LANTRONIX®

XPort™ Embedded Device Server

▶ **Minimal engineering** efforts required – just add your applications

▶ **Remote command** and control of edge devices

▶ **Real-time** edge device status via e-mail alerts

▶ **Encryption** for secure communications – 256-bit AES US Government approved Rijndael

▶ **FCC Class B compliant** – EMC compliant

▶ **Everything you need** – all in a single RJ-45 package

XPort™ Embedded Device Server: Complexity Made Amazingly Simple

The XPort is the most compact, integrated solution available to Web-enable any edge device with a serial interface. By simply adding XPort to a product design, device manufacturers can now offer Ethernet connectivity as a standard feature *in as little as 60 days*—instantly increasing product value, enhancing end-user experience and facilitating new service delivery options.

As the demand for device connectivity increases exponentially, Lantronix removes the complexity manufacturers face by incorporating all the required hardware and software inside a single embedded device solution. Although it is smaller than your thumb, the XPort incorporates all essential networking features, including a 10Base-T/100Base-TX Ethernet connection, a proven operating system, an embedded Web server, e-mail alerts, a full TCP/IP protocol stack and 256-bit AES encryption for secure communications. In effect, the disruptive technology introduced by XPort adds profit immediately to your bottom line by significantly reducing product development time, risk and cost.

XPort is powered by Lantronix's own DSTni™ (Device Server Technology Network Interface) networking chip, which includes a 10/100 PHY, the efficient XPort architecture requires the use of only 256 Kbytes of SRAM and 512 Kbytes of Flash. This Flash memory provides nonvolatile storage of Web pages, and allows system software upgrades via the internet. XPort also offers a built-in (Java applet capable) Web server using

interactive data communications to and from a device through a standard Internet browser. Web capability can be used for configuration, remote monitoring, or troubleshooting —including real-time device performance notification via e-mail alerts. Additionally, the XPort acts as a dedicated co-processor to optimize network activities, permitting the host microprocessor to function at maximum efficiency.

By integrating the XPort into a design, you can make any electronic product a smart device, with embedded network intelligence so that it can deliver innovative applications such as:

- Remote Diagnostics and Upgrades
- Asset Tracking and Replenishment
- Automation and Control
- Power Management
- Remote Collaboration
- Personalized Content Delivery

The unique form factor of the XPort allows OEMs to cost-effectively embed networking into a wide array of products. The complex task of Web-enabling your edge devices has never been so simple.
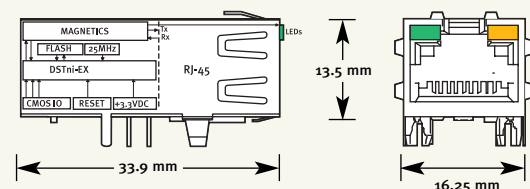
XPort Actual Size

Features and Specifications

Serial Interface
Interface: CMOS (Asynchronous, 5V tolerant)
Data Rates: 300 Kbps to 920 Kbps
Characters: 7 or 8 data bits
Parity: odd, even, none
Stop Bits: 1 or 2
Control Signals: RTS/DCD, CTS, RTS
Flow Control: XON/XOFF, RTS/CTS
Programmable I/O: 3 PIO pins (Software selectable)

Network Interface
Interface: Ethernet 10Base-T or 100Base-TX (Auto-Sensing)
Connector: RJ-45
Protocols: TCP/IP, UDP/IP, ARP, ICMP, SNMP, TFTP, Telnet,
   DHCP, BOOTP, HTTP and AutoIP

Indicators (LED)
10Base-T connection
100Base-TX connection
Link & activity indicator - Full/half duplex

Management
SNMP, Telnet, serial, internal Web server, and Microsoft
   Windows® based utility for configuration

Security
Password protection
Optional 256-bit AES US Govt. approved Rijndael encryption

Internal Web Server
Serves Web pages and Java applets
Storage capacity: 384 Kbytes for web pages

Architecture
CPU: Based on the DSTni-EX enhanced 16-bit, 48MHz or 88MHz
   x86 architecture
Memory: 256 Kbytes SRAM and 512 Kbytes flash
Firmware: upgradeable via TFTP and serially

Power
Input voltage: 3.3 VDC

Environmental
Operating: -40°- 85℃ (-40° - 185°F) normal mode,
   -40° - 75℃ (-40° - 167°F) high-performance mode
Storage: -40° - 85℃ (-40° - 185°F)

Packaging
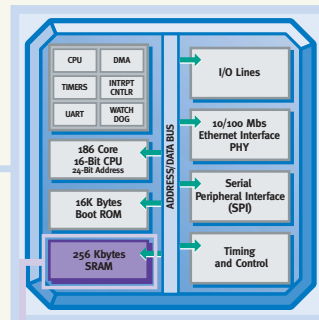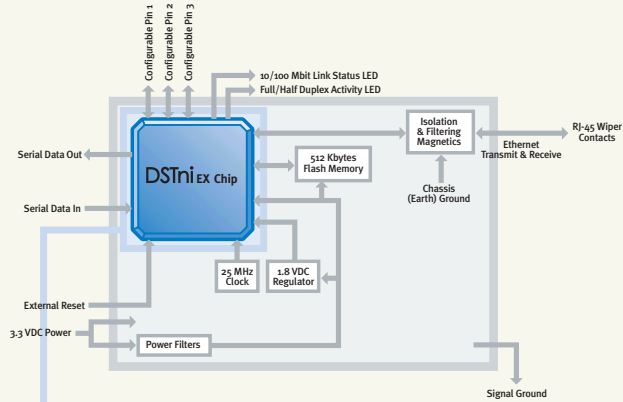Dimensions: 33.9 x 16.25 x 13.5 mm (1.33 x .64 x .53 in)
Weight: 9.6 g (0.34 oz)

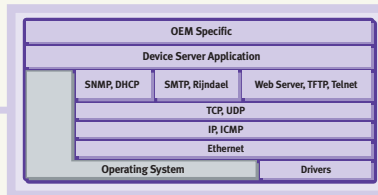### Warranty
2-year limited warranty

Included Software
MS Windows® based software device installer and MS
   Windows based Com Port Redirector

XPort Block Diagram

EX Chip Hardware Diagram

Internal Software Portfolio

XPort Development Kit

The XPort Development Kit includes everything you need to integrate the XPort into your next product design, including:

- An XPort Evaluation Board and reference design including CAD PCB files and complete BOM
- Universal AC power adapter
- Network (CAT5) and serial cable
- Connector adapter included

- Data sheet
- Lantronix utilities CD containing new Com Port Redirector, Device installer
- Sample code and application notes
- Complete User Manual

For details contact your local Lantronix representative or Lantronix directly:
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Europe via e-mail at eu_sales@lantronix.com
Japan via e-mail at japan_sales@lantronix.com
United States via e-mail at sales@lantronix.com or call OEM sales support at 800-526-8764.

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