



# **PlugLink 500 Wireless “N” Adapter User’s Guide PL9571-WAP**

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- Move the equipment to one side or the other of the television or radio.
- Move the equipment farther away from the television or radio.
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## Contact Information

For more information about the PlugLink 500 Wireless “N” Adapter or any of Asoka’s other leading-edge solutions, please contact us using any of the following methods:

- **Voice calls:** (408) 550-8167 - We welcome your calls Monday through Friday, from 9:00 am to 5:00 pm Pacific Time. Voice mail is available during non-business hours.
- **Email:** If you prefer, you can send information requests to our e-mail address: [sales@asokatech.com](mailto:sales@asokatech.com).
- **Web site:** Our Web site contains valuable information about our products, solutions, and services. We encourage you to visit us at <http://www.asokatech.com>.

## Customer Service

Available from: Monday through Friday, from 9:00 am to 5:00 pm Pacific Time, by calling (408) 550-8167 or through email at [custserv@asokatech.com](mailto:custserv@asokatech.com).

## Technical Support

Technical support is available Monday through Friday, from 8:00 am to 5:00 pm Pacific Time, by calling (408) 550-8173 or through email at [support@asokatech.com](mailto:support@asokatech.com).

Please provide the following information about the problem:

- Product name and model.
- System configuration, including a description of the devices connected to your PlugLink 500 Wireless “N” Adapter.
- The circumstances surrounding the error or failure.
- A detailed description of the problem and what has been done to try to solve it.

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# Chapter 1

## Introduction

Thank you for purchasing a PlugLink 500 Wireless "N" Adapter from Asoka. This adapter lets you extend an existing Powerline network allowing you to set up an instant wireless hotspot simply by plugging into a power outlet. With your PlugLink 500 Wireless "N" Adapter, you can easily share your high-speed Internet broadband, mp3s, video and gaming throughout the home or home office without pulling any new cabling.

This unit will not interfere with other household appliances such as hair dryers, vacuum cleaners or microwave ovens. Consuming only 7 watts of power, it is environmentally friendly and will not noticeably increase your electrical bill. It is a simple, secure and reliable choice for web surfing, playing games, and complimenting your existing wireless network, mp3 streaming and even video sharing.

This User's Guide shows you how to connect your PlugLink 500 Wireless "N" Adapter to your existing Powerline network. Setup is easy. Just follow the instructions in this guide, your network will be up and running in a matter of minutes.

# Chapter 2

## Important Safety Instruction

The following precautions should be taken when using this product:

- Read all instructions before installing and operating this product.
- Do not open the cover or casing on this product and/or alter this product in any way.
- Follow common household electrical safety practices.

If you have any questions or concerns regarding these safety measures, please contact Technical Support via email at [support@asokatech.com](mailto:support@asokatech.com) or via phone at 408-550-8173 Monday through Friday between 9:00 am and 5:00 pm PST (excluding holidays).

# Chapter 3

## Learning about PL9571

### Package Contents

- PlugLink 500 Wireless "N" Adapter (PL9571-WAP)
- Quick Installation Guide
- Installation Resource CD
- Warranty and Support Information Card
- Ethernet Cable

IF ANY OF THE PARTS ARE INCORRECT, MISSING, OR DAMAGED, CONTACT THE RETAILER WHERE YOU MADE YOUR PURCHASE. Keep the carton, including the original packing materials, in case you need to return the unit for repair.

### The Front Panel

The front panel of the PL9571-WAP Adapter contains the status lights described below.



Figure 3-1: PL9571-WAP Front Panel

You can use the status lights to verify connections. Viewed from top to bottom, left to right, the table describes the lights on the front panel of the unit.

Table 3-1: Status Light Descriptions

Power	On	Indicates Device Powered On
	Off	Indicates No Power
PLC Activity	Blinking. The colors act as throughput indicators.	Indicates Activity on Powerline. Green means good throughput. Orange means average throughput. Red means low throughput.
	Off	Indicates No Activity on Powerline (Should blink Intermittently)



RF Power	On	One LED "ON" green indicates Low Wi-Fi (RF) Transmission Power
	On	Two LED(s) "ON" green indicates Intermediate Wi-Fi (RF) Transmission Power
	On	Three LED(s) "ON" green indicates High Wi-Fi (RF) Transmission Power
ETH Link	On	Indicates Ethernet Connectivity
	Blinking	Indicates Ethernet Traffic
	Off	No Ethernet Activity

### The Bottom Panel

The bottom panel of the PL9571-WAP two (RJ-45) ports shown in figure 3-2.



- *Figure 3-2: PL9571-WAP Bottom Panel*
- *Table 3-2: Status Light Descriptions*

PLC Activity	Blinking Green	Excellent PLC Connection
	Blinking Yellow	Good PLC Connection
	Blinking Red	Low PLC Connection
	Off	No PLC Connection
Power	On	Device Powered ON
	Off	No Power
Ethernet Link (ETH)	On	Ethernet Connectivity
	Blinking	Ethernet Traffic
	Off	No Ethernet Connectivity
Wireless Activity	Blinking	Activity on Wireless Connection
	Off	No Activity on Wireless Connection

### The Rear Panel

The label on the rear panel of the PL9571-WAP Adapter contains the items listed below.

