



PremierWave® GG2050

Ethernet to Enterprise
Wi-Fi Bridge Module



SIMPLE AND RELIABLE ENTERPRISE WI-FI CONNECTIVITY FOR ETHERNET DEVICES

PremierWave GG2050 is a line of embedded modules that connect Ethernet based devices to Enterprise Wireless LAN networks by offering reliable and always-on 5G Wi-Fi (802.11ac) connectivity and completely offloading the WLAN connectivity, management and security protocol processing from the host processor. With a production ready software stack and modular RF certification, it simplifies deployments and accelerates availability of robust WLAN connected IoT products.

Production Ready



Building and maintaining Wi-Fi connectivity software and keeping up with the pace of innovation in Wi-Fi technologies can consume significant resources in budget and time. With PremierWave GG2050, design engineers and system architects can be confident of building the products on time and deploying them with confidence that their products will connect and work as expected. By using optimized hardware and robust software for Wi-Fi connection management, secure system management and configuration functions, and robust Ethernet to Wi-Fi Bridging you can ease the integration, manufacturing, deployment and support of your Wi-Fi enabled product.

Integrated Enterprise Security



Secure Wi-Fi connectivity requires supporting scalable Enterprise class Wi-Fi via Extensible Authentication Protocol (EAP) methods and secure AES (CCMP) ciphers. For protecting management interfaces, PremierWave GG2050 uses SSL/TLS and SSH for data encryption and PKI/Certificate Management for authentication and key management. For added protection, PremierWave GG2050 offers firewall features to block ports and has NIST-certified AES encryption. It also support FIPS 140-2* for government and military applications.

Designed for Industrial and Commercial Applications



Enterprise and Industrial IoT applications are mission critical in nature. Robust and always-available connectivity is a key requirement. Premierwave GG2050 features a robust application stack and connection management, antenna diversity, support for 5 GHz bands for reliable Wi-Fi connectivity. It also offers an extended operating temperature (-40°C to +85°C) and a best-in-class 5-year limited warranty.

PremierWave GG2050 Highlights

- Reliable Wi-Fi connectivity and management for mission critical operations
- Industrial rated 802.11ac Wi-Fi module for high performance Enterprise IoT
- Enterprise Wi-Fi Security (EAP)
- Simultaneous AP and Client Access
- Simplified manufacturing and deployment time provisioning workflows
- Fully certified module mitigates regulatory and product availability risks
- Available M2M/IoT expertise and world class support for deploying Wi-Fi products
- Antenna Diversity with choice of u.fl connector or on-module antenna
- Compact SMT (LGA) footprint



PremierWave® GG2050

PRELIMINARY

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Features and Specifications

Network

Wireless Specifications

- IEEE 802.11ac (1x1) up to 433 Mbps; IEEE 802.11n (1x1) up to 150 Mbps
- 20, 40 and 80 MHz (ac only) channel width with optional SGI
- Dual Band 2.4 GHz and 5 GHz, Channels 1-14, UNII-1, 2, 2e and 3
- Compatible with 802.11 a/b/g, Supports IEEE 802.11 d/h/j/i
- Transmit Beamforming, Tx/Rx Low Density Parity Check (LDPC), Rx Space Time Block Coding (STBC)
- Bluetooth/WLAN Coexistence

Ethernet Specifications

- IEEE 802.3 MAC and PHY, 10BaseT and 100BaseT
- Auto Negotiation/Auto MDIX, Full duplex and half duplex support

Security and Authentication

- AES/CCMP and TKIP encryption, WPA/WPA2 Personal
- WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAPv0/v1, EAP-FAST)
- SSH v1/v2, SSL v3, TLS v1, PKI, Supports up to 2048-bit RSA
- NIST Certified AES (FIPS-197)
- FIPS 140-2 Level 1 Certification *

Management Interfaces

- CLI (via Serial Port, Telnet, SSH)
- Web Browser (HTTP/HTTPS), Web Services API (HTTPS)
- XML Configuration and XML Status (CLI, FTP, API)
- OTA Field upgradable

Protocol Support

- DHCP Client, DHCP Server, DHCPv6 Client
- uPnP (Discovery), LCAP (77FE), Telnet, SSH, (S)FTP, HTTP(S)
- IPv4/IPv6, TCP, UDP, ARP, ICMP, Auto-IP, DNS, SNMP v2/v3

Wireless Features

- Soft Access Point with DHCP Server, DNS Proxy, Wi-Fi Direct *
- 14 simultaneous client connections to Soft AP interface
- Simultaneous AP and Client mode
- Connect to multiple WLAN networks, WLAN QuickConnect
- Ethernet to Wi-Fi Client Bridge (Single Host Mode), Auto-MAC ID

Power

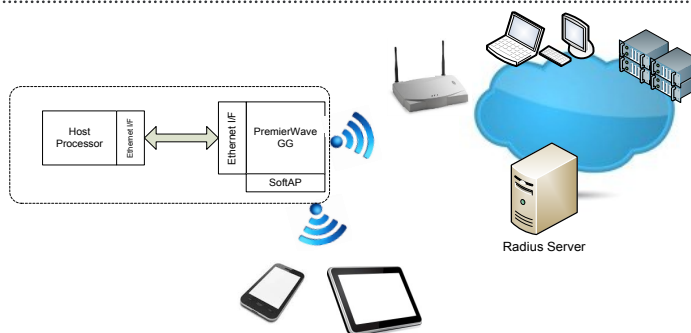
- Input Voltage: 5 VDC
- Max Current Consumption: TBD Standby Mode: TBD

Dimensions

- 45.26 mm (L) x 44.37 mm (W) x 3.45mm (H) +/- 0.3 mm

Packaging

- JEDEC Tray (15-count) - Bulk
- MSL Level 3 Bag - Sample



Environmental

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

Certifications

- FCC Part 15 Class B, 15.247, 15.407,
- ICES-003 Issue 4, RSS-210
- ETSI EN 301-489-1 V1.8.1, EN 301-489-17 V1.3.2, E
- ETSI EN 300 328 V1.7.1, EN 301 893 V1.5.1
- C-Tick (AS/NZS CISPR2:2006); AS/NZS 4771:2000 + A1:2003
- Japan Radio Cert Article 2-1 (19), (19-2), (19-3), (19-3-2)
- UL 60950/CSA 22.2 No. 60950, EN 60950:2001; IEC 60950
- RoHS, REACH Compliance
- Wi-Fi Alliance Certified (802.11ac); IPv6 Ready Logo Certified

Warranty

- 5 Year Limited

Ordering Information

Part Number	Description
PWGG2051000B	Ethernet to Wi-Fi Bridge Module, Dual u.fl, BULK
PWGG2052000B	Ethernet to Wi-Fi Bridge Module, Chip Ant, BULK
PWGG2051000K	PremierWave W2051 Module, u.fl Ant, EVALKIT
PWGG2052000K	PremierWave W2052 Module, Chip Ant, EVALKIT

United States

Call: 1.800.422.7055
Email: sales@lantronix.com

Asia/Pacific

Call: +852 3428.23.38
Email: asiapacific_sales@lantronix.com

Europe

Call: +31 (0) 76.52.3.6.74.4
Email: emea@lantronix.com

Japan

Call: +81.3.6277.8802
Email: japan_sales@lantronix.com



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