i>Notes:</i></p> <p>After power up, the unit should be allowed at least 30 seconds to start before executing this command.</p> <p>The command can be executed from either USB or Ethernet but only returns status information via USB.</p> <p>When complete the unit should be power cycled for the changes to take effect. The complete process takes approximately 60 seconds.</p> <p>User changes to the XPort CPM or line settings can prevent the XPortConfig command from executing properly. In this case the user should use the web page management tool to reset the device to the Lantronix factory defaults, then execute the XPortConfig command.</p> <p>The default IP address is 192.168.1.160 using socket 2101.</p>	

Read the Ethernet IP and MAC addresses	
<u>Command:</u>	<u>Description:</u>
“XPortGetIP”	Get IP and MAC from device and send to host
“XPortGetIPr”	If ‘r’ is appended, the command reads the addresses from previously stored values
<u>Response:</u>	<u>Description:</u>
“XPortGetIP”	Echo command
[IP address]	Example: “192.168.1.160”
[MAC address]	Example: “00:80:A3:78:28:51”
<p><i>Notes:</i></p> <p>This command takes about 5 seconds to execute, after which the XPort interface is automatically rebooted. If executing this command from the Ethernet interface, the response will be lost during reboot. After reboot is complete (~15 seconds), the connection should be reestablished and the XPortGetIPr” command should be sent to read the results. Sending the command with the “r” appended will return the result immediately without causing a reboot. Note, the IP and MAC addresses are read on power up and the ‘?’ command can be used to read the results.</p>	

A result of zero or null indicates the IP and MAC have not been read.

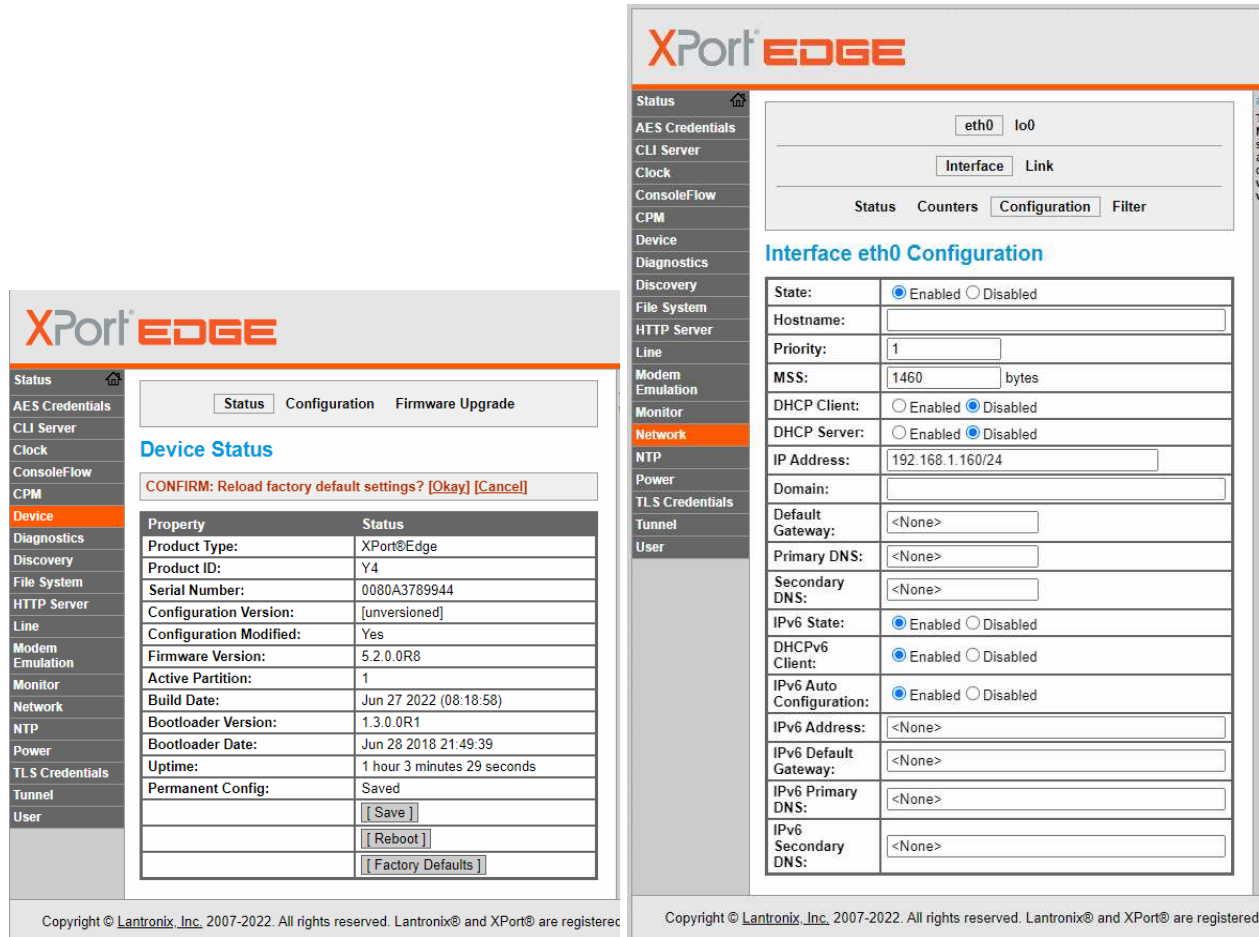
Set the Ethernet IP address	
<u>Command:</u>	<u>Description:</u>
"XPortSetIP"	
[IP address]	Example: "192.168.1.160"
<u>Response:</u>	<u>Description:</u>
"XPortSetIP"	Echo command
[IP address]	Example: "192.168.1.160"
<i>Notes:</i>	
<p><i>This command takes about 10 seconds to execute, after which the XPort interface is automatically rebooted. If executing this command from the Ethernet interface, the response will be lost during reboot. After reboot is complete (~15 seconds), the device should be power cycled for the changes to take effect.</i></p>	