Model number  
 PLC DAK  
 PLC MAC Address  
 Serial number

**Note:** For future convenience, please write this information down in your Warranty and Support Information Card.

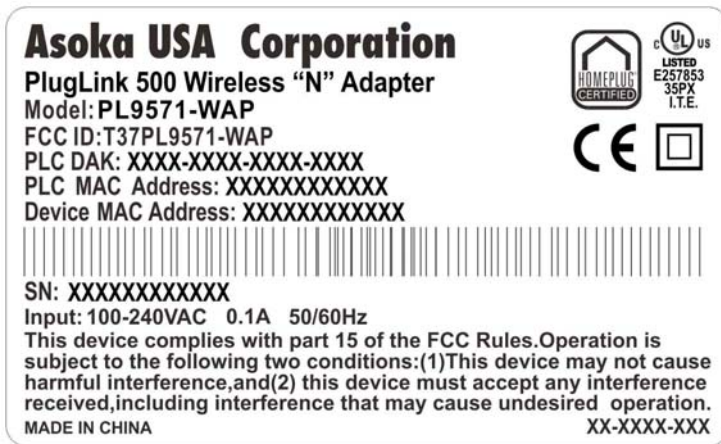


Figure 3-3: Rear Label

## Buttons

The PlugLink 500 Wireless "N" Adapter has three push buttons; their functions are as follows.

**SECURITY** (PLC Network ID) button: All Asoka PlugLink AV adapters have a default Powerline Network Encryption Key (NEK) set to "HomePlugAV" allowing them to communicate to each other. The SECURITY button helps you create a secure randomized Powerline Network Encryption for maximum security.

**RESET** (PLC FW RST) button: Resets the PlugLink AV PLC NEK back to factory default "HomePlugAV". All other configuration settings should not change.

**RF Power Button/WPS push-button:** This button helps create a WPS (Wi-Fi Protected Setup) network and also manipulates three different levels of the Wi-Fi power strength (Low/Intermediate/High).

For details on how to use the PL9571-WAP buttons, please refer to page 31 of this manual.

# Chapter 4

## Preparing to Install

The PlugLink 500 Wireless "N" Adapter lets you set up an instant wireless Access Point using your existing electrical outlets. It can also easily compliment your existing network by connecting to any device with a 10/100BaseT Ethernet-capable device.

To setup a PLC (PowerLine Communication) Network you will need:

- One (1) PL9571-WAP device
- One (1) PL9660-Q1 device (sold separately)
- Standard Cable/ DSL gateway (provided by your ISP)

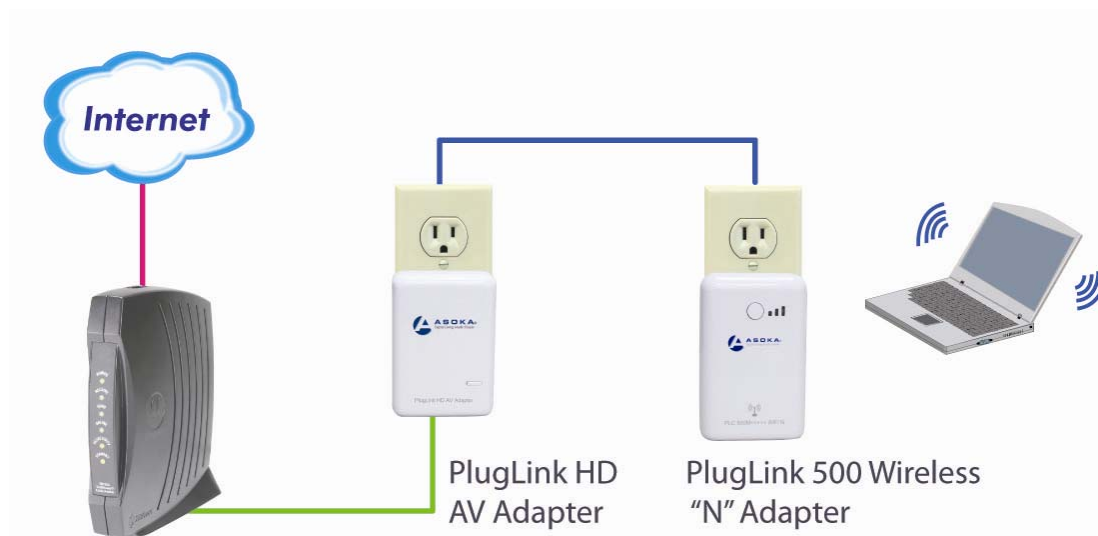


Figure 4-1: Connecting PL9571-WAP with PL9661-ETH diagram

# Chapter 5

## Installing PL9571

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Note

Do not connect the PlugLink 500 Wireless "N" Adapter to a power strip, extension cord, uninterruptible power supply (UPS), or surge protector. This may prevent the unit from working properly or degrade the network performance. Plug the PlugLink 500 Wireless "N" Adapter into the wall outlet vertically (right side up).

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1. Use the Ethernet cable shipped with your PlugLink HD AV Adapter PL9660-Q1 (PL9660-Q1 not included; sold separately) to a LAN port on your router.
2. Plug the PlugLink HD AV Adapter PL9660 (PL9660-Q1 not included) into a nearby wall outlet.

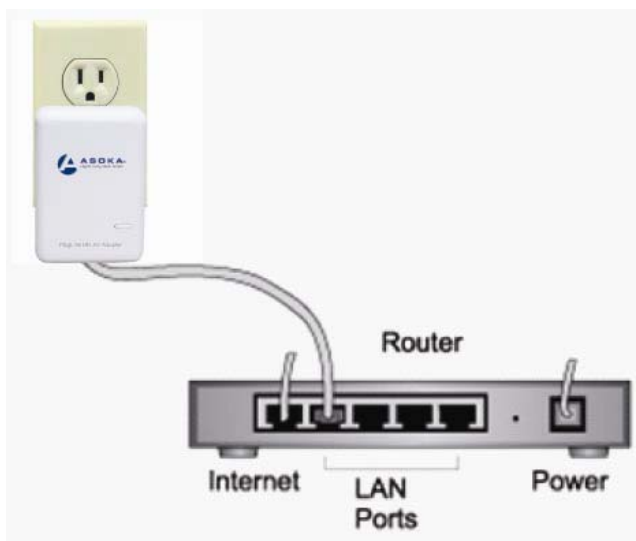


Figure 5-1: Connecting the PL9661-ETH to a router.

