## Ethernet Module (P/N 10-2627)



## Lantronix XPort Programming Guide



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#### DOCUMENT HISTORY

Document Title: Ethernet Module Programming Guide

#### Document Reorder Number: 06-388-1

Revision	Section	Date	Reason for Change
0	All Sections	09/08	Initial Release



#### **Ethernet Module Overview**

The 10-2627 Ethernet Module provides a means to connect the CyberCat or Cheetah Xi control panels to the local network or the Internet. This allows remote panels to transmit system events to a monitoring panel that can be located on the protected premises or at a remote location. Each module has an integrated Xport Ethernet component that must be programmed with a static IP address, Subnet Mask, and Default Gateway as outlined in this guide for proper communication to occur. You will need to work with the Information Technology (IT) personnel responsible for the protected premises to obtain these values for each Ethernet module installed.

The associated control panel(s) must also be configured for Ethernet operation before proper communication will occur. Refer to Fike document 06-388, "Ethernet Module Product Manual" for panel programming instructions.

(i) Note: The guide was prepared using current information supplied by Lantronix<sup>®</sup> and Microsoft<sup>®</sup> for the referenced software and components. Since these items are not under the direct control of Fike, the following information is subject to change without notice.

#### **Obtaining and Installing Lantronix DeviceInstaller**

There are several methods that Lantronix provides to configure the Xport Ethernet component; however, this guide will only cover the use of the DeviceInstaller windows based programming application. Use the following steps to download the software.

- 1 Open web browser and navigate to www.lantronix.com
- 2 Click Products
- 3 Click Software & Utilities
- 4 Click DeviceInstaller





#### 5 – Click Download Software

LANTRONI	X°				Partr	ners   Careers   Investors
Products	Solutions	Support	Newsroom	Resources	About Us	How to Buy
Home > Device Networking > S Device Linx Device Networking Embedded Networking External Networking Ethernet Switches Software & Utilities ManageLinx Remote Access Remote Device Access SecureLinx IT Management Platform Console Servers KVM-over-IP Remote Power Management Branch Office Management Branch Office Management Console Servers CM-Over-IP Remote Power Management Branch Office Management Branch Office Management Branch Office Management	ioftware & Utilities > Devic DeviceInsta The Lantronix Derito install and com Using DeviceInsta Load the ap Assign IP & Load custor Enable web Ping or que Allow Teinet View specifi Note: The DST & Download the lat	ieInstaller - iller TI viceInstaller is a N figure specific Lar aller, you can: propriate firmwar other network sp n web pages -based configurat ; communication v c device data files and APS Configur test version of D	Nindows-based GUI a Itronix device server p pecific addresses tion of the device serv evice(s) over the netw with the device(s) ration Utilities are no <u>eviceInstaller</u> .	pplication that provid roducts. er vork w part of DeviceIns	des an easy way	eviceInstaller Online 5 OWNLOAD Software Action atest Firmware

6 - From the Download via HTTP column, click the latest version number

LANTRON	IX <sup>∞</sup>					Partners   Careers   Investors
Products	Solutions	Support	Newsroom	Resources	About U	Js How to Buy
Home > Support 👻						
Support Tech Support	Answers S	iend an E-mail 🗌 My	Stuff			Login Help
Knowledgebase / FAQs		Search by Product 🤇	Search	by Keyword	Search Tips?	Search
Submit a Tech Support Question		<u>, , , , , , , , , , , , , , , , , , , </u>	Search	By		Poweredby/RIGHT
Documentation			Prirase	s <u>·</u>		NOW
Downloads	ID	Lat	est version of DeviceIns	staller		
Product Registration	644	Qu	estion			
Product Bulletins	Products	Wh	at is the latest version of	DeviceInstaller?		
Online Product Tutorials	EDS8PR	An Ce Servers	swer			_
Live Assist	EDS16PR	The	e current version of Dev	viceInstaller is v4.2.0	0.0	6
Cable / Adaptor Lookup	EDS32PR EDS4100	Pr	oduct Downlo	oad via FTP Dow	nload via HTTP	2
Warranty Policy	IntelliBox-I/C	<u>2100</u> De	eviceInstaller <u>v4.2.0.(</u>	<u>v4.2</u>	.0.0	
Extended Support & Services	SDS1101 SDS2100 UDS1100	Re	lease Notes <u>v4.2.0.(</u>	<u>) v4.2</u>	. <u>0.0</u>	
Spares Program	UDS1100-IA	Dev	vice Installer requires M	icrosoft's .NET Frame	ework version 2.0	
FTP Site	0092100					I if from the link below:

7 – Save installation file to Desktop



8 - From the Desktop, double-click on DeviceInstaller icon



- 9 Step thru the installation wizard using default values.
  - **NOTE:** If prompted to install Microsoft .NET Framework, locate the proper version on the web page illustrated in Step 6 above.

