



# 802.11bgn Wireless Hotspot Gateway

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*Quick Installation Guide* Ver 0.0.3  
**WAS-105R**



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## 1. Before You Start



**Package Contents**

- WAS-105R → → → → x 1
- CD-ROM (with User Manual and QIG) → x 1
- Console Cable → → → → x 1
- Ethernet Cable → → → → x 1
- Power Adapter : DC12V 1A → → x 1
- Antenna → → → → x 2
- Ground Cable → → → → x 1
- Mounting Kit → → → → x 1



It is highly recommended to use all the supplies in the package instead of substituting any components by other suppliers to guarantee best performance.

- ✓ Web Browser : Internet Explorer (8.0 or above), Firefox, Safari
- ✓ A Computer with a network adapter properly installed.
- ✓ 1 X RJ-45 Ethernet cable.

## Preface

The **WAS-105R** is the most economical yet feature-rich **Wireless Hotspot Gateway**, targeting mini-size stores who want to provide small, single-point wireless Internet access service. WAS-105R is a perfect choice for beginners to run hotspot businesses. It does not cost a fortune to buy a pile of equipment, nor does it take the skills of an expert to glue multiple applications out of multiple freeware. Feature-packed for hotspot operation, WAS-105R comes with **built-in 802.11n/b/g access point, web server and web pages for clients to login, easy logo-loading for branding a hotspot store, simple user/visitor account management tool, payment plans, PayPal credit card gateway, traffic logs, IP sharing** and etc.

This Quick Installation Guide provides instructions and reference materials for getting started with WAS-105R.

## Panel Function Description

### Front Panel



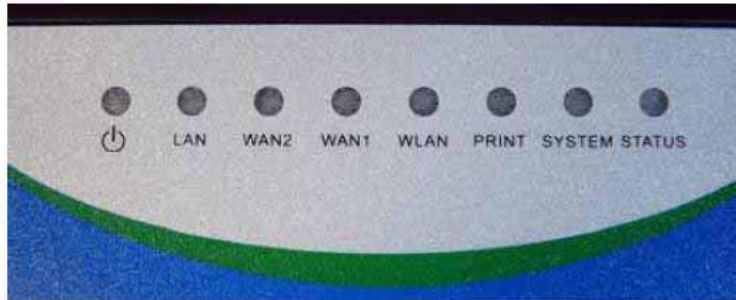
1. Power SOCKET (12V DC) : Attach the power socket here.
2. Reset : Press the Reset button once to restart the system, The LED except Power indicator will be off before restarting.
3. LAN(PoE) : Clients devices connect to WAS-105R via LAN ports
4. WAN1/WAN2 : Two WAN ports are available on the system.
5. Console : The serial RS-232 DB9 cable attaches here.
6. Scan Button :
  - ➔ Press and hold the Reset button for **3** seconds and release to Scan New AP's Channel. The **STATUS** LED will be FLASH.
  - ➔ Press and hold the Reset button for more than **10** seconds to reset the system to default configurations. The **SYSTEM** LED will be FLASH.
7. USB : For 3G adapter (option)

### Rear Panel



1. WAS-105R supports 1 RF interface with 2 SMA connectors for Antenna connection.

### LED Panel



1. Power : LED ON indicates power on, OFF indicates power off.
2. WAN1/WAN2/LAN : LED ON indicates connection, OFF indicates disconnection, FLASH indicates packets transmitting.
3. WLAN : LED ON indicates Wireless ready.
4. PRINT : LED ON indicates PSS-120 ready.
5. SYSTEM : LED ON/FLASH indicates Flash busy, OFF indicates Flash Idle
6. STATUS : LED ON indicates System up, OFF indicates down, FLASH indicates Scan button activated.

## 2. Hardware Installation

Please follow the steps mentioned below to install the hardware of WAS-105R

1. Place the WAS-105R at a best location.

The best location for WAS-105R is usually at the center of your wireless network.

2. Connect WAS-105R to your outbound network device.

Connect one end of the Ethernet cable to the WAN1/WAN2 port of WAS-105R on the front panel. On your environment, connect the other end of the cable to the external Internet . The WAN1/WAN2 LED indicator should be ON to indicate a proper connection.

3. Connect WAS-105R to your network device.

Connect one end of the Ethernet cable to LAN port of WAS-105R on the front panel. Connect the other end of cable to a PC for configuring the system. The LAN LED indicator should be ON to indicate a proper connection.

