LANTRONIX®

XPress™-I/O Device Server

- Remotely monitor and control RS232 or RS422/485-based equipment
- Secure access and control of remote digital I/O and relays
- Remote I/O management using common SCADA or OPC servers with Modbus/TCP protocol
- 10/100 Ethernet interface with 1.5kv isolation (802.3 standard)
- Two serial ports, 1 RS232, 1 RS422/485, with ESD protection
- Removable screw terminal blocks for all connectors and power input
- Two optically-isolated digital I/Os (IO1-, IO1+, IO2-, IO2+)
- Modbus TCP to Modbus RTU/ASCII gateway

RoHS WEEE COMPLIANT

XPress™-I/O

Industrial Device Server

Remotely Monitor and Control Your Industrial Equipment – Quickly and Easily!

The rugged XPress-I/O device server delivers a powerful I/O network connectivity option for a wide range of industrial automation equipment.

Combined with Lantronix's serial device networking power, digital I/O and dry contact (relay) functionality delivers the ability to remotely access, monitor and control industrial I/O devices with maximum flexibility. Xpress I/O can monitor and control alarms, valves, fans, lights, motor starters, control relays and much more.

Featuring Evolution OS™, our powerful real-time networking operating system, XPress I/O also delivers an unprecedented level of intelligence and security enabling, multiple pieces of equipment to become secure members of the network which can be accessed and managed from virtually anywhere, at any time.

Applying Network Connectivity to I/O Devices

With the XPress-I/O device server, monitoring and protection of your high-value I/O assets has never been so easy. Through remote I/O management using common SCADA, OPC Servers or PLC's with Modbus/TCP protocol, this specialized device server enables users to monitor equipment failure, environmental alarms, intrusion detection, relay contact closures – a wide array of industrial equipment with I/O functionality.

The addition of digital I/O and relay monitoring enables the XPress-I/O to not only protect data but also the physical environment that provides it. Activity can be monitored remotely and the user alerted via email or Modbus TCP. Enabling the user to respond to critical events, digital I/Os and relays can be triggered remotely from the XPress-I/O's web page, command line interface or via Modbus.

Standards-Based Communications

The XPress-I/O's open Ethernet architecture lets you quickly and easily incorporate your industrial I/O equipment into existing network system designs.

When used in conjunction with an OPC server, most Windows®-based HMI, SCADA and PC-based control applications have full access to information in connected devices. Existing COM-port based applications can access network-enabled devices via Lantronix's Com Port Redirector™ software. And with our powerful Evolution OS™ operating system, you'll have the flexibility to accommodate future network expansion.

Thrives in the Industrial Environment

The XPress-I/O meets the demanding, complex industrial environment head on. It's equipped with isolated serial, I/O and Ethernet ports. Screw terminal connectors are provided for serial, I/O, relay and power. It supports industrial protocols such as Modbus TCP, Modbus ASCII, Modbus RTU and is FM-approved for hazardous locations Class 1, Div. 2.

- 15KV serial port ESD protection shields circuitry from overcurrent conditions
- ESD-protected I/O channels are independent and optically isolated
- Wide -40°-75°C operational temperature range
- Flexible power with 9-30 VDC and 9-24 VAC input range

Configuration Flexibility

Flexible configuration options allow the XPress-I/O to be set up locally using the serial port, or remotely over Ethernet using Telnet or browser. The CPU's flash memory provides maintenance-free, non-volatile storage and easily accommodates future system upgrades.

LANTRONIX® EVOLUTION OS™

Features and Specifications

Serial Interface
2 Serial ports: 1 RS232, 1 RS422/485 (4-wire/2-wire) with terminal block connection
Baud rate selectable from 300 to 230 Kbps
Customizable baud rate support for non-standard serial speeds
LED indicators for TXD and RXD activities

Serial Line Formats
Characters: 7 or 8 data bits
Stop bits: 1 or 2
Parity: odd, even, none

Flow Control
Hardware: RTS/CTS
Software: XON/XOFF

Modem Control
CTS, RTS, DTR, DCD on Serial 1

Digital I/O
2 Independently configurable digital I/Os, configured via GUI set-up Menu
Opto-isolated to eliminate grounding issues
Logically compatible with 3.3V level, and also higher voltage levels
Opto-isolated relay if configured as outputs, thus, can also be used as low power DC/AC switches
Transient voltage and polarity reversal protections built in

Relay
Contacts are capable of handling up to 8A resistive load
Contacts are mechanically isolated to eliminate grounding issues
Contacts are non-latching with Normally Open (NO) or Normally Closed (NC) for simple application such as power failure indication

Network Interface
1 RJ45 Ethernet port
10Base-T/100Base-TX
Full or half duplex
Auto-negotiating or hard coded

LED Indicators
10Base-T and 100Base-TX Link
Ethernet Activity
Serial Transmit Data
Serial Receive Data
Power / Status

