xPico® 270

802.11 ac Wi-Fi® + Bluetooth®
Embedded IoT Gateway

THE APEX OF INDUSTRIAL WI-FI

High-performance Wi-Fi, Ethernet and Bluetooth Connectivity

The *xPico® 270* gateway delivers dual-band 802.11ac Wi-Fi connectivity management and enterprise security for optimal device performance and communication within noisy industrial settings. In addition to high-performance Wi-Fi, the compact *xPico 270* embedded gateway simplifies the deployment of robust Ethernet, Bluetooth and Bluetooth Low Energy (BLE) connectivity without writing complex drivers. Its industry-leading compact SMT footprint fits it into any design and can operate in extreme environments.

Intelligent Networking and Advanced IoT Communication Engine

Simplify embedded application development and accelerate time to market with the *xPico 270* gateway's built-in network communications engine and flexible system integration modes. Completely offload IoT communications from your embedded microcontroller when operating as a network co-processor or use it as a wireless microcontroller with the provided SDK.

Field-tested *TruPort®* Serial technology supports transparent pass-through of hundreds of proprietary serial and standard Fieldbus protocols and *TruPort®* Socket technology enables complete control over multiple connections via TCP, UDP or TLS. Configure and control the gateway operation from the host microcontroller side using command mode or the network side with Web Service APIs and XML configuration data.

Lantronix InfiniShield® Security - Comprehensive Device Security Framework

The *xPico 270* embedded IoT gateway includes a comprehensive suite of built-in device security applications that offer robust and secure connections, data-at-rest protection for keys, configuration, secure boot and secure firmware-over-the-air (FOTA) updates, user role-based access control and fine-grained policy-based network service control.

Remotely Manage Your Connected Machines with the MACH10® IoT Platform

Add scalable remote device management and data access from your machines via pre-integrated *MACH10®* IoT software components. Provision *xPico 270* gateways and connected machines with mobile apps for iOS and Android.

xPico® 270 Key Benefits

- Faster Time to Market
- Industrial-grade Security
- Robust Data Handling
- Highest Integration

xPico® 270 Highlights

- Dual-band Wi-Fi (802.11 a/b/g/n/ac) and Ethernet
- Enterprise Wi-Fi Security (EAP/802.1X)
- Dual-mode Bluetooth Classic and Bluetooth Low Energy (BLE) 4.2
- Automatic network connection management
- Concurrent Soft AP + client mode for direct wireless service access without disrupting machine field operations
- Enables operation as network co-processor or wireless MCU
- Pre-integration with MACH10® IoT platform
- Approvals/Compliance: FCC, Industry Canada, EU (RED), AU/NZS, India, Taiwan, Mexico
- Industrial-grade design for operation in extreme environments (-40°C to +85°C)

LANTRONIX®

xPico® 270

Features and Specifications

Network

Wireless LAN Specifications
- IEEE 802.11 a/b/g up to 54 Mbps; 802.11 n (1x1) up to 150 Mbps; 802.11ac up to 433 Mbps
- 20, 40 and 80 MHz channel width with optional SGI
- Dual Band 2.4 GHz and 5 GHz
- Supports IEEE 802.11 d/h/i

Ethernet Specifications
- IEEE 802.3 MAC, 10BaseT and 100BaseT (RMII)

Bluetooth Specifications
- Compliant to Bluetooth Core Specification version 4.2 (BR/EDR/BLE)
- BLE Central and Peripheral Roles
- Support for Generic Access Profile (GAP), Generic Attribute Profile (GATT), Device ID Profile, Serial Port Profile (SPP)

Data Communication
- TruPort® Serial Technology— TCP and UDP Server Mode, TCP and UDP Client Mode, Multi-host Connect; TLS Client and Server
- TruPort® Socket— Multi-host Client and Server Modes, HTTP(S), Sockets, TLS
- Authenticated SMTP Support— Send email directly from device
- Modbus TCP to Modbus RTU/ ASCII gateway