3. Plug the PlugLink 500 Wireless "N" Adapter into a wall outlet near the wireless computer that you want to connect.



*Figure 5-2: Plugging the PL9571-WAP vertically into a wall outlet.*

4. Wait a few seconds and the top three LEDs on the PlugLink 500 Wireless "N" Adapter will light up.
5. From your computer, scan your Wireless Network Connections available and look for (and select) your PlugLink 500 Wireless "N" Adapter's SSID name "**Asoka Network**". For the Security Key or Password, use the last 10 digits of your PL9571-WAP serial number.
6. Verify wireless connectivity by connecting to the Internet or log into the PL9571-WAP from a computer with wireless capabilities.

# Chapter 6

## Logging on

1. Open a web browser application (Internet Explorer or Mozilla Firefox).
  2. Enter the router's default IP address (192.168.1.254) in the URL address field.
- Press **Enter** to open the login screen..



Figure 6-1: Login Address

For security, the PL9571-WAP has its own user ID and password. When prompted, enter admin for the user ID, welcome for the password, both in lower case letters, and press Login.

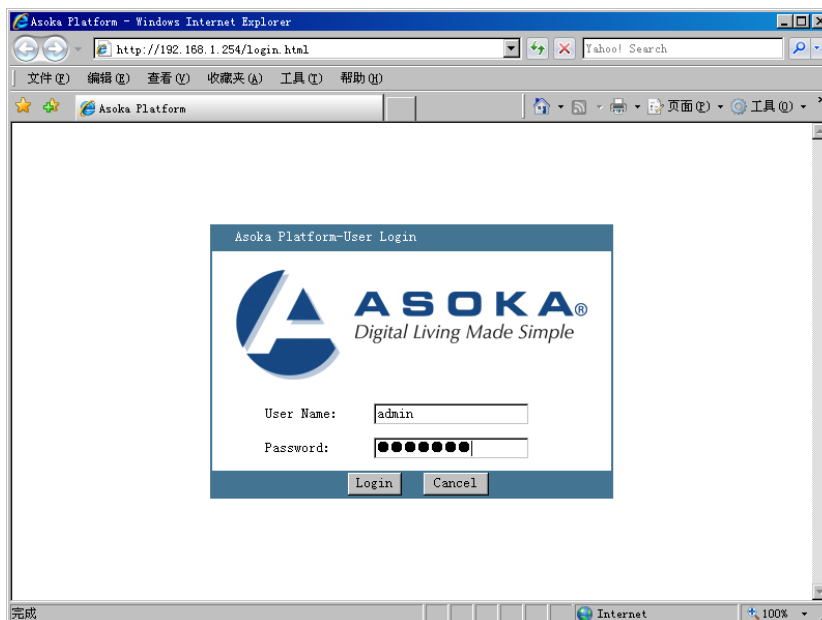
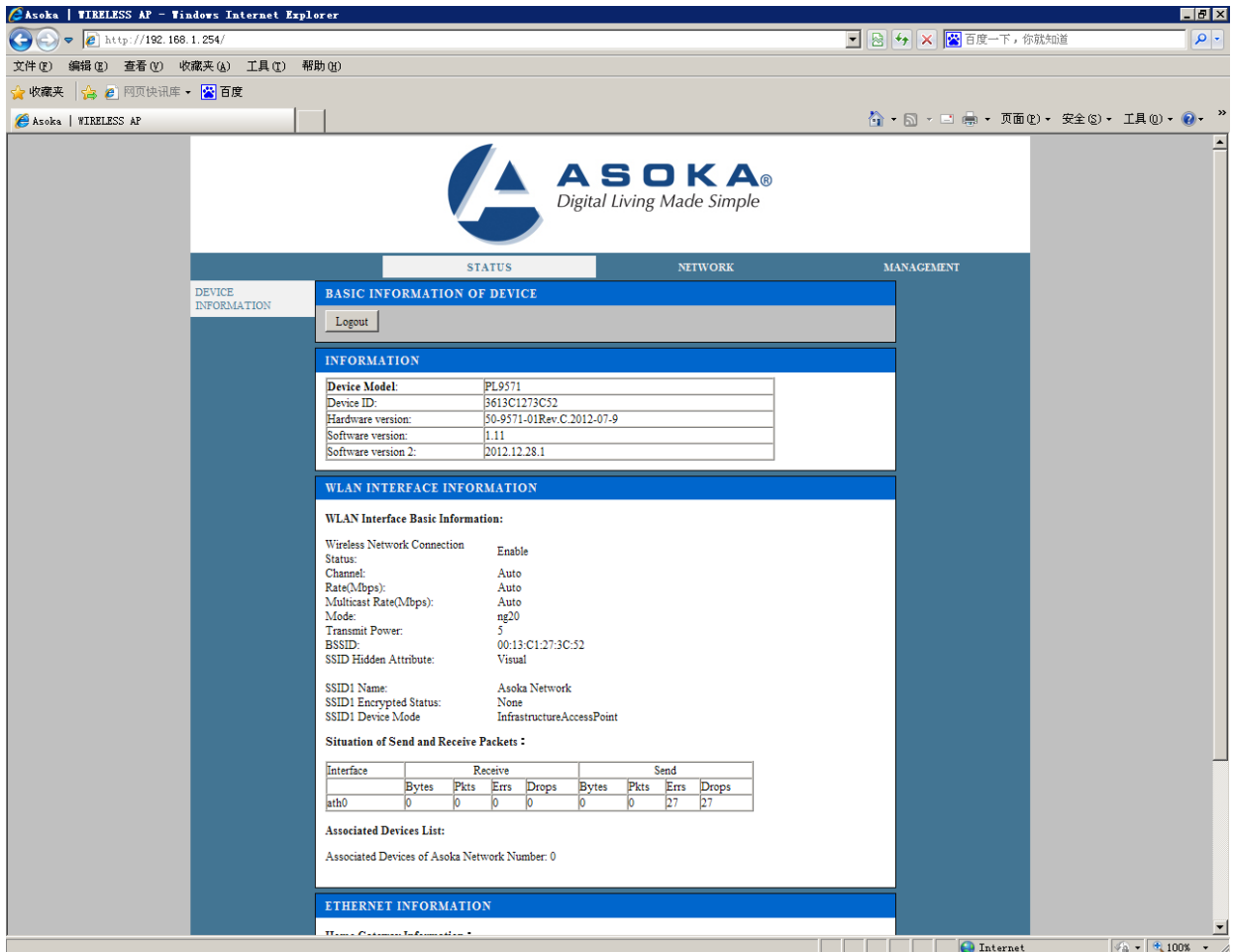