🛃 DeviceInstaller 4.2 - InstallShield Wizard
Location to Save Files Where would you like to save your files?
Please enter the folder where you want these files saved. If the folder does not exist, it will be created for you. To continue, click Next.
Save files in folder:
C:\Program Files\Lantronix\DeviceInstaller4.2\Install
⊆hange
Instalibrield



🛃 Lantronix DeviceInstaller 4.2.0.0	
Select Installation Folder	
The installer will install Lantronix DeviceInstaller 4.2.0.0 to the following fold To install in this folder, click "Next". To install to a different folder, enter it be Folder:	er. slow or click ''Browse''.
C:\Program Files\Lantronix\DeviceInstaller4.2\	B <u>r</u> owse Disk Cost
Cancel < <u>B</u> ack	<u>N</u> ext >





Installation Complete         Lantronix DeviceInstaller 4.2.0.0 has been successfully installed.         Click "Close" to exit.         Please use Windows Update to check for any critical updates to the .NET Framework.         Cancel       < Back	😽 Lantronix DeviceInsl	aller 4.2.0.0	)					
Lantronix DeviceInstaller 4.2.0.0 has been successfully installed. Click "Close" to exit. Please use Windows Update to check for any critical updates to the .NET Framework.	Installation Con	plete						
Click "Close" to exit. Please use Windows Update to check for any critical updates to the .NET Framework. Cancel	Lantronix DeviceInstaller 4	2.0.0 has bee	en succes	ssfully insl	talled.			
Please use Windows Update to check for any critical updates to the .NET Framework.	Click "Close" to exit.							
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Cancel < Back Close	Please use Windows Upd	ite to check fo	or any crit	tical upda	ites to ti	ne .NET F	ramework	ς.
Cancel < Back Close								
			Ca	ancel	1	< <u>B</u> ack		<u>C</u> lose



#### **Connect to the Ethernet Module**

**Option 1:** For connection between a PC and the Ethernet Module thru a hub/switch, use a standard, straightthru, Category-5 (CAT5) Ethernet cable as shown in the following diagrams.





**Ethernet Straight-Thru** 

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**Option 2:** For direct connection between a PC and the Ethernet Module, use a Category-5 (CAT5) Ethernet Cross-Over cable.





**Ethernet Cross-Over** 



#### Change Computer IP Address and Subnet Mask

The computer running the DeviceInstaller software must be set to the same IP address, Subnet mask and Default Gateway as the default configuration for the Ethernet Module. The following procedure shows how to set these values in a Windows XP operating platform.

1 - Open Control Panel



2 – Open Network Connections



3 – Right-Click on Local Area Connection, and select Properties



4 – Select Internet Protocol (TCP/IP), and click Properties

🚣 Local Area Connection Properties 🔗 🍸 🗙
General Authentication Advanced
Connect using:
Broadcom NetXtreme 57xx Gigabit C
This connection uses the following items:
🗹 🚚 QoS Packet Scheduler 📃
🗹 🐨 Network Monitor Driver
Internet Protocol (TCP/IP)
I <u>n</u> stall <u>U</u> ninstall P <u>r</u> operties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
<ul> <li>Show icon in notification area when connected</li> <li>Notify me when this connection has limited or no connectivity</li> </ul>
OK Cancel

- 5 Select the Alternate Configuration tab
- 6 Select the User configured radio button

7 - Enter the appropriate IP Address, Subnet mask, and Default gateway

**Ke** 

Internet Protocol (TCP/IP) Properties	s <u>?</u>	×
General Alternate Configuration		_,
If this computer is used on more than on settings below.	e network, enter the alternate IP	
O Automatic private IP address		
User configured		
<u>I</u> P address:	10 . 10 . 10 . 2	
S <u>u</u> bnet mask:	255 . 255 . 255 . 0	
Default gateway:	10 . 10 . 10 . 1	
Preferred DNS server:		
<u>A</u> lternate DNS server:		
Preferred <u>W</u> INS server:	· · ·	
Alternate WI <u>N</u> S server:		
	OK Cancel	

- 8 Click OK to close the Internet Protocol (TCP/IP) Properties window
- 9 Click OK to close the Local Area Connection Properties window
- 10 Connect PC to network or Ethernet Module.
  - **NOTE:** It takes the computer a minute or so to determine that the *Alternate Configuration* should be used. So be patient and look for the balloon indicating the network is now connected.

