



xPico® Wi-Fi SMT

Embedded Wireless
Device Server



AN INNOVATIVE, MOBILE-READY, WI-FI® SOLUTION FOR M2M AND IOT APPLICATIONS

As an innovative, mobile ready solution, the Lantronix® xPico® Wi-Fi SMT device server sets new standards for its customers by enabling IoT applications that deliver highly desired smartphone and tablet functionality. Once complex, Wi-Fi implementation is now greatly simplified with xPico Wi-Fi SMT's unique and robust feature set including: simultaneous Soft AP and client mode, zero host load and configuration by customization. These, along with Lantronix's commitment to reliability, quality and ease of use, support developers to quickly leverage mobile solutions for their applications, while reducing their total cost of ownership across their products' life cycle.

Tablet & Smartphone Enable Your Devices

Access your data and devices from anywhere – wired or wireless. Lantronix's device server application and protocol stacks enable seamless remote access to device data, simplifying design integration, all while providing robust connectivity – including the ability to access data from any mobile device, including smartphones and tablets.

Robust Networking Solution

The Lantronix xPico Wi-Fi SMT device is an extremely compact, low power networking solution that enables wireless LAN connectivity on virtually any solution with a SPI, USB (device) or serial interface.

Simultaneous Access Point & Client Mode

The xPico Wi-Fi SMT is a state-of-the-art solution that offers all the functions one can expect including a unique simultaneous Soft AP and client mode. This allows for easy points of access for those devices that do not include or have a limited user interface while maintaining a secure network connection.

Cost Savings & Faster Time-To-Market

As one of the smallest embedded device servers in the world, xPico Wi-Fi SMT can be utilized in designs typically intended for chip solutions. Its "zero host load" eliminates the need for drivers on the connected microcontroller, thus making implementation easy and fast with virtually no need to write a single line of code. This makes the xPico Wi-Fi SMT an ideal choice to offload Wi-Fi connectivity to your products, which translates to considerably lower development costs and faster time-to-market.

As xPico Wi-Fi SMT meets FCC Class B, UL and EN EMC and safety compliance, your development time is shortened. xPico Wi-Fi SMT can reduce the overall cost of ownership compared to the competition.

xPico Wi-Fi SMT Highlights

- Low profile footprint: 18.3 x 26.1 x 3.0mm
- Version available with an on-module antenna
- Low power (6µA Standby)
- Can be operated off batteries
- IEEE 802.11 b/g/n (2.4 GHz)
- Simultaneous Soft AP and client mode
- Complete device server application with full IP stack and web server
- Dual serial port with data rate of up to 921 kbps
- SPI with clock rate of 30MHz
- USB 2.0 full rate device mode*
- Industrial temperature range: -40° to +85° C
- 5-Year limited warranty

Features and Specifications

Wireless LAN Interface

- IEEE 802.11 b/g and IEEE 802.11n (single stream) WLAN interface (2.4 GHz only)
- IEEE 802.11 d/h/i/j
- u.FL connector and RF pads for optional external antenna (XPCW1002100B)

Serial Interface

- Two Serial CMOS Ports (3.3V, 5V tolerant)
- 300 to 921.6 Kbps
- Flow control XON/XOFF, RTS/CTS
- Lantronix tunneling application

Host Interface

- Dual Serial Port, SPI, USB 2.0* (device)
- 8 GPIO

Network Protocols

- TCP/IP, UDP/IP*, DHCP, ARP, ICMP, DHCP, Auto-IP, DNS

Networking Capabilities

- Soft Access Point with DHCP Server
- QuickConnect: Dynamic Profiles facilitate easy and rapid connections to access points

Management and Control

- Web Server - Landing Page
- CLI (Serial Monitor Port)
- XML import and Export (XCR)
- Field upgradable firmware (OTA)

Security

- IEEE 802.11i Support – WPA-Personal, WPA2-Personal
- 256-bit AES Encryption*

Architecture

- ARM Cortex M3 class processor with on-chip Flash and SRAM
- 1MB Flash and 128 KB SRAM
- 1MB SPI Flash storage

Power

- Input Voltage: 3.3VDC
- Low power consumption of approximately 6µA standby

Physical Interface

- 56-Pad SMT Castellation

Environmental

- Operating Temperature: -40° to +85° C
- Storage Temperature : -40° to +85° C
- Relative Humidity: 0% to 90% non-condensing

Certifications

- FCC Class B, UL and EN EMC

Packaging

- Dimensions:
 - XPCW1002100: 26.1mm (L) x 18.3mm (W) x 3.0mm (H)
 - XPCW1003100: 30.1mm (L) x 18.3mm (W) x 3.0mm (H)
- Weight: 2.5g

*Software support for these features available in a future software release.
Please contact sales representatives for more information.

Warranty

- 5-Year Limited

Tablet & Smartphone enable devices

xPico WiFi SMT provides simultaneous Soft AP and Client mode, allowing for easy points of access while maintaining a secure network without the need for special clients.

Other members of the xPico product family:

xPico

A chip-sized networking solution that enables Ethernet connectivity on virtually any device.

xPico IAP

A chip-sized networking solution that enables Ethernet connectivity on devices for industrial and automation applications that require MODBUS support.

Ordering Information

| Part Number | Description |
|--------------|---|
| XPCW1002100B | xPico Wi-Fi W1002— IEEE 802.11 b/g/n Device Server Module, Extended Temp, SMT, Bulk, RoHS |
| XPCW1003100B | xPico Wi-Fi W1003— IEEE 802.11 b/g/n Device Server Module, Extended Temp, w/ On-Module Antenna SMT, Bulk, RoHS |
| XPCW1003100S | xPico Wi-Fi W1003— IEEE 802.11 b/g/n Device Server Module, Extended Temp, SMT, Sample, RoHS |
| XPCW1002100K | EVALUATION KIT with xPico Wi-Fi W1002 Wi-Fi Module, SMT on Carrier Board, IEEE 802.11 b/g/n, with U.FL and Antenna Sample |
| XPCW1003100K | EVALUATION KIT with xPico Wi-Fi W1003 Wi-Fi Module, SMT 802.11 b/g/n, On-Module Antenna |

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