Figure 6-2: Login Screen

3. NOTE: The PL9571-WAP Web Interface Login Access Control Password can be changed from the MANAGEMENT tab of the PL9571-WAP main Web page. The web interface opens to the basic devices information.



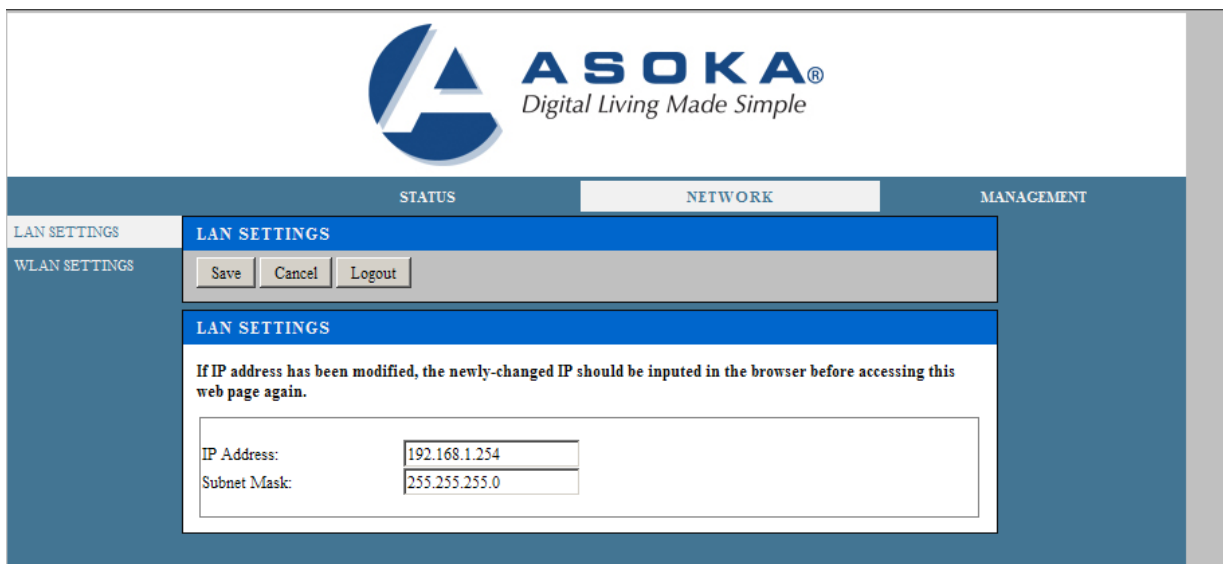
# Chapter 7

## Network

### To set the IP address

1. Under LAN settings, enter the IP address and subnet mask.
2. Click **Save** to commit the changes.

To set the IP address:



The screenshot displays the ASOKA network configuration web interface. At the top, the ASOKA logo and tagline "Digital Living Made Simple" are visible. Below the logo, there are three main navigation tabs: "STATUS", "NETWORK", and "MANAGEMENT". The "NETWORK" tab is currently selected. Under the "NETWORK" tab, there are two sub-tabs: "LAN SETTINGS" and "WLAN SETTINGS". The "LAN SETTINGS" sub-tab is active, showing a "Save", "Cancel", and "Logout" button bar. Below this, a message states: "If IP address has been modified, the newly-changed IP should be inputted in the browser before accessing this web page again." The "LAN SETTINGS" section contains two input fields: "IP Address" with the value "192.168.1.254" and "Subnet Mask" with the value "255.255.255.0".

### Wireless LAN (WLAN) Setup

Set up a WLAN either manually or by using WiFi protected setup (WPS). WPS allows easy setup of client devices that support WPS. Choose the **NETWORK** tab, then choose the **WLAN SETTINGS** tab to open the Radio Settings screen. Note that WPS configures one client device at a time. Repeat the instructions for each client device that supports WPS.