Management
Internal web server
SNMP v2C (MIB-II, RS232MIB)
Serial login
Telnet/SSH login
XML
DeviceInstaller software

Power
Removable screw terminal block connector
9-30 VDC or 9-24 VAC with chassis ground
2.3W

Environmental
Temperature: -40°C to 75°C (-40° to 167°F) Operating
Temperature: -40°C to 85°C (-40° to 185°F) Storage
Humidity: 10% to 90% relative humidity, noncondensing

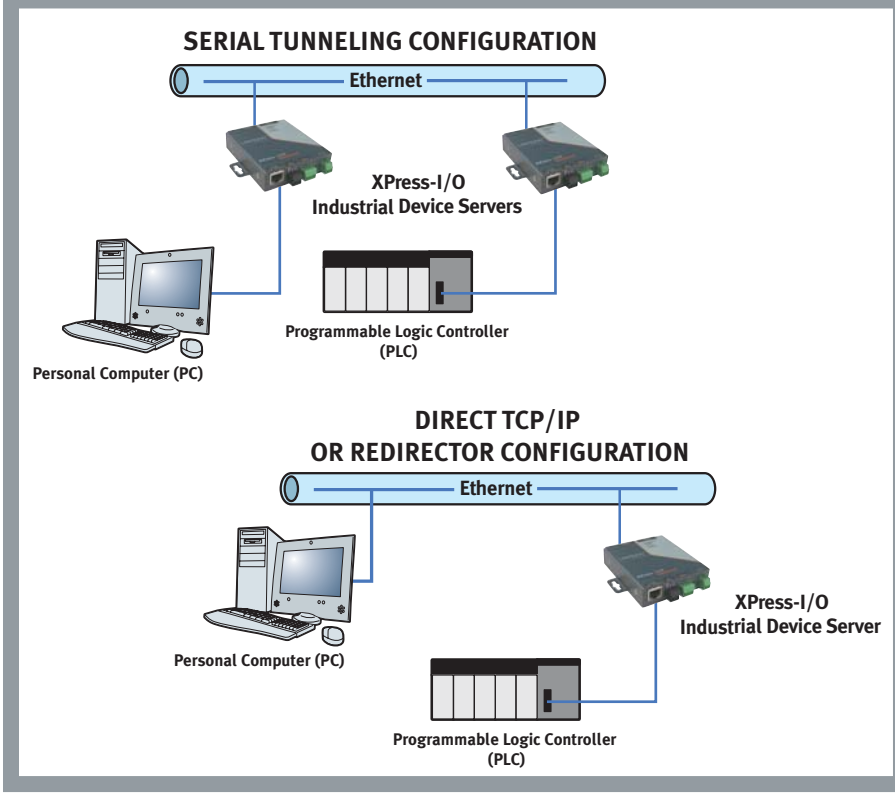
Agency Approvals
UL, CSA, FCC, CE,TUV, CTick,VCCI, FM Class 1, Div. 2

Protocols Supported
ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, SMTP, FTP, DNS, Traceroute, HTTP

Industrial Application Protocols
Modbus TCP, Modbus ASCII/RTU

CPU
Lantronix DSTNI-EX 120 MHz clock, 256 KB SRAM, 16 KB Boot ROM Internal CPU Memory

XPress-I/O Example Configurations



Memory
4 MB Flash
2 MB SRAM

EEPROM
64 Kbits

Reset
Recessed push button

Packaging
Case: metal enclosure with wall mounts
IP30 enclosure rating
Dimensions: (L x W x H): 115 x 109 x 23 mm (4.54 x 4.30 x .90 in), terminal blocks included
Weight: 0.3 kg (0.63 lb) (10 oz)

Shipping Dimensions (L x W x H)
254 x 216 x 70 mm (10 x 8.5 x 2.75 in.)

Warranty
2-year limited warranty

Isolation
1.5 KVAC / 2.1 KVDC galvanic isolation between power input port and Ethernet port (except chassis ground)
1.5 KVAC / 2.1 KVDC galvanic isolation between power input port and serial ports
1.5 KVAC / 2.1 KVDC galvanic isolation between Ethernet port and serial ports
1.5 KVAC / 2.1 KVDC opto-isolation between digital I/O ports and all other ports
1.5 KVAC / 2.1 KVDC mechanical isolation between Relay contacts and all other ports
8 KV direct contact, 15 KV air discharge, ESD protection on all serial ports (IEC 1000-4-2, IEC 61000-4-2)
40 A (5/50 ns) EFT protection (IEC 61000-4-4), 12 A (8/20 us) lightning protection (IEC 61000-4-5) on Ethernet port
Transient voltage protection and ESD at power input with max non-repetitive surge current 800 A (8/20 us) (IEC 61000-4-2)
Transient voltage protection and ESD with max non-repetitive surge power 600W peak (10/1000 us) at digital I/O ports

gridconnect™
1630 Diehl Road
Naperville, Illinois 60563 USA
+1 630 245-1445, +1 630 245-1717 FAX