🔅 🔱 Local Area Connection is now connected	×
Speed: 100.0 Mbps	
	5

#### Open DeviceInstaller and configure Ethernet Module

- 1 Start > All Programs > Lantronix > DeviceInstaller v#.# > DeviceInstaller
- 2 If Windows Security Alert occurs, click Unblock



3 – When a prompt occurs to update product database, check the *Do not prompt me about this* checkbox and click *No*.

Product Information Base Update Alert	×
Would you like to check for updates to the Product Information Base? (An Internet connection is needed for updates)	
The Product Information Base has not been updated since installation.	
Do not prompt me about this. (Can enable this again from Tools->Options)	
Yes No	

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4 – Each Ethernet Module accessible by the computer will be listed in the DeviceInstaller tree. Click the IP Address corresponding with the unit you wish to configure.

**NOTE:** The computer running DeviceInstaller must be set to the same network and subnet mask as the default configurations for the Ethernet Modules.

5 – Click Assign IP.

DeviceInstaller 4.2.0.0			
File Edit View Device Tools 5			
🖃 🚍 Lantronix Devices - 1 device(s)	Device Details Web Configuration	Telnet Configuration	
E- Local Area Connection (10.10.1)	2		
XPort-U3 - hirmware v5.5.0.7	Property	Value	
	Name		
	Group		
	Comments		
	Device Family	XPort	
	Туре	XPort-03	
	ID	X5	
	Hardware Address	00-20-4A-A4-02-18	
	Firmware Version	6.50	
	Extended Firmware Version	6.5.0.7	
	Online Status	Online	
	IP Address	10.10.10.10	
	IP Address was Obtained	Statically	
	Subnet Mask	255.255.255.0	
	Gateway	10.10.10.1	
	Number of COB partitions suppo	6	<b>_</b>
	Number of Ports	1	
🥩 Ready			

6 - Select Assign a specific IP address and click Next



7 - Enter appropriate IP Address, Subnet mask, and Gateway. Press Next.

🧟 Assign IP Address		×				
	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: 10.10.10.10					
	Subnet mask: 255.255.255.0					
	Default gateway 10.10.10.1					
*						
	< Back Next > Cancel Help					

8 - Click Assign to update information

🥸 Assign IP Address	<u>×</u>
	Assignment Click the Assign button to complete the IP address assignment. Assign
	< Back Finish Cancel Help

9 – Task will progress. Click Finish when complete.

🧟 Assign IP Address	×					
Assign IP Address	Assignment Click the Assign button to complete the IP address assignment.					
ţ	Progress of task:					
	Finish Help					

NOTE: Changing IP information could result in loss of communication between the computer running DeviceInstaller and the respective Ethernet Module.

The above information is the minimum required for each Ethernet Module. If module(s) fails to function properly after all configuration has been verified within the Cheetah Xi or CyberCat panel, refer to the following section.



#### **Verification of Ethernet Module settings**

- 1 In DeviceInstaller, click the IP Address corresponding with the unit you wish to verify.
- 2 Click the Web Configuration tab.
- 3 Click Go.



4 – At prompt, click OK (default username and password are blank)



5 – Click Network and verify settings match the following. Click OK if changes are made.

LANTRO	Firmware Version: V6.5.0.7 MAC Address: 00-20-4A-A4-02-18
<u>ش</u>	Network Settings
Server	
Serial Tunnel Hostlist	Obtain IP address automatically
Channel 1	Auto Configuration Methods
Serial Settings Connection	BOOTP: @ Enable Disable
Email	DHCP: @ Enable @ Disable
Trigger 1 Trigger 2	AutolP: @ Enable @ Disable
Trigger 3	DHCP Host Name:
Apply Settings	O Use the following IP configuration:
Apply Factory Defaults	IP Address: 10.10.10 Application Specific
	Subnet Mask: 255.255.255.0 Application Specific
	Default Gateway: 10.10.10.1 Application Specific
	Ethernet Configuration
	🔽 Auto Negotiate
	Speed: 🔎 100 Mbps 💭 10 Mbps

6 – Click Server and verify settings match the following exactly. Click OK if changes are made.