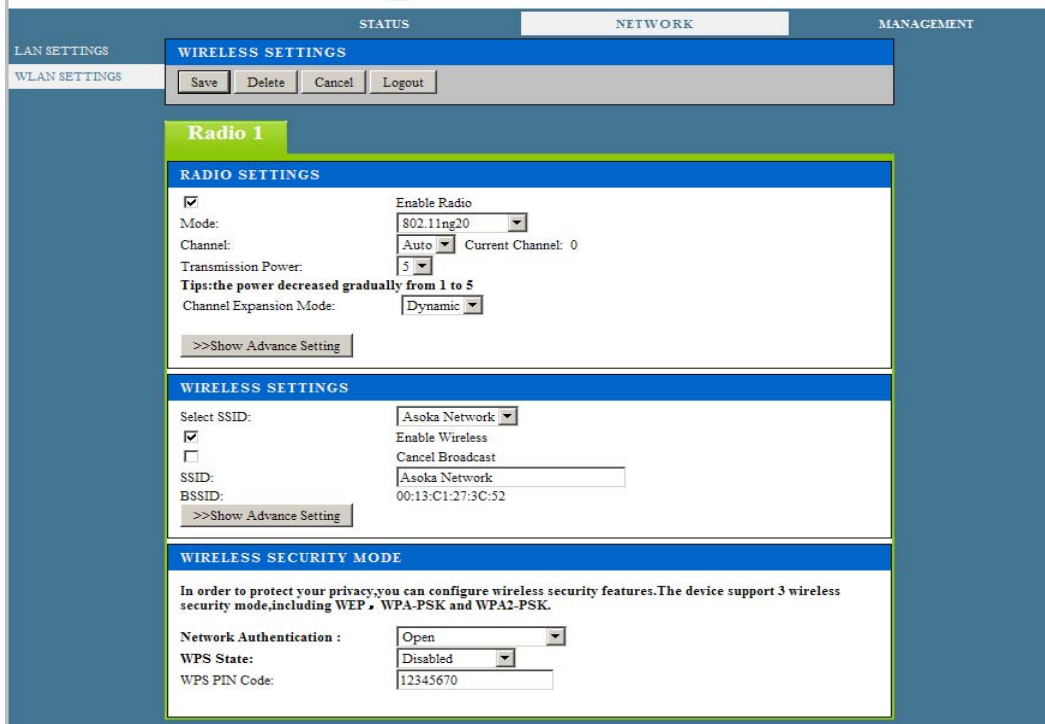


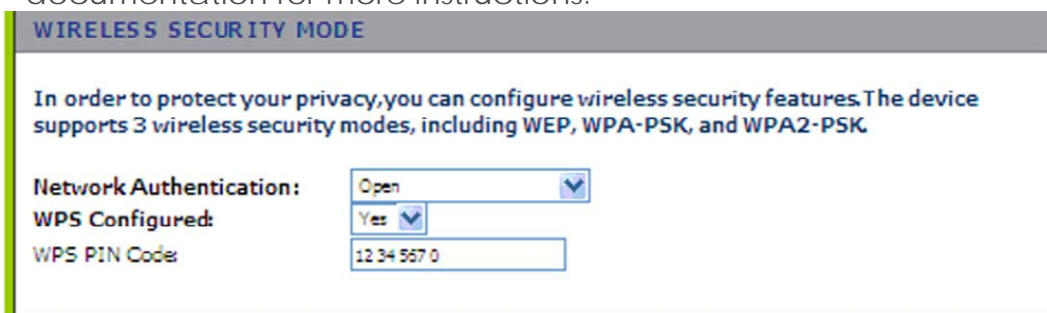
Figure7-2 WPS Setup Screen

To use automatic WPS configuration:

1. Under the Wireless Security Mode section of the WPS setup screen: In the WPS Configured drop-down menu, choose Yes.

For a client device with a WPS button: click the WPS button on the client device, then click the WPS button on the router board. After the client device has been configured, click OK. See the client device documentation for more instructions.

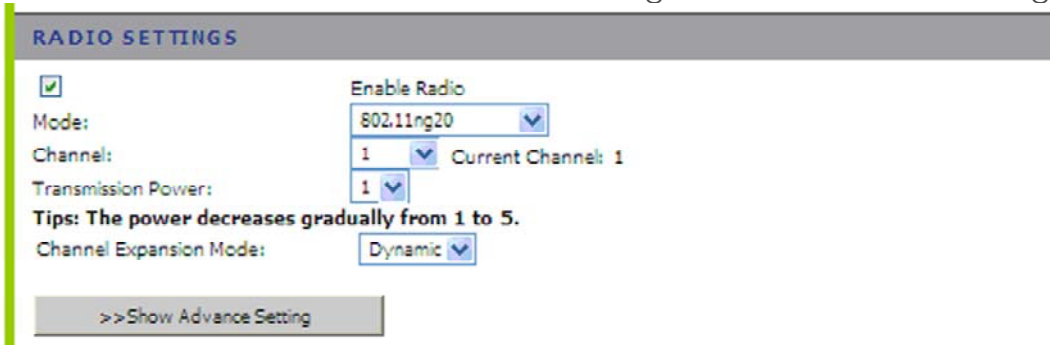
For a client device that asks for a Router PIN number: enter the PIN number listed on the web page (or on the label on the bottom of the router). After the client device has been configured, click OK. See the client device documentation for more instructions.



1. Click Save to commit the changes.

To use manual WLAN configuration:

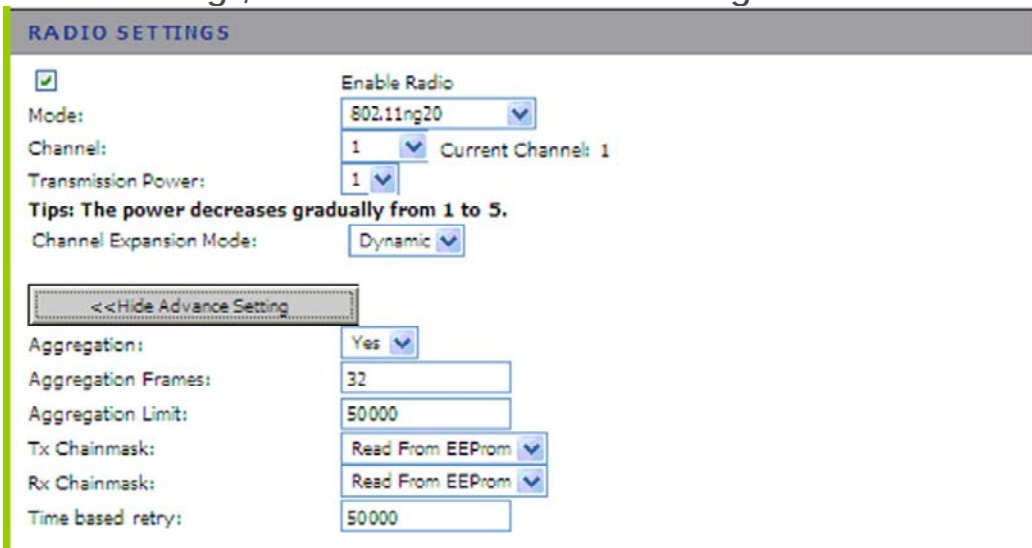
1. Enable the radio under the radio settings section of WLAN settings:



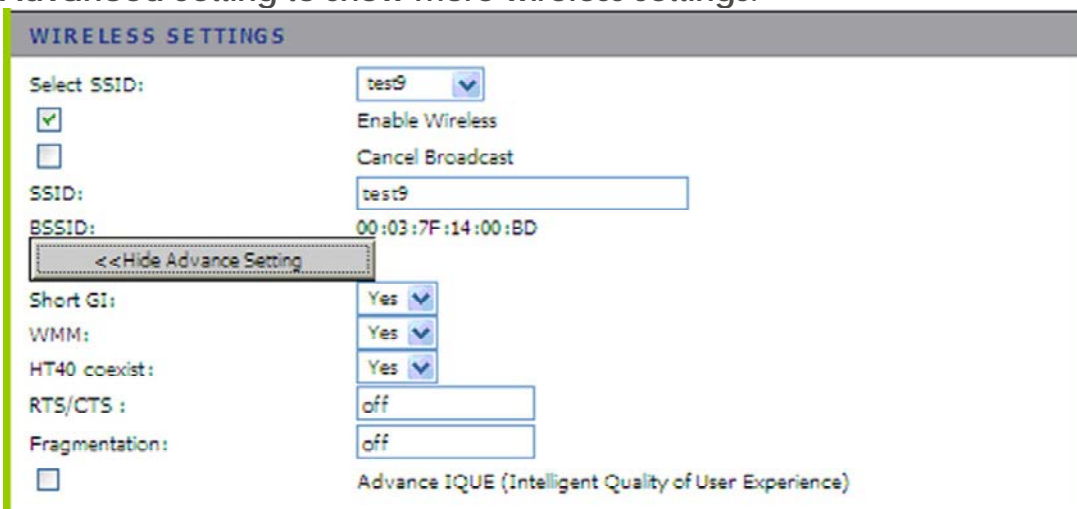
2. Select the mode, channel, and transmission power levels.

3. Click **Save** to commit the changes.

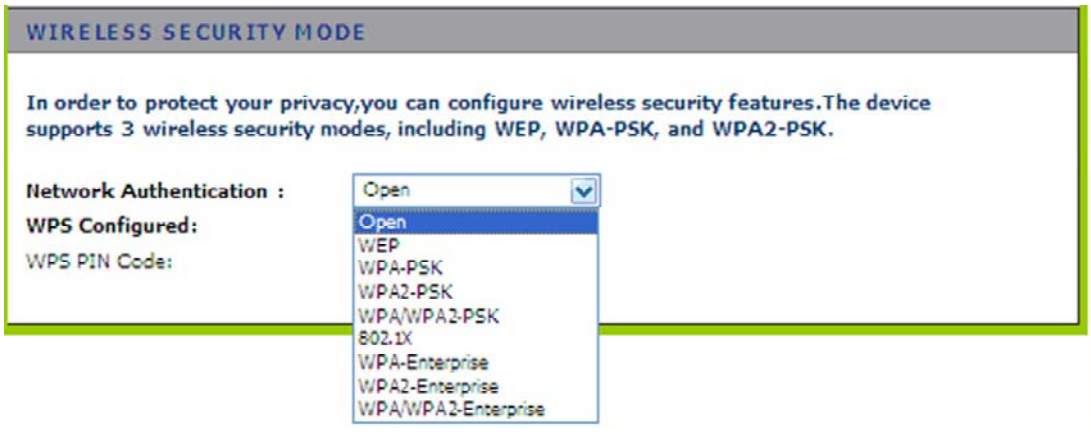
In radio settings, click >>Show Advanced Setting to show more radio settings:



View the basic wireless settings on the wireless settings screen. Click >>Show Advanced Setting to show more wireless settings:



View the wireless security mode settings on the WLAN settings screen:



Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA/WPA2) and Wired Equivalency Privacy (WEP) offer different levels of security for wireless communication.

A network encrypted with WPA/WPA2 is more secure than a network encrypted with WEP, because WPA/WPA2 uses dynamic key encryption. And WPA2 is more secure than WPA. To protect the information as it passes over the airwaves, you should enable the highest level of encryption supported by your network equipment.

WEP is an older encryption standard and may be the only option available on some older devices that do not support WPA.

**Note:** Not all wireless adapter configuration utilities support WPA/WPA2. Furthermore, client software is required on the client. Windows XP with Service Pack 3, Windows 2000 with Service Pack 4, and Windows Vista include the client software that supports WPA/WPA2. Nevertheless, the wireless adapter hardware and driver must also support WPA/WPA2.

The PL9571-WAP provides the following levels of security: Open, WEP, WPA-Personal, WPA-Enterprise, WPA2-Personal and WPA2-Enterprise.

Table9-1: Wireless Security Options:

Field	Description
Open	No wireless security enabled.