4. There are two ways to supply power over to WAS-105R

➔ Connect the DC power adapter to the WAS-105R power socket on the front panel.



Please only use the power adapter supplied with the WAS-105R package. Using a different power adapter may damage this system

➔ WAS-105R is capable of transmitting DC current via its LAN(PoE) port. Connect an IEEE 802.3af-compliant PSE device, e.g. A PoE Switch, to the LAN(PoE) port of WAS-105R with the Ethernet cable.

Now, the hardware installation is completed.



To double verify the wired connection between WAS-105R and your switch/router/hub, please check the LED status indication of these network devices.

## 3. Getting Started

### Step :

1. Once the hardware installation is done, set DHCP in TCP/IP of the administrator's PC to get an IP address automatically. Connect the PC to the LAN(PoE) port of WAS-105R. An IP address will be assigned to the PC automatically via the WAS-105R.
2. Launch a web browser to access the web GUI of WAS-105R by entering "http://192.168.2.254" in the address field.



3. The following Administrator Login Page will appear. Enter "root" in the Username field, and "default" in the Password field.



4. After a successful login, the "Home Page" will appear on the screen.



System Service Domain Wireless Advance Utilities Status

**Overview**

**System**

- System Info
- Device Info
- CPU Info
- Memory Info

**System Info**

Host Name: WAS-105R  
 Operating Mode: HOTSPOT Mode  
 Location:  
 Description: 802.11B/G/N MIMO Hotspot Gateway  
 Firmware Version: Can-95-H261 V0.0.1  
 Firmware Date: 2010/06/22 10:12:03  
 Device Type: 2010/06/28 00:21:21  
 System Up Time: 02:29:23  
 Primary DNS: 162.15.1.1  
 Secondary DNS:

**Device Info**

WAN1 WAN2 LAN

VAP	Domain	ESSID	Status
VAP0	Domain 0	AP00	On
VAP1	Domain 0	AP01	Off
VAP2	Domain 0	AP02	Off
VAP3	Domain 0	AP03	Off
VAP4	Domain 0	AP04	Off
VAP5	Domain 0	AP05	Off
VAP6	Domain 0	AP06	Off
VAP7	Domain 0	AP07	Off

**WAN1 Monitor**

Mode: Static IP Mode  
 MAC Address: 00:11:CC:9A:70:81  
 IP Address: 192.168.2.64  
 Netmask: 255.255.255.0  
 Gateway: 192.168.2.1  
 RX(Bytes): 0366175  
 TX(Bytes): 1924010

**LAN Monitor**

MAC Address: 00:11:CC:9A:70:80  
 IP Address: 192.168.3.234  
 Netmask: 255.255.255.0  
 RX(Bytes): 0  
 TX(Bytes): 0  
 Bandwidth Control: Off

**Ticket Count**

Auth Type	Tickets
Pre-generated	10
On-Demand	2
Payment Gateway	0
Thermal Printer	0
Local Radius	0
<b>Total</b>	<b>12</b>

Used Space: 0.19%

**Online Users**

Domain	Auth Type	Online
Domain 0	None	
Domain 1	None	
Domain 2	None	
Domain 3	None	
Domain 4	None	
Domain 5	None	
Domain 6	None	
Domain 7	None	
<b>Total</b>		<b>0</b>

## 4. Quick Configuration

WAS-105R provides wireless and wired network service with authentication required for clients in Service Domain. Clients in the each Service Domain are isolated with each other. WAS-105R supports 8 Service Domains, Domain-0 to Domain-7. Administrator can select authentication type on each Service Domain. If *Authentication Required* is enabled, the clients are required to get authenticated successfully before access the Internet.

### Configuration Steps :

#### Step 1 : Change Root's Password

- Click **System -> Management**, the Management Setup page will appear.
- Enter a **New Root Password** for the Root account and retype in the **Check Root Password** field. (4-30 alphanumeric and specific characters; **not support Space**)

Root Password

New Root Password:

Check Root Password:

- Click Save button.



For security concern, it is strongly recommended to change the Root password.

#### Step 2 : Choose System's Time Zone

- Click **System -> Time Server**, the Time Server Setup page will appear.
- Select the appropriate NTP Server, Time Zone from drop-down list.

Setup Time Use NTP

Default NTP Server:  (optional)

Time Zone:

Daylight Saving Time:

- Click **Save** button.



