

# PremierWave™ EN Wireless Device Server

with Software Development Kit



## THE MOST FEATURE RICH, DEPLOYMENT-READY WI-FI NETWORKING AND WEB SERVER MODULE - NOW WITH SOFTWARE DEVELOPMENT KIT

PremierWave™ EN delivers a new dimension of Wi-Fi networking with the highest levels of security to virtually any device or electronic product. It provides affordable connectivity in a compact form factor, enabling OEMs to add Wi-Fi or wired Ethernet networking to their products on a single PCB design.

With a choice of Wi-Fi or Ethernet connectivity, PremierWave EN takes the complexity out of RF design and networking. OEMs can focus on their core competencies while minimizing engineering risk, shortening development time and reducing development cost.

### Wi-Fi Network Processor Module

PremierWave EN has a dedicated 32-bit processor module that manages wireless connectivity and web services. With its high performance, ample memory and Linux OS, PremierWave EN can be designed as the primary host processor for demanding applications.

### Bulletproof Security

With an unmatched portfolio of security technologies, PremierWave EN goes far beyond compliance with the popular 802.11i, WPA and WPA2 wireless security specifications. It ensures data integrity and privacy for highly sensitive requirements such as medical or financial applications.

- + Small form factor measuring 55mm x 30mm
- + 802.11 a/b/g/n solution with Selectable Dual Band Radio (2.4GHz or 5GHz)
- + Linux Operating System with IPv6 Support
- + Adds Wi-Fi to devices with the highest enterprise-grade security and authentication protocols
- + Lantronix SmartRoam™ technology\* provides seamless mobile connectivity and improved reliability
- + Includes full TCP/IP stack and web server
- + Robust set of interfaces that include Ethernet, Serial, USB, I2C, and SPI
- + Low power consumption modes
- + Powerful applications customization platform with 32-bit ARM9 Processor
- + Virtual IP (VIP) Access to gain remote connectivity behind firewalls
- + Ethernet-to-Wireless LAN bridging provides seamless connectivity for wired Ethernet devices
- + Advanced Applications Suite including:
  - Tunneling
  - Secure Tunneling
  - Configuration Manager
  - Web-based Configuration Manager

\*Available via future firmware release.

- + IEEE 802.11i-compliant radio with AES-CCMP and TKIP encryption
- + PSK and complete suite of 802.1x Extensible Authentication Protocols (EAP) including EAP-TLS, EAP-TTLS, PEAP, and EAP-PEAP
- + End-to-end SSL TLS and SSH tunneling

### SmartRoam to Enable Seamless Mobile Connectivity

With exclusive SmartRoam technology,\* PremierWave EN continuously tracks the signal strength of access points (AP) within range. If necessary, pre-authentication and caching enables smooth and automatic transition to an access point with a stronger signal. This enhances mobility within a building, warehouse or across a campus network with less time spent re-authenticating due to a lost connection or re-associating to a stronger signal.

### Scan, Gather and Report Radio Parameters

With an unmatched portfolio of security technologies, PremierWave EN scans current AP and Received Signal Strength radio parameters, as well as authentication and negotiated encryption types for the current association, and displays them on a web page. This enables remote technicians to diagnose problems as they occur and troubleshoot over any IP network without a service call, reducing support costs and unnecessary visits.

### Linux and Web Server Technologies

Featuring Linux, PremierWave's integrated CGI-capable web server transforms a standalone device into a networked product that can be managed remotely via a standard web browser. CGI capability enables users to remotely monitor and collect information from the device in real-time and send the information to dynamic web pages.

### Flexible & Intelligent Design

Designed with an on-board antenna and option for external antennas and diversity, PremierWave EN provides the flexibility to locate the antenna and connector based on design requirements. PremierWave EN also includes a user-controlled, intelligent power management option to shut down the radio during periods of inactivity, minimizing current power consumption.

### FCC Certified for Immediate Deployment

PremierWave EN is module-certified by the U.S. Federal Communications Commission (FCC) enabling OEMs to leverage the Lantronix FCC license grant and bypass 802.11 regulatory

\*Available via future firmware release.



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testing. PremierWave EN has been pre-tested for European telecommunications regulations.

### PremierWave EN Key Features

- + **Network Interface: Wireless 802.11a, 802.11b, 802.11g, and 802.11n, Ethernet**
- + **Selectable Dual Radio Frequency: 2.4GHz or 5GHz**
- + **Management, Configuration and Encryption suite**
- + **Serial Interface: Serial (UART, RS 232, RS (VIP) 485), USB, SPI, I2C**
- + **Architecture: 32-bit processor (ARM Core) with Linux**
- + **Virtual IP Access**

### PremierWave EN SDK

- + **SDK developed by Timesys,® a leading embedded Linux solutions provider**
- + **Empowers developers with greater control over product development**
- + **Offers unmatched flexibility**
- + **Provides successful build and maintenance of the Linux platform, toolsets and applications specific to project requirements**
- + **More than 1,000 Open Source packages available**

### Ordering Information

Please contact your Lantronix Representative for more details.

- + To speak with a Lantronix sales representative in North America, call +1 (800) 422-7055.
- + For a full listing of Lantronix worldwide offices or to locate a partner, please visit [www.Lantronix.com/about/contact.html](http://www.Lantronix.com/about/contact.html)

+ Part Number	+ Description
PEN100100A-01	PremierWave EN 802.11 a/b/g/n Device Server with internal Antenna, BULK - Minimum order quantity 10 units
PEN10010SA-01	PremierWave EN 802.11 a/b/g/n Device Server with internal Antenna, SAMPLE - Order quantities of up to 10 - Available Now
PEN10010NA-01	PremierWave EN 802.11 a/b/g/n Device Server without internal Antenna, BULK - Minimum order quantity 10 units
PEN10010NASA-01	PremierWave EN 802.11 a/b/g/n Device Server without internal Antenna, SAMPLE - Order quantities of up to 10
PWDK1000-01	PremierWave no module Development Kit, sample must be purchased - Evaluation Board, Power Supply, RS-232 Cable, Cat 5e Cable, USB Cable (A-B) - Licensing for Timesys SDK sold separately
PWEV1000-01	PremierWave no module Evaluation Board, sample must be purchased. Includes power supply module.

For more information on the Timesys SDK, please visit <http://www.timesys.com/supported/boards/lantronix>