PLANET
Networking & Communication

Product Specification

200M Powerline Wireless N Extender

PL-510W-EU / UK / US

Change History:

Revision	Date	Author	Change List
Version 1.0	9/4/2012	Brandon Wang	Initial release

Author	Brandon Wang	Editor:	Brandon Wang
Reviewed by:	Jonas Yang	Approved by:	Tom Shih

PRODUCT DESCRIPTION

High-Speed Ethernet Connection via Home's Power Supply

With HomePlug AV technology, the PLANET PL-510W Powerline Wireless N Extender is a high-speed Internet connection to any power outlet. With hassle-free plug and play installation and provides fast reliable wired/wireless speed of up to 200/300 Mbps. Just plug a pair of powerline adapters into your house power outlets, and easily enjoy high definition video streaming and network transmission. No more tripping over tangled, messy wires running through your house, the PL-510W is an ideal solution to create a wall-to-wall home network.

Faster wireless speeds, wider operational range

The PL-510W features 802.11n radio with 2T2R antenna technology compliant with 802.11b/g/n standards. With the 300Mbps High Speed transmitting rates, the PL-510W is easy to integrate the wireless devices with existing wired network. To secure the wireless communication, the PL-510W supports most up-to-date encryptions including WEP / WPA / WPA2-PSK with TKIP/AES.

Data Transfer Rate up to 200Mbps and 300 Meters

With advanced HomePlug AV technology, PL-510W provides users with stable, high-speed data transfer rates of up to 200Mbps on a line length of up to 300 meters. With a speed of up to 200Mbps, the PL-510W transmits multiple HD streams and even Full HD movies to every room, making it a great choice for an easy to build multimedia entertainment network.

Secures the network connection with the Pair button, no need to remember passwords

Simply by pushing the button on the PL-510W, users can easily set up a hassle-free Powerline network within minutes, complete with 128-bit AES encryption for network security and data protection.

Getting started is as easy with WPS button at 1-2-3

1. Click the WPS button at the PC.

2. Press the WPS button at the PL-510W.

3. Done.

Efficient Bandwidth management – QoS (Quality of Service)

Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic over various technologies. The PL-510W provides 5 priorities for easy and quick setup, such as internet, online game, IPTV, video and VOIP.

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PRODUCT FEATURES

➢ **IEEE Compliant HomePlug AV & LAN**

- Designed for high-definition multimedia streaming
- Data rate of up to 200Mbps and 300 Meters over existing electrical wiring
- IEEE 802.3, IEEE 802.3u, IEEE 802.11n, IEEE 1901 and HomePlug AV standard compliant
- Equipped with 10/100Mbps RJ-45 Ports for LAN/ WAN, Auto MDI/ MDI-X supported

➢ **Secure Network Connection**

- Converts any power socket into a wired connection point Plug-and-Play installation in minutes, no need to configure software
- Simple push-button setup with sophisticated data encryption128-bit AES encryption for network protection enhancement
- Easily extends secure wireless network by One-touch Wi-Fi Protected Setup (WPS)

➢ **Easy Installation & Management**

- Create a network connection throughout your home without the mess of cables
- Web-Based UI and Quick Setup Wizard for easy configuration
- Up to 8 Powerline Network Adapters can communicate on a single network
- QoS can efficiently distribute the downloading rate for the clients
- TDMA and priority-based CSMA/CA channel access schemes maximize efficiency and throughput

PRODUCT SPECIFICATION

MAIN COMPONENT

Chipset:	BCM60321 + BCM5358
RAM :	32MB
Flash :	4MB

FUNCTIONAL SPECIFICATIONS

Model	PL-510W
Hardware Specification	
Main Chipset	BCM60321 + BCM5358
Network Interface	One RJ-45 port (10/100Base-T Ethernet) One 200Mbps power line port supporting co-existence with HomePlug 1.0 (14/85Mbps)
Antenna	Gain: 2 x Internal 2.5dBi Antenna Orientation: Horizontal and Vertical
Cabling	Cat. 5 UTP cable
LED	Power：On / Off Ethernet：Solid / Blinking / Off

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	Data：Solid / Blinking / Off WLAN：Solid / Blinking / Off WPS：Solid / Blinking / Off
Buttons	One WPS / Reset button One Pair button
Wireless Interface Specification	
Standard	IEEE 802.11b/g/n
Working mode	AP mode
Frequency Band	2.4~2.4835GHz

Data Transmission Rates	802.11b: 11/5.5/2/1Mbps (Dynamic)
	802.11g: 54/48/36/24/18/12/9/6Mbps (Dynamic)
	802.11n(40MHz): 270/243/216/162/108/81/54/27Mbps
	                135/121.5/108/81/54/40.5/27/13.5Mbps (Dynamic)
	802.11n(20MHz): 130/117/104/78/52/39/26/13Mbps
	                65/58.5/52/39/26/19.5/13/6.5Mbps (Dynamic)