Before Hotspot service active, make sure the Local Time is correctly.

### Step 3 : Select Connection Type for WAN1 Port and Set DNS Server

- Click **System -> WAN**, the WAN Setup page will appear.
- Select the appropriate Connection Type for WAN1 port, there are four types of WAN1 connections to be selected from: **Static IP**, **Dynamic IP**, **PPPoE Client** and **PPTP Client**.
- Enter the IP Address of a DNS Server provided by your ISP(Internet Service Provider). Contact the ISP if the DNS IP Address is unknown.
- Click **Save** button.

#### WAN Setup

WAN1 Setup

Disable
  Static IP
  Dynamic IP
  PPPoE
  PPTP

Hostname:

Keep Default MAC Address  
 Clone MAC Address: **00:16:D4:33:32:6B**  
 Manual MAC Address:

WAN2 Setup

Disable
  Static IP
  Dynamic IP
  PPPoE
  PPTP

DNS

DNS:  No Default DNS Server  Specify DNS Server IP

Primary:

Secondary:

Save

### Step 4 : Configure Wireless General Settings

- Click **Wireless -> General Setup**, the Wireless General Setup page will appear.
- Select desired wireless **Band**, **Channel**.
- Click **Save** button

#### Wireless Setup

General Setup

MAC Address: 00:11:22:33:44:0b

Band Mode:

Country:

Channel:

Tx Power:

HT Physical Mode

Channel BandWidth:  20  20/40

Extension Channel:  Upper  Lower

MCS:

Short GI:  Disable  Enable

Aggregation:  Disable  Enable

Aggregation Frames:

Aggregation Size:

Save

### Step 5 : Set Virtual AP and Select Authentication Type for Service Domain

- Click **Service Domain**, the Service Domain Setup page will appear.

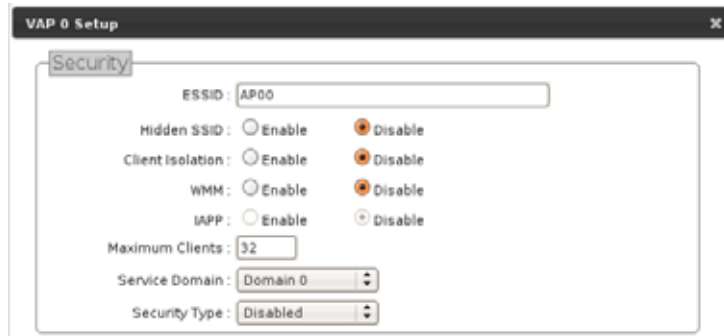


## Service Domain Setup

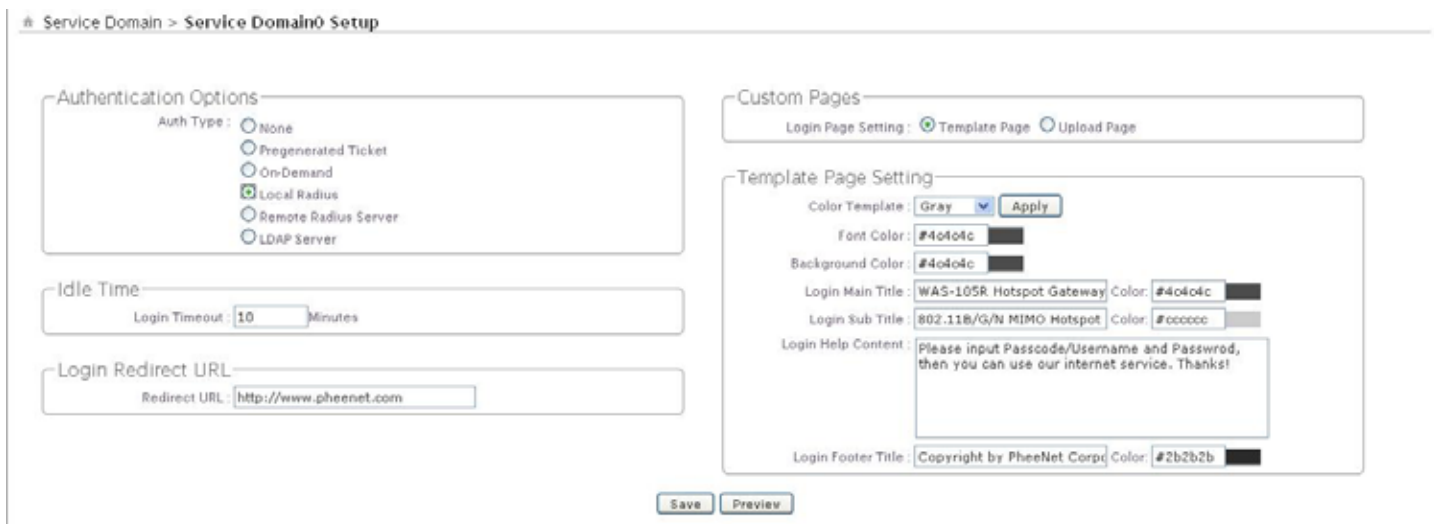
The screenshot displays four domain configuration windows:

- Domain 0:** LAN Port: LAN, Auth Type: None, Redirect URL: [Link](#), Login Page: Template Page. Contains icons for AP1 through AP7.
- Domain 1:** LAN Port: VLAN1, Auth Type: Local Users, Redirect URL: [Link](#), Login Page: Template Page. Contains an AP0 icon with a red lightning bolt icon next to it.
- Domain 2:** LAN Port: VLAN2, Auth Type: None, Redirect URL: [Link](#), Login Page: Template Page.
- Domain 3:** LAN Port: VLAN3, Auth Type: None, Redirect URL: [Link](#), Login Page: Template Page.

Move **AP0 Icon** to Domain 1 window and click, the VAP0 Setup page will appear.



- Select desired wireless **ESSID** and related settings.
- Click **Tool Icon** on **Domain 1** window, the Service Domain1 Setup page will appear. For each Service Domain (by default, authentication is **None**), authentication type can be selected in **None**, **Pregenerated Ticket**, **On-Demand**, **Local Radius**, **Remote Radius Server** and **LDAP Server**. Clients shall log in the system before using network server if **Auth Type** is **not None**. Below depicts an example for **Local Radius**.



- Select **Local Radius** for Domain0's Authentication Type.
- Enter the **Redirect URL** that users should be initially directed to when successfully authenticated to the network.
- Configure related settings for the selected Auth Type.
- Click **Save** button.

## Step 6 : Add Local Radius Accounts

- Click **Service Domain** -> **Authentication** -> **Local Radius Accounts**, the Local Radius Accounts Management page will appear.
- A new account can be added into the Local Radius Database. To add a account here, enter the Username(e.g. **test1**), Password(e.g. **11111**), MAC Address(optional, to specify the valid MAC address of this account) and Description.
- More accounts can be added by clicking the Save button.

### Service Domain > Local Radius Accounts Management

**Create Radius Accounts**

Username:

Password:

MAC Address:

Description:

**Local Radius Accounts List**

Import Accounts File:

Show  entries Search:

#	Username	MAC Address	Description	Delete	Edit
1	test1			Delete	Edit
2	test2			Delete	Edit
3	test3			Delete	Edit
4	test4			Delete	Edit
5	test5			Delete	Edit

Showing 1 to 5 of 5 entries

## Step 7 : Restart WAS-105R

- Click **Reboot**, the Reboot page will appear

⚠ Press "**Reboot**" to Enable New Setting.

- Click **Reboot** button to start the restarting process.

### Reboot

⚠ Press "**Reboot**" to Enable New Setting.

i Sometimes it may be necessary to reboot the system if it begins working improperly. Rebooting the system will not delete any of your configuration settings. Click reboot button to reboot the system.



Please don't interrupt the system during the restarting process.


- When the "Home Page" appears, it means the restart process is now completed.

## 5. User Login

To verify whether the configuration of the new Local Radius accounts created via the Quick Configuration has been completed successfully :

### Step :

1. Connect a client device (e.g. Notebook) with wireless interface to scan the configured ESSID of WAS-105R (e.g. **AP00**) and get associated with this ESSID.
2. The client device will obtain an IP address automatically via DHCP from WAS-105R. Open a web browser on a client device, access any URL, and then the Domain1 **User Login Page** will appear.



3. Enter the *Username* and *Password* of a Local Radius account previously generated via **Quick Configuration** (e.g. “test1” as the *Username* and “1111” as the *Password*); then Click **Login** button.

### Congratulation !

The Timer page will appear after a client has successfully logged into WAS-105R and has been authenticated by the system. Now, you are connected the network and Internet!

