LANTRONIX®

WiPort Embedded Device Server

- ▶ Smallest integrated wireless solution
- ▶ Industry standard 802.11b wireless interface and a 10/100 Ethernet interface
- ▶ 128bit WEP Encryption for security
- ▶ Connect any serial device to a wireless network
- ▶ Fastest time-to-market wireless solution

WiPort – the ideal solution for integrating wireless capability into your edge devices

The WiPort is the most compact, integrated solution available to add 802.11b wireless networking to any edge device with a serial interface. Using our highly integrated hardware and software platform, you will add to your bottom line by significantly reducing product development time, risk, and cost.

The WiPort offers the highest level of integration available in a device server. Within a compact package is a DSTni x86 controller, memory, 802.11b transceiver, a 10/100 Ethernet transceiver and dual high-speed serial ports. All of this combines to give you a complete networking solution. The WiPort is the first product in a line of embedded wireless device servers, designed with flexibility to support additional 802.11x wireless standards without requiring redesign.

To enable access to a local network or the Internet, the WiPort integrates a fully developed TCP/IP network stack and OS. The WiPort also includes an embedded web server that can be used to remotely configure, monitor, or troubleshoot the attached device.

WiPort can serve Web pages to a Web browser when there is a need to gather information or communicate with a networked device. The WiPort becomes a conduit between you and your device over the network or internet.

The Windows™-based configuration software, Device Installer, simplifies installation and setup. The WiPort can also be configured locally through its serial port, or remotely over a network using Telnet (password protected) or a Web browser. Flash memory provides for maintenance-free, non-volatile storage of Web pages, and allows future system software upgrades.

Hardware & Software Description

The WiPort functions independently of a PC, providing a complete hardware and software solution for adding wireless connectivity to your edge devices. Within a single compact package, this powerful device server comes with an 802.11b wireless connection, a 10/100 Ethernet transceiver, a reliable and proven operating system stored in flash memory, an embedded Web server, a full TCP/IP protocol stack and WEP security.

The WiPort software runs on a Lantronix DSTni controller which has 256KB of internal SRAM, and 16KB of boot ROM. The WiPort communicates to the edge device through a 3.3V logic level interface. WiPort also includes 2048Kbytes of flash memory for storing firmware and Web pages.

A larger memory option is available that includes 4096Kbytes of flash memory, and an additional 1024Kbytes of SRAM. The WiPort runs on a single 3.3V supply, and has a built-in voltage supervisory circuit.

The WiPort will connect through a coaxial cable "pigtail" to a panel-mounted external antenna, which makes the electro-mechanical integration very simple.

Protocol Support

The WiPort uses the widely accepted 802.11b protocol to connect to a wireless access point or an ad hoc network. It uses the Transmission Control Protocol (TCP) to ensure that no data is lost or duplicated and everything sent to the connection arrives correctly at the target.

Other supported protocols are listed below:

- ARP, UDP, TCP, ICMP, Telnet, TFTP, AutoIP, DHCP, HTTP, and SNMP for network communications.

- TCP, UDP, and Telnet for connections to the serial port.

- TFTP for firmware updates.

- IP for addressing, routing, and data block handling over the network.

- User Datagram Protocol (UDP) for typical datagram applications in which devices interact with other devices without maintaining a point-to-point connection.

Dimensions

The WiPort dimensions are shown in the drawing below.

More Key Features

- Complete integrated solution
- Supports WLAN or Ethernet connectivity
- Serial to 802.11b conversion
- Stable, field proven TCP/IP protocol suite and Web-based application framework
- Easy configuration through a Web interface
- Easy installation of custom Web pages
- Embedded Web server
- E-Mail alerts
- Password protection
- Upgradeable WiPort firmware via the network or serial port
- Dual serial ports
- WPA security upgradeable
- High performance throughput

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