Start / access the XPort command line interface (CLI) terminal through the USB	
<u>Command:</u>	<u>Description:</u>
"XPortTerm"	
[CLI commands]	See Lantronix XPort documentation
	<escape> key to exit
<u>Response:</u>	<u>Description:</u>
<p>Command Line started.</p> <p>></p>	See XPort documentation
[CLI responses]	See XPort documentation
<i>Notes:</i>	
<p><i>This command takes about 10 seconds to execute, after which the XPort interface enters the CLI mode and responds with the CLI command prompt through the USB interface. The USB can be used as the CLI terminal to the XPort device until exiting by pressing the <esc> key. This command should only be used via the USB interface.</i></p>	

Configuration / Recovery using the Web Interface

Should the Ethernet interface become unrecoverable from the LPG unit, the web interface can be used to reconfigure it if the IP address is known. From a web browser, enter the IP address of the unit and log into the device with username: “admin” and password: “PASSWORD”. If the IP address is unknown, the Lantronix Provisioning Manager can be used to “discover” the IP address.

From the web page, under “Device”, select “Factory Defaults” then “Okay”. After rebooting, change the settings as shown in the remaining screen shots.



Device Status

CONFIRM: Reload factory default settings? [Okay] [Cancel]

Property	Status
Product Type:	XPort®Edge
Product ID:	Y4
Serial Number:	0080A3789944
Configuration Version:	[unversioned]
Configuration Modified:	Yes
Firmware Version:	5.2.0.0R8
Active Partition:	1
Build Date:	Jun 27 2022 (08:18:58)
Bootloader Version:	1.3.0.0R1
Bootloader Date:	Jun 28 2018 21:49:39
Uptime:	1 hour 3 minutes 29 seconds
Permanent Config:	Saved

[Save]
[Reboot]
[Factory Defaults]

Interface eth0 Configuration

eth0 | lo0

Interface | Link

Status | Counters | Configuration | Filter

State: Enabled Disabled

Hostname:

Priority:

MSS: bytes

DHCP Client: Enabled Disabled

DHCP Server: Enabled Disabled

IP Address:

Domain:

Default Gateway:

Primary DNS:

Secondary DNS:

IPv6 State: Enabled Disabled

DHCPv6 Client: Enabled Disabled

IPv6 Auto Configuration: Enabled Disabled

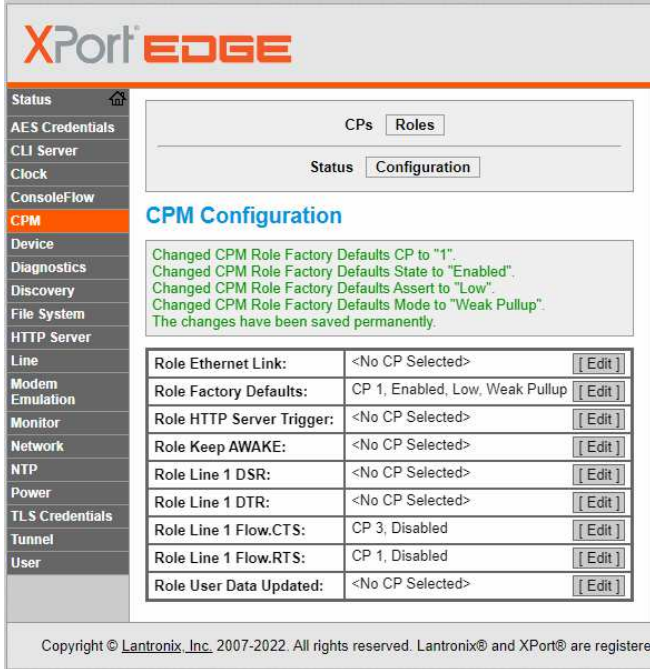
IPv6 Address:

IPv6 Default Gateway:

IPv6 Primary DNS:

IPv6 Secondary DNS:

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XPort EDGE

Status CPs Roles

CLI Server

Clock

ConsoleFlow

CPM

Device

Diagnostics

Discovery

File System

HTTP Server

Line

Modem Emulation

Monitor

Network

NTP

Power

TLS Credentials

Tunnel

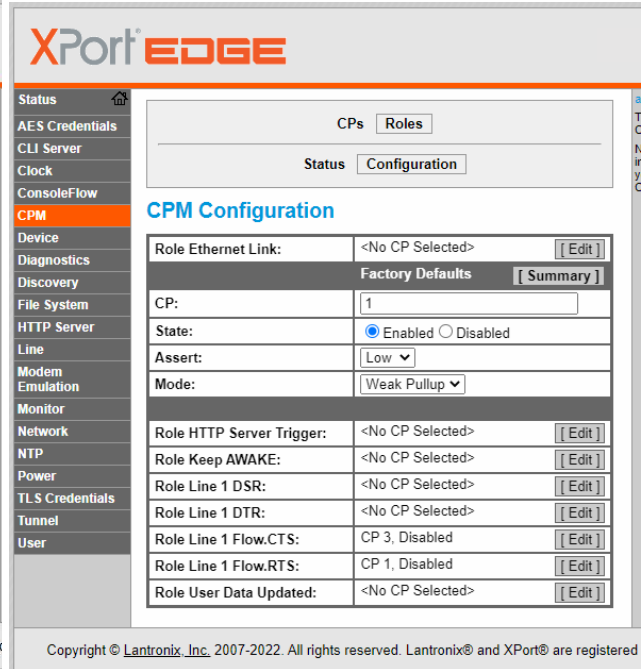
User

CPM Configuration

Changed CPM Role Factory Defaults CP to "1".
 Changed CPM Role Factory Defaults State to "Enabled".
 Changed CPM Role Factory Defaults Assert to "Low".
 Changed CPM Role Factory Defaults Mode to "Weak Pullup".
 The changes have been saved permanently.

Role Ethernet Link:	<No CP Selected>	[Edit]
Role Factory Defaults:	CP 1, Enabled, Low, Weak Pullup	[Edit]
Role HTTP Server Trigger:	<No CP Selected>	[Edit]
Role Keep AWAKE:	<No CP Selected>	[Edit]
Role Line 1 DSR:	<No CP Selected>	[Edit]
Role Line 1 DTR:	<No CP Selected>	[Edit]
Role Line 1 Flow.CTS:	CP 3, Disabled	[Edit]
Role Line 1 Flow.RTS:	CP 1, Disabled	[Edit]
Role User Data Updated:	<No CP Selected>	[Edit]

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CPM Configuration

Role Ethernet Link: <No CP Selected> [Edit]

Factory Defaults [Summary]

CP: 1

State: Enabled Disabled

Assert: Low

Mode: Weak Pullup

Role HTTP Server Trigger: <No CP Selected> [Edit]

Role Keep AWAKE: <No CP Selected> [Edit]

Role Line 1 DSR: <No CP Selected> [Edit]

