A FEATURE RICH, DEPLOYMENT READY Wi-Fi® NETWORKING SYSTEM ON MODULE

PremierWave® EN is a high performance Industrial ready ARM 9 system on module suitable for M2M applications. It is offered as a small removable module with integrated Flash, RAM and dual band 802.11 a/b/g/n capabilities. The PremierWave® EN is an ideal solution for embedded applications that require simple development, ease of use and a proven robust high performing solution with network connectivity. Developers can save time and reduce the complexity of developing subsystems with high speed memory, Ethernet and Wi-Fi® networking that can be easily integrated into real products.

PremierWave® EN Highlights:

- Powerful applications customization platform with 32-bit ARM9 Processor
- Small form factor measuring 55mm x 30mm
- Robust set of interfaces that include Ethernet, Serial, USB, I2C, and SPI
- Low power consumption modes
- Linux Operating System
- 802.11 a/b/g/n solution with Selectable Dual Band Radio (2.4GHz or 5GHz)
- Adds Wi-Fi to devices with the highest enterprise-grade security and authentication protocols

- Includes full TCP/IP stack and web server
- 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
- Lantronix SmartRoam® technology provides seamless mobile connectivity and improved reliability

LANTRONIX®
CONNECT SMART. DO MORE.™

The Power of Linux

All PremierWave® EN System-On-Modules come preloaded with Full Embedded Linux and U-Boot making it simple and easy to add custom software and applications. Full source code of the Linux BSP is provided, along with a Linux cross-development environment. The PremierWave® EN can use GNU C/C++ tool chain for Linux and Windows or similar and supports third-party SDK.

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.

• 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.

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

The PremierWave EN is a 400MHz ARM9 processor with up to 64Mbyte of SDRAM and up to 256Mbyte of NAND Flash. Included is a Dual Band 802.11 a/b/g/n with an on-board antenna and option for external antennas and diversity, two serial interfaces (up to 921 kbps), USB 2.0 Full speed Host/Device Port, SPI and I2C interfaces. 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 testing. PremierWave EN has been pre-tested for European telecommunications regulations.

PremierWave EN Key Features
• Architecture: 32-bit processor (ARM Core) with Linux
• 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
• Interfaces: Serial (UART, RS -232, RS -485), USB, SPI

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

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Call: +81.3.6277.8802
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Call: +86.021.6237.8868
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> Part Number	> Description
PEN 100100A-01	PremierWave EN 802.11 a/b/g/n Device Server with internal Antenna, BULK - Minimum order quantity 10 units
PEN 10010SA -01	PremierWave EN 802.11 a/b/g/n Device Server with internal Antenna, SAMPLE
PEN 10010NA -01	PremierWave EN 802.11 a/b/g/n Device Server without internal Antenna, BULK
PEN 10010NASA -01	PremierWave EN 802.11 a/b/g/n Device Server without internal Antenna, SAMPLE
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
PWEV 1000-01	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
> **Warranty**	2-Year Limited

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