WEP	<p>WEP offers the following options:</p> <ul style="list-style-type: none"> <li>• <b>Open System</b> With Open Network Authentication and 64- or 128-bit WEP data encryption, the PL9571-WAP does perform 64- or 128-bit data encryption but does not perform any authentication</li> <li>• <b>Shared Key</b> Shared Key authentication encrypts the SSID and data. Choose the encryption strength (64- or 128-bit data encryption). Manually enter the key values which are case sensitive</li> </ul>
WPA-Personal / WPA2-Personal	<p>WPA supports two encryption methods, TKIP and AES, with dynamic encryption keys. Select the type of algorithm, TKIP or AES. (AES is a stronger encryption method than TKIP.)</p> <p><b>WPA-Pre-Shared Key (PSK)</b> performs authentication, dynamically changes the encryption keys, making it nearly impossible to circumvent.</p> <p><b>Group Key Renewal</b> is the Key Renewal period, which tells the Router how often it should change the encryption keys. The default Group Key Renewal period is 3600 seconds.</p>
WPA- Enterprise / WPA2-Enterprise	<p>This option features WPA used in coordination with Auth Server (This should only be used when a Auth server is connected to the PL9571.)</p> <p>The Auth Server IP, Port, and Secret (pass code) need to be configured in this mode.</p>
802.1x	<p>This option features 802.1x used in coordination with Auth Server (This should only be used when a Auth server is connected to the PL9571.)</p> <p>The Auth Server IP, Port, and Secret (pass code) need to be configured in this mode.</p>

The following note applies to WEP Security Type:

**ASCII**-Any combination of letters and numbers

5 Characters (64Bit) / 13 Characters (128 Bit)

**HEX** – Any combination of numbers (0-9) and letters (A-F)

10 Characters (64 Bit) / 26 Characters (128 Bit)

## Configuring Wireless Security

By default, the PL9571-WPA security options are enabled. The default security type is set to WPA2-Personal AES; and its security key is the last 10 digits of the

PL9571's serial number shown on the label. The security options should be configured by advanced users only. To change the security option, follow the steps bellow.

1. Click on Network from the top main menu.
2. Click on *Wireless Settings* from the Sub Navigation Link. The security dialog page will appear.
3. Make your selection under *Security Type* from the drop down list.
4. Fill in the gaps according to your Security Type selection.
5. Enter your new security key (PSK for WPA2-Personal Security Type).
6. Click Save
7. You are done.

## How the Security and WPS-Push Button can be used

Following is an example of how the **Security** button can be used:

1. Select a PlugLink 9571 device in your network. Press and hold the **Security** button for 10 seconds. After about 10 seconds, the lights on your device will blink off briefly and come back on immediately. This will change the existing Network Encryption Key (NEK) to a randomized NEK.
2. On the PlugLink 9571 device from Step #1, press and hold the **Security** button for about 2 seconds. The power light on the device will begin flashing. This unit has now been set to allow other units to join the network and be assigned the same password. This unit will remain in "adder" mode for about 2 minutes.
3. Before the three minutes is up from Step #2, select another PlugLink device from your network. Press and hold the **Security** button for about 2 seconds. The power light on the device will blink as well. The two devices will communicate and the second device will have its NEK set to the NEK of the first device. This should happen in about 15 to 20 seconds. Once the process has been completed, you can then test if the two devices are communicating.
4. If you add units at a later time, you only need to perform Step #2 (using any device in the network) and Step #3 (any new devices). Step #1 is not necessary unless you wish to change your NEK.

Following is a basic description of how the **WPS-Push Button** can be used:

1. Press **WPS/ RF Power** button for more than 5 seconds. (Or click Reset WPS network button on the web interface's wireless-basic-settings tab). This will create a new wireless network with random SSID, random wireless password and WPA2-Personal-AES security algorithm. The PL9571 will wait 2 minutes for a client to join the wireless network by pushing the client's **WPS** button.
2. Press **WPS/ RF Power** button for less than 5 seconds (or click **WPS AP Push Button** on the web interface's wireless-basic-settings tab).

a) If the current wireless network was not created by WPS:

Pressing the WPS/sw2 button will create a new wireless network with a random SSID, random wireless password using the WPA2-Personal-AES security algorithm. After the new wireless network is created, the PL9571 will wait 2 minutes for a client to join the wireless network by pushing the client's WPS button.

b) If the current wireless network was created by WPS:

The PL9571 will use the current SSID/wireless password and retain the current clients' connections in the wireless network.

The PL9571 will wait

2 minutes for any new clients to join the wireless network by pushing the client's WPS button.



The SSID and wireless password can be checked from web interface's wireless-status tab. Users can also use this information and manually connect to the wireless network.

---

3. If you have multiple clients that wish to join the wireless network, you will have to press the RF Power button for 5 seconds (or less) for every client. The user will then have to press the WPS button to join the network.

Following is an example to make your network:

1. Press and hold the RF Power button for more than 10 seconds. This will reset the current wireless network and create a new wireless network with random SSID, random wireless password and WPA2-Personal-AES security algorithm. The PL9571 will wait 2 minutes for a client to join the wireless network by pushing the client's **WPS** button.
2. Before the 2 minutes have elapsed, push a client's **WPS** button. The client will join the network created at Step 1.
3. If there are additional clients that wish to join the WPS network, push the RF Power button for less than 3 seconds and push a client's **WPS** button, this will add one connection. Repeat for every client that needs to join the WPS network.
4. For clients without **WPS** push button capabilities, you can make a manual connection using the WPA2-Personal-AES security algorithm and inputting the SSID and wireless password information which is available from the web-interface's wireless-status tab.

# Chapter 8

## Management

The screenshot shows the ASOKA management interface. At the top, there is the ASOKA logo with the tagline "Digital Living Made Simple". Below the logo is a navigation bar with three tabs: "STATUS", "NETWORK", and "MANAGEMENT". The "MANAGEMENT" tab is selected. The main content area is divided into several sections:

- MANAGEMENT**: Contains a "Logout" button.
- ACCESS CONTROL-- PASSWORD**: Contains two input fields for "New Password:" and "Confirm the Password:", and a "Save" button.
- DEVICE RESTART**: Contains the text "Click the button below to restart device." and a "Restart" button.
- UPGRADE DEVICE**: Contains the text "Profile saved in the computer can be used to upgrade the device.", a "Profile Name:" label, an input field, a "浏览..." button, and an "Upgrade settings" button.
- RESTORE FACTORY SETTINGS**: Contains the text "Restore the device to factory settings." and a "Restore Defaults" button.

