



Embedded Wireless Device Server

- ▶ Upgrade to wireless – quickly and easily
- ▶ Form factor compatible with our Micro and Micro100 boards
- ▶ Embedded web server
- ▶ “Plug and Play” wireless connectivity
- ▶ Wireless security using 128-bit WEP and WPA-PSK, TKIP
- ▶ End-to-end security using 256-bit Rijndael encryption

WiMicro – The Easy Way to Upgrade Ethernet-enabled Products to 802.11 Wireless Networking

The WiMicro™ board provides a quick and easy solution for adding 802.11 wireless connectivity for Lantronix customers who already integrate our Cobox-Micro or Micro100 embedded Ethernet device servers.

Usually requiring minimal, or zero, modification to the existing design, WiMicro not only provides the flexibility for existing OEM customers to offer Ethernet and/or wireless in their products, but makes the transition smooth without increasing engineering investment or time-to-market.

Proven WiPort Technology

The WiMicro board allows a Lantronix WiPort™ embedded 802.11 wireless device server to plug directly into the existing interface and uses the same mounting holes as the original Micro and Micro100 products. The LEDs and antenna are positioned in the same locations as the original Micro/Micro100 LEDs and Ethernet RJ45 connector making this a simple drop in solution.

Compact Size – Powerful Functionality

About the size of a matchbook, WiPort offers the highest level of integration available in a device server. Within a compact package are a DSTni x86 processor, memory, 802.11 transceiver and dual high-

speed serial ports. To enable access to a local network or the Internet, WiPort integrates a feature rich TCP/IP network stack, OS and an embedded web server. Flash memory provides maintenance-free, non-volatile storage of web pages, and allows remote download of any future system software/firmware upgrades. All of this combines to give you a complete, easy-to-deploy wireless networking solution.

FCC Certified

Furthermore, WiPort is certified by the Federal Communications Commission (FCC). This offers solution providers and OEMs automatic FCC approval for devices implementing WiPort, ultimately eliminating the need for companies to run specific 802.11 testing. You can leverage the Lantronix FCC license grant by simply adding the grant number to your label. No additional 802.11 intentional radiator testing must be done to satisfy the FCC. This simplifies the process, accelerates time to market and significantly reduces the cost of bringing a product to market.

Bulletproof Security

With 128-bit WEP and WPA (PSK, TKIP) encryption, WiPort offers the highest level security available in an embedded device server. It also features 256-bit Advanced Encryption Standards (AES, Rijndael) for an end-to-end encrypted connection.





Features and Specifications

Serial Interface

(One Full serial port, One 3-wire serial port with Rx, Tx, GND)
TTL Level (Asynchronous) – 5volt tolerant

Data Rates

300 bps to 230 Kbps

Serial Line Formats

Characters: 7 or 8 data bits
Stop Bits: 1 or 2
Parity: Odd, even, none

Modem Controls

DTR, RTS, CTS, DCD

Flow Control

XON/XOFF (Software)
CTS/RTS (Hardware)

Wireless Interface

802.11

Indicators (LED)

Serial Channel Status
Wireless Link Status
Diagnostics

Management

HTTP
SNMP
Serial Login
Telnet Login

Protocol Support

ARP, UDP, TCP, ICMP, Telnet, TFTP, AutoIP, DHCP 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
UDP for typical datagram applications in which devices interact with other devices without maintaining a point-to-point connection

Security

Optional 256-bit AES (End to End)
128-bit Wireless WEP Encryption
WPA Wireless (PSK authentication, TKIP encryption)

Architecture

Lantronix DSTni™ Processor
SRAM: 256 KB – zero wait
Internal Flash: 1 MB
Integrated WiPort (wireless 802.11b)
Internal Web Server

System Software (Firmware)

Flash ROM standard:
Downloadable from a TCP/IP host (TFTP) or across the serial port

I/O Control

4 GPIO pins on a header

Physical Dimensions (W x L)

58.6mm x 49.0mm (2.3" x 1.9")

WiMicro Board Layout and Pinouts

TOP VIEW

BOTTOM VIEW

JP1 (2 x 6 Pins) TTL	
Pin	Function
1	+5V
2	GND
3	RXA (Input)
4	TXA (Output)
5	RTSA (Output)
6	DTRA (Output)
7	CTSA (Input)
8	DCDA (Input)
9	RVA/TX_EN
10	RESET #
11	RXB (Input)
12	TXB (Output)

JP3) CP Connector	
Pin	Function
1	CP1
2	CP7
3	CP4
4	CP8

Power

WiMicro Voltage: 5VDC +/- 5%
WiMicro Current: 460mA peak current

Environmental

Standard Temperature Range: 0°C to 70°C (32°F to 158°F)
Storage Temperature: -40°C to 85°C (-40°F to 185°F)

Warranty

2-year limited warranty

Part Number and Description

WM11A0002-01 WiMicro board with LEDs, TTL pin header on bottom, GPIO pin header on top

