# LANTRONIX®



### **XPort® Embedded Device Server**

- Minimal engineering effort required to web-enable virtually any electronic device
- Remote command and control of edge devices
- Real-time edge device status via e-mail alerts
- 256-bit AES encryption for secure communications
- **▶** EMC/EMI-compliant; RoHS-compliant
- Everything you need all in a single RJ45 package

# **Build Network Connectivity into Your Products, Quickly and Simply**



XPort® is a compact, integrated solution to webenable any device with serial capability. By incorporating XPort to a product design, manufacturers can offer network connectivity as a standard feature within weeks — so they can be accessed and controlled over the Internet.

#### **Full Networking in a Tiny Package**

XPort removes the complexity – of designing network connectivity into a product by incorporating all of the required hardware and software inside a single embedded solution. Smaller than your thumb, it includes all essential networking features, including a 10Base-T/100Base-TX Ethernet connection, proven operating system, an embedded web server, e-mail alerts, a full TCP/IP protocol stack, and 256-bit AES encryption for secure communications. This easy-to-embed networking processor module enables engineers to focus on their core competency while reducing development time and cost and increasing product value.

#### **Integrated Network Communications Module**

XPort is powered by our DSTni™ network processor SoC, which includes a 10/100 MAC/PHY and 256 KB of SRAM. It features a built-in web server for communications with a device via a standard Internet browser. Web capability can be used for remote configuration, real-time monitoring or troubleshooting. XPort has 512 KB of onmodule Flash for web pages and software upgrades. It acts as a dedicated co-processor that optimizes network activities permitting the host microprocessor to function at maximum efficiency.

### **Building Intelligent Devices**

With XPort you can embed intelligence into any electronic product for applications such as:

- Remote diagnostics and upgrades
- · Asset tracking and replenishment
- · Automation and control
- Power management
- Remote collaboration
- Personalized content delivery

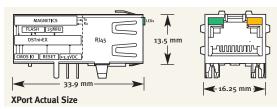
#### **Robust, Feature-Rich Software Suite**

Eliminating the need to negotiate the intricacies of Transmission Control Protocol (TCP) or Internet Protocol (IP), XPort incorporates:

- Robust Real Time Operating System (RTOS)
- Full-featured network protocol stack
- Proven, ready-to-use serial-to-wireless application
- Built-in web server for device communication and configuration via a standard browser

The Windows-based DeviceInstaller $^{\text{\tiny M}}$  makes configuring one or more WiPorts in a subnet quick and easy.

- Install and configure XPort and load firmware
- Assign IP & other network specific addresses
- Set wireless parameters
- Load custom web pages and view specific device data
- Enable web-based configuration of the device
- Ping or query the attached device(s) over the network
- Allow Telnet communication with the device(s)





## **Features and Specifications**

#### **Serial Interface**

Interface: CMOS (Asynchronous, 5V tolerant)
Data Rates: 300 bps to 921,600 bps
Characters: 7 or 8 data bits
Parity: odd, even, none
Stop Bits: 1 or 2

Control Signals: DTR/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: RJ45

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
Ontional 256-bit AFS Riinda

Optional 256-bit AES Rijndael encryption

#### **Internal Web Server**

Storage capacity: 384 KB for web pages

#### Architecture

CPU: Based on the DSTni-EX enhanced 16-bit, 48MHz or 88MHz x86 architecture

Memory: 256 KB SRAM and 512 KB Flash Firmware: upgradeable via TFTP and serially

#### Power

Input voltage: 3.3 VDC

#### **Environmental**

Extended Temp: -40° to 85°C (-40° to 185°F) Commercial Temp: 0° to 70°C (32° to 158°F) Storage: -40° to 85°C (-40° to 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)

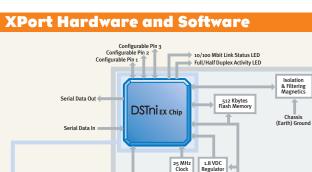
#### Warranty

2-year limited warranty

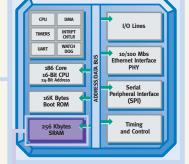
#### Included Software

MS Windows-based DeviceInstaller software and MS Windows-based Com Port Redirector

Model XPort XE Min. Quantity: 50 Units	<b>Part Number</b> XP1001000-03R XP1001001-03R XP1001000M-03R	Description  XPort RoHS Extended Temperature  XPort RoHS Commercial Temperature  XPort XE RoHS Extended Temperature, with MODBUS
XPort SE Min. Quantity: 50 Units	XP1002000-03R XP1002001-03R	XPort RoHS Extended Temperature, with Encryption XPort RoHS Commercial Temperature, with Encryption
XPort SE SMPL	XP100200S-03R	XPort RoHS Extended Temperature, with Encryption - Sample
XPort 485 Min. Quantity: 50 Units	XP1004000-03R	XPort RS-485 RoHS Extended Temperature, with Encryption
XPort 485 SMPL XPort Evaluation Kit	XP100400S-03R XP100200K-03	XPort RS-485 RoHS Extended Temperature, with Encryption - Sample XPort Evaluation Kit, with Encryption



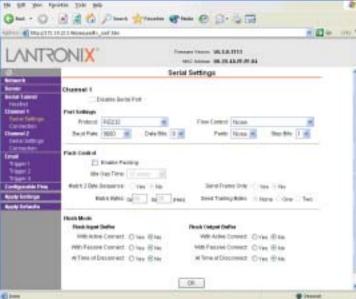
Power Filters





Ethernet smit & Receive

**EX Chip Hardware Diagram** 



# XPort Evaluation Kit

The XPort Evaluation 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 (CAT<sub>5</sub>) and serial cable
- Connector adapter
- Data sheet
- Lantronix utilities CD containing new Com Port Redirector, DeviceInstaller
- Sample code and application notes
- · Complete user manual



The included

DeviceInstaller

software makes

configuring XPort

quick and easy!