### To set the new password

1. Fill in the new password.
2. Click **Save** to commit the changes.

### To set the Restart

Select the option button that you want to perform (Factory Default, Reset Device or Upgrade settings)



# Chapter 9

## Technical Support

PLEASE REFER TO THE WARRANTY AND SUPPORT INFORMATION CARD THAT WAS SHIPPED WITH YOUR PRODUCT.

By registering your product at [www.asokatech.com/register](http://www.asokatech.com/register), we can provide you with faster expert technical support and timely notices of product and software upgrades.

### Support Information

Phone: 1-408-550-8167

Email: [support@asokatech.com](mailto:support@asokatech.com)

URL: [www.asokatech.com](http://www.asokatech.com)

# Chapter 10

## Technical Specifications

### Standards Compliance

- HomePlug® AV
- IEEE 1901, IEEE 802.3,
- IEEE 802.11b/g/n

### System Requirements

- Windows® 98, 2000, XP , Vista
- and Windows 7

### Network Protocol

- TCP/IP, IEEE 802.3 Ethernet,
- IEEE 802.11b/g
- IEEE 802.1x

### Network Interface

- Two 10/100 Base-T Ethernet (RJ-45)
- HomePlug® AV PowerLine 1.0
- 802.11b/g /n
- 

### Bandwidth

- PLC 500 Mbps

### Operating Frequency

- 2 to 70 MHz over Powerline
- 2.4GHz over wireless

### Modulation Schemes

- Orthogonal Frequency Division Multiplexing (OFDM)
- QAM4096/1024/256/64/16
- QPSK
- BPSK

### Wireless Security

- WEP, WPA, WPA2,802.1x

### Distance

- Up to 328 feet (100 Meters) over wireless
- Up to 1000 feet (300 Meters) over powerline

### Quality of Service (QoS)

- TOS
- 802.1q

### Additional Protocols

- Forward Error Correction (FEC)
- Automatic Channel Adaptation

### Power Supply

- US Version: 100-120VAC
- UK/EU Version: 220-240VAC

### Power Rating

- US Version: 100-120VAC 0.25A, 60Hz
- UK/EU Version: 220-240VAC 0.15A, 50Hz

### LEDs

- Power
- PLC Activity
- Wireless
- Ethernet Activity

### Dimensions

- Size: (L104 x W66 x H31mm)
- Weight: 136g

### Environmental Specifications

- Operating temperature: 32°F to 113°F (0°C to 45°C)
- Operating humidity: 10% to 85% Non-Condensing
- Storage temperature: -4°F to 185°F (-20°C to 80°C)
- Storage humidity: 5% to 90% Non-Condensing

### Electromagnetic Emissions/EMI Safety

- FCC Part 15 Class B
- UL (US and Canada)
- CE

### Surge Protection

- 4KV/6KV

### Warranty

- 1-year limited

# Chapter 11

## FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### *FCC RF Radiation Exposure Statement:*

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

# Chapter 12

## Warranty Information

Asoka warrants that (a) the hardware components of the product will be free from defects in materials and workmanship under normal use for one (1) year from the date of purchase when used within the limits set forth in the Specifications section of the User Guide, and (b) the software components will perform substantially in accordance with Asoka's published specifications for ninety (90) days from the date of purchase, but does not warrant that the software will be error-free or free of all defects.

Should a product fail to perform as described in the User Guide, it will be repaired or replaced with the same or functionally equivalent product by Asoka, at its discretion, free of charge provided that you: (a) return the failed product to an Asoka designated repair facility with shipping charge prepaid, and (b) provide Asoka with proof of the original date of purchase. Repaired or replacement products will be returned to you with shipping charges prepaid. Asoka warrants any replaced or repaired product or component for the life of the product.

This warranty extends only to you, the original purchaser and is not transferable to any subsequent purchasers.

This warranty does not apply if, in the judgment of Asoka, the product fails due to damage from shipment, handling, storage, accident, abuse, misapplication or misuse, or if it has been used or maintained in a manner not conforming to product manual instructions, has been modified in any way, or has had any serial number removed or defaced. Repair by anyone other than Asoka or an approved agent will void this warranty. The maximum liability of Asoka under this warranty is limited to the purchase price of the product covered by the warranty. Prior to returning any defective product, the purchaser or the authorized merchant from whom the purchaser originally bought the product must obtain a Return Material Authorization (RMA) number from Asoka. All defective products should be returned to Asoka with shipping charges prepaid. Asoka will not accept collect shipments.

WHILE ASOKA HAS MADE EVERY EFFORT TO PROVIDE CLEAR AND ACCURATE TECHNICAL INFORMATION ABOUT ITS PRODUCTS, ASOKA ASSUMES NO LIABILITY FOR ANY EVENTS ARISING OUT OF THE USE OF THE TECHNICAL INFORMATION OR THE PRODUCT. EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT OR AS REQUIRED BY LAW, THE WARRANTIES AND REMEDIES STATED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. ANY AND ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS ARE EXPRESSLY EXCLUDED. NEITHER ASOKA NOR BELLSOUTH SHALL BE LIABLE, UNDER ANY CIRCUMSTANCES, TO ANY PERSON OR ENTITY FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, DAMAGES RESULTING FROM THE USE OR MALFUNCTION OF THE PRODUCTS, LOSS OF PROFITS OR REVENUES, BUSINESS INTERRUPTION, OR COSTS OF REPLACEMENT GOODS, EVEN IF ASOKA OR BELLSOUTH IS INFORMED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.

**Asoka USA Corporation**

2620 Augustine Drive Suite 230  
230 Santa Clara, California 95054  
USA Phone: (408) 550-8167  
Fax: (408) 884-2390  
[www.asokatech.com](http://www.asokatech.com)