		MAC Address: 00-20-4A-A4-02-18
	₩ ₩	Server Settings
<	Server Serial Tunnel Hostlist Channel 1 Serial Settings Connection Email Trigger 1 Trigger 2 Trigger 3 Configurable Pins Apply Settings Apply Factory Defaults	Server Configuration Telnet Password: Retype Password:  Advanced ARP Cache Timeout (secs): 600 (secs): 600 CPU Performance Mode: Regular C High
		HTTP Server Port: 80
		MTU Size: 1400
		ОК

7 - Click Serial Settings and verify settings match the following exactly. Click OK if changes are made.

<b>谷</b>	Seria	Settings
letwork		
Server	Channel 1	
Serial Tunnel Hostlist	🗖 Disable Serial Port	
Channel 1	Port Settings	
Serial Settings	Protocol: RS232	Flow Control: None
mail	Baud Rate: 9600 💌 🛛 Data Bits: 8 💌	Parity: None 🔍 Stop Bits: 👔 🖷
Trigger 1		
Trigger 2	Pack Control	
Trigger 3	Enable Packing	
.onligurable Pins	Idle Cap Time: 12 mage	
Apply Settings	idie Gap Time. 12 msec	
Apply Factory Default	🗴 Match 2 Byte Sequence: 🦱 Yes 🚳 No	Send Frame Only: 🥤 Yes 🧐 No
	Match Bytes: 0x00 0x00 (Hex)	Send Trailing Bytes: 🔍 None 🔍 One 🔍 Tr
	Flush Mode	
	Flush Input Buffer	Flush Output Buffer
	With Active Connect: O Yes 💿 No	With Active Connect: C Yes 💿 No
	With Passive Connect: O Yes 💿 No	With Passive Connect: O Yes 💿 No
	At Time of Disconnect I O Yes I No	At Time of Disconnect 🛛 Yes 💿 No

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8 – Click *Connection* and verify settings match the following exactly. Click *OK* if changes are made.

命	Con				pection Settings				
Network Server Serial Tunnel Hostlist Channel 1 Serial Settings Connection Email Trigger 1	Channel 1 Connect Protocol Protocol: UI Datagram Mode: Datagram Endpoint Configura	Inel 1 Sect Protocol Protocol: UDP I ram Mode: Datagram Type: 00 I Accept Incoming: Yes Soint Configuration:							
Trigger 2	Loca	1		Remote Port: 0					
Trigger 3	9 Remote	Host: 0.0.0.	0						
Apply Settings	Devic	ce Address	fable:						
Apply Factory Default	s No.	Dev Addr	No.	Dev Addr	No.	Dev Addr	No.	Dev Addr	
	0	0	1	0	2	0	3	0	
	4	0	5	0	6	0	7	0	
	8	0	9	0	10	0	11	0	
	12	0	13	0	14	0	15	0	

9 – If changes were made, click Apply Settings.

#### **Preloaded Factory Settings**

The following settings are preloaded into Ethernet Module by Fike prior to shipment from the Factory.

#### **Network / IP Configuration**

**re** 

- IP Address Customer Provided; factory defaulted to 10.10.10.10
- Subnet Mask Customer Provided; factory defaulted to 255.255.255.0
- Default Gateway Customer Provided; factor defaulted to 10.10.10.1

#### Server / Advanced

- ARP Cache Timeout 600 seconds
- TCP Keepalive 45 seconds
- Monitor Mode @ Bootup Enable
- CPU Performance Mode Regular
- HTTP Server Port 80
- MTU Size 1400

#### **Channel 1 / Serial Settings**

Channel 1 / Disable Serial Port – Off Port Settings / Protocol – RS232 Port Settings / Baud Rate – 9600 Port Settings / Data Bits – 8 Port Settings / Flow Control – None Port Settings / Parity – None Port Settings / Stop Bits – 1 Pack Control / Enable Packing – Off Flush Mode / Flush Input Buffer – all set to NO Flush Mode / Flush Output Buffer – all set to NO

#### **Channel 1 / Connection**

- Connect Protocol / Protocol UDP
- Datagram Mode / Datagram Type 00
- Datagram Mode / Accept Incoming Yes



Reserved for future use.

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