Security and Authentication
- InfiniShield® Security Software
  - Secure Boot, Secure Firmware-Over-the-Air (FOTA) Updates
  - Secure Key Storage, Encrypted Configuration
  - Secure Connections with SSL/TLS, HTTPS
  - Software Controlled Network Service Ports Enable/Disable
  - Role Based Access Control
- AES/CCMP and TKIP encryption, WPA/WPA2 Personal
- WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST)
- SSLv3/TLS 1.2 with PKI and X.509 Certificates (up to 4096-bit Keys)
- AES Algorithm, 256-bit, 192-bit, 128-bit

Management Interfaces
- Lantronix MACH10™ IoT Software Platform, REST, MQTT
- Lantronix Discovery Protocol (77FE)
- Serial Port, Internal Web Server (HTTP/HTTPS)
- XML Configuration and XML Status (CLI, API)
- Secure Firmware Upgrade via HTTP
- Remote management with MACH10®

Protocol Support
- DHCP Client, Server (Soft AP), HTTP Server/Client
- IPv4, TCP/IP, UDP/IP, ARP, ICMP, Auto-IP, DNS

Wireless Features
- Concurrent Soft AP + STA (Client), Client, Soft AP
- Up to 5 simultaneous client connections to Soft AP interface
  - Up to 4 in Concurrent Mode
- Connect to multiple WLAN networks, WLAN QuickConnect
- Ethernet to Wi-Fi Client Bridge (Single Host Mode), Auto-MAC ID

Operating Conditions
- Operating Temp: -40°C to +85°C; Storage Temp: -40°C to + 85°C
- Vibration (Operational): 40G; Non-operational Shock: 65G
- Storage Humidity: 10% to 85% relative humidity, non-condensing

Host Interfaces
- Serial: UART Port TTL
  - Data Rates: 9600 bps to 4 Mbps (software selectable)
  - Control signals: DTR/DCD; Flow Control: RTS/CTS; XON/XOFF
- USB (Host)

Power
- Input Voltage: 3.3VDC
- Max Current Consumption (Boot Peak): 600 mA

Dimensions & Packaging
- Dimensions: 17mm x 25mm x 2mm (LGA); 22mm x 35.5mm x 2.73 mm (Edge Card)
- For LGA: Tape and Reel MSL3
- For Edge Connector: Tray

Certifications & Compliance (Planned for Product Release)
- Approvals/Compliance: FCC, Industry Canada, EU (RED), AU/NZS, India, Taiwan, Mexico
- Safety: EN/IEC 62368-1, EN 62311, UL/EN/IEC 60950-1
- RoHS, REACH

Warranty
- 5-Year Limited

xPico 270 is Ideal for :

| Industrial Automation | Medical Devices | Responsive Retail | Resource Management |

Product Variants

Part Number	Description
XPC270100B	xPico 270 Embedded IoT Gateway, 802.11 a/b/g/n/ac Wi-Fi, Ethernet, Bluetooth, Dual u.fl Antenna, Ind. Temp, LGA, T&R 250
XPC270300B	xPico 270 Embedded IoT Gateway, 802.11 a/b/g/n/ac Wi-Fi, Ethernet, Bluetooth, Dual u.fl Antenna, Ind. Temp, Edge Connector, Tray
XPC270100S	xPico 270 Embedded IoT Gateway, 802.11 a/b/g/n/ac Wi-Fi, Ethernet, Bluetooth, Dual u.fl Antenna, Ind. Temp, LGA, T&R 25-pack
XPC270300S	xPico 270 Embedded IoT Gateway, 802.11 a/b/g/n/ac Wi-Fi, Ethernet, Bluetooth, Dual u.fl Antenna, Ind. Temp, Edge Connector, Single
XPC270300EK	xPico 270 Embedded IoT Gateway, Evaluation Kit, Wi-Fi, Bluetooth 4.2 + Ethernet

Ordering Information

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Learn More About xPico 270

For contact information, go to **www.lantronix.com**