Transmission Distance	Coverage 150 ㎡
Channel	America / FCC: 2.412~2.462GHz (11 Channels) Europe / ETSI: 2.412~2.472GHz (13 Channels) Japan / TELEC: 2.412~2.484GHz (14 Channels)
Channel Width	20 / 40MHz
Max. RF Power	802.11b: 17±1.5dBm 802.11g: 14.5±1.5dBm 802.11n (20MHz): 12.5±1.5dBm 802.11n (40MHz): 12.5±1.5dBm
Receive Sensitivity	802.11b: -92dBm @ 1Mbps; -85dBm @ 11Mbps, PER < 8% 802.11g: -88dBm @ 6Mbps; -73dBm @ 54Mbps, PER <10% 802.11n: -90dBm @ MCS8; -70dBm @ MCS15, PER <10%
Encryption Security	WEP (64/128-bit) encryption security WPA / WPA2 (TKIP/AES) WPA-PSK / WPA2-PSK (TKIP/AES)
Standards Conformance	
Computer Interface	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX
Standards	IEEE 1901 / HomePlug AV
Security	128-bit AES link encryption with key management
Data PHY Rate	200Mbps over Powerline and 10/100Mbps over Ethernet
Modulation Schemes	OFDM symbol modulation on line synchronization 1024/256/64/16/8 - QAM, QPSK, BPSK, ROBO carrier modulation
Frequency Band	2 ~ 30 Mhz
Additional Protocols	Mix of TDMA and CSMA/CA channel access scheme; CO device generates a periodic beacon carrier for channel access scheme Qos prioritizes both wired and wireless Internet traffic to bandwidth- sensitive applications like online gaming, IPTV or stream multimedia
Operation Range	Estimated range of 300 meters in wall power lines
Environment Specifications	
Operating	Temperature: 0~40 Degree C

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	Relative Humidity:10~90% (non-condensing)
Storage	Temperature: -40~70 Degree C
	Relative Humidity: 0~90% (non-condensing)
Power Supply	100~240V AC, 50~60Hz internal
Housing Dimension (W x D x H)	Plastic (94 x 29.85 x 32 mm)
Weight	94 g
Emission	FCC, CE

PHYSICAL SPECIFICATION

Dimensions
94 x 29.85 x 32 mm (W x D x H)

Weight
94 g

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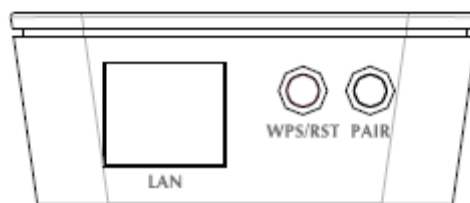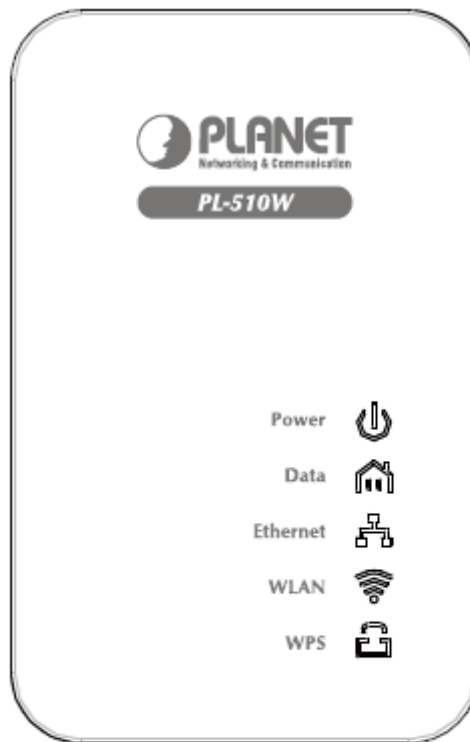
LED Definition

LED	Status	Description
Power	On	Steady on indicate the PLC connect to the power outlet.
	Off	Power off.
Data	On	The PLC connection is in the communication state, but not transmitting and receiving data.
	Off	The PLC connection is in the non-communication state.
	Quick blink	Data is being transmitted.
	Slow blink	A terminal is attempting to connect to the PL-510W.
Ethernet	On	The Ethernet port is in the communication state.
	Off	The Ethernet port is in the non-communication state.
	Blink	The Ethernet port is transmitting and receiving data.
WLAN	On	The WLAN connection is in the communication state.
	Off	The WLAN connection is in the non-communication state.
	Blink	Data is being transmitted and received in the WLAN.
WPS	On	The WPS session is up.
	Off	The WPS session is down.
	Blink	A terminal is attempting to connect to the PL-510W through WPS.

Button Definition

Button	Description
Reset	Hold the Reset button more than 6 seconds.
WPS	For enabling WPS PBC mode.
Pair	Press Pair button during 1~3 seconds to connect PLC. Press Pair button during 6~9 seconds to exit the network.

ENVIRONMENTAL SPECIFICATION

Operating
Temperature: 0~40 degree C
Relative Humidity: 10~90% (non-condensing)
Storage
Temperature: -40~70 degree C
Relative Humidity: 0~95% (non-condensing)

ELECTRICAL SPECIFICATION
Input Voltage: 100~240V AC, 50~60Hz

REGULATORY COMPLIANCE
FCC
CE

BASIC PACKAGING

■ PL-510Wx 1 (PL-510W x 2 for PL-510W-KIT)

■ CD ROM x 1 (User's Manual, Quick Guide and Utility)

■ RJ-45 Cable x 1 (RJ-45 Cable x 2 for PL-510W-KIT)

■ Quick Installation Guide x 1

PACKAGING INFORMATION

■ Dimension

133 x 99 x 65 mm (W x D x H)

208 x 127 x 65 mm (W x D x H) for PL-510W-KIT

■ Weight

300(gross weight)

600(gross weight) for PL-701-KIT