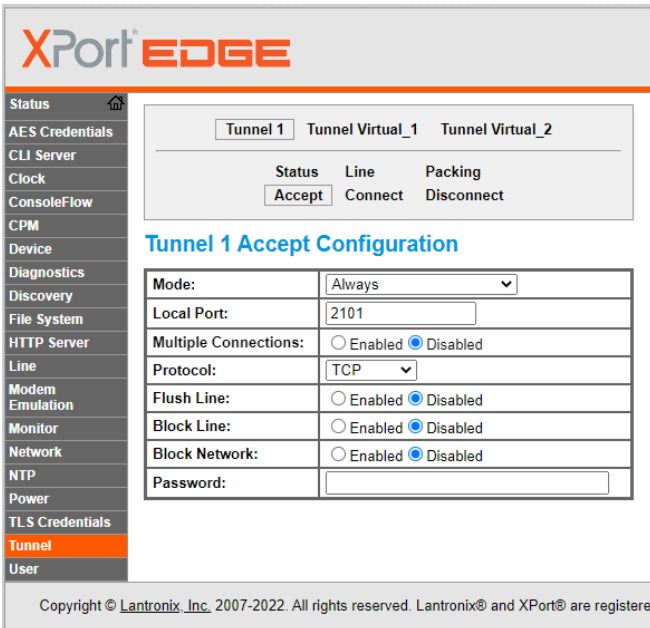
Role Line 1 DTR: <No CP Selected> [Edit]

Role Line 1 Flow.CTS: CP 3, Disabled [Edit]

Role Line 1 Flow.RTS: CP 1, Disabled [Edit]

Role User Data Updated: <No CP Selected> [Edit]

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XPort EDGE

Status Tunnel 1 Tunnel Virtual_1 Tunnel Virtual_2

CLI Server

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CPM

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Tunnel

User

Tunnel 1 Accept Configuration

Mode: Always

Local Port: 2101

Multiple Connections: Enabled Disabled

Protocol: TCP

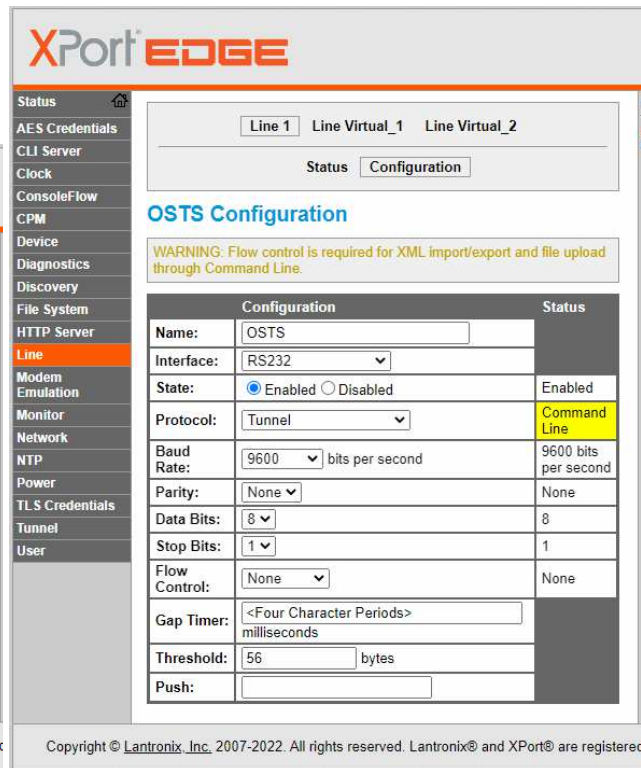
Flush Line: Enabled Disabled

Block Line: Enabled Disabled

Block Network: Enabled Disabled

Password:

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OSTS Configuration

WARNING: Flow control is required for XML import/export and file upload through Command Line.

Configuration	Status
Name: OSTS	
Interface: RS232	
State: <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	Enabled
Protocol: Tunnel	Command Line
Baud Rate: 9600 bits per second	9600 bits per second
Parity: None	None
Data Bits: 8	8
Stop Bits: 1	1
Flow Control: None	None
Gap Timer: <Four Character Periods> milliseconds	
Threshold: 56 bytes	
Push:	

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Factory Configuration Commands

Sets the LPG model type	
<u>Command:</u>	<u>Description:</u>
"SetModel"	
[model]	Ethernet option and dash number "E003"
<u>Response:</u>	<u>Description:</u>
"SetModel"	Echo command
[model]	Ethernet option and dash number
<i>Example:</i>	
<i>Notes: Configures the LPG based on the part.</i>	