

Quick Installation Guide

EAP747 V1.20

Enterprise Access Point

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FCC CAUTION

This equipment has been tested and proven to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses 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.**

The device contains a low power transmitter which will send out Radio Frequency (RF) signal when transmitting. 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.

CE CAUTION

Declaration of Conformity with Regard to the 1999/5/EC (R&TTE Directive) for European Community, Switzerland, Norway, Iceland, and Liechtenstein

Model: EAP747

For 2.4 GHz radios, the device has been tested and passed the requirements of the following standards, and hence fulfills the EMC and safety requirements of R&TTE Directive within the CE marking requirement.

- Radio: EN 300.328.
- EMC: EN 301.489-1, EN 301.489-17,
- EMC: EN 55022 Class B, EN 55024.+ A1 + A2 including the followings:
 - EN 61000-3-2, EN 61000-3-3.
 - EN 61000-4-2, EN 61000-4-3, EN 61000-4-4,
 - EN 61000-4-5, EN 61000-4-6, EN 61000-4-11
- Safety: EN 60950-1 + A11,

Caution:

- This declaration is only valid for configurations (combinations of software, firmware, and hardware) provided and supported by 4ipnet Inc. The use of software or firmware not provided and supported by 4ipnet Inc. may result in the equipment no longer being compliant with the regulatory requirements.

European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835 GHz. This equipment is intended to be used in all EU and EFTA countries. Outdoor use may be restricted to certain frequencies and/or may require a license for operation. Contact your local regulatory authority for compliance.

Taiwan NCC Statement

根據 NCC 低功率電波輻射性電機管理辦法 規定:

- | | |
|------|---|
| 第十二條 | 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。 |
| 第十四條 | 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之擾。 |

Preface

4ipnet EAP747 is a high-end 802.11 a/b/g/n 2.4GHz/5 GHz MIMO Access Point (AP) with the best price/ performance for business and industrial applications and is compliant with the latest industrial wireless security standards that are required in the tightly secured enterprise network environments.

EAP747 makes the wireless communication fast, secure and easy. It supports business grade security such as 802.1X, and Wi-Fi Protected Access (WPA and WPA2). By pushing a purposely built button, the **4ipWES (Press-n-Connect)** feature makes it easy to bridge wireless links of multiple EAP747s for forming a wider wireless network coverage.

EAP747 also features multiple ESSIDs with VLAN tags and multiple Virtual APs; great for enterprise applications, such as separating traffic from different departments using different ESSIDs. The PoE Uplink port is able to receive power from Power over Ethernet (PoE) sourcing devices.

This Quick Installation Guide provides instructions and reference materials to get you started with 4ipnet EAP747.

Package Contents

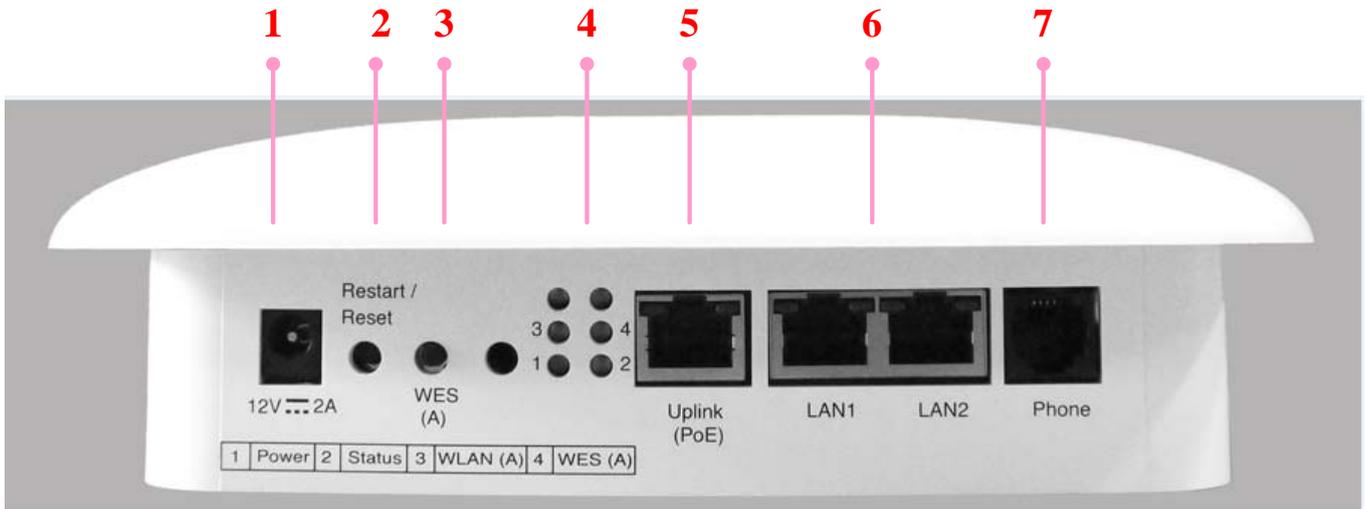
1. 4ipnet EAP747 x 1
2. Quick Installation Guide (QIG) x 1
3. CD-ROM (with User's Manual and QIG) x 1
4. Ethernet Cable x 1
5. Power Adapter (DC 12V) x 1 (Optional)
6. Mounting Kit x 1



It is recommended to keep the original packing material for possible future shipment when repair or maintenance is required. Any returned product should be packed in its original packaging to prevent damage during delivery.

System Overview

Rear Panel



EAP747's Rear Panel

1	12V 2 A	Attach the power adapter here.
2	Restart / Reset Button	Press once to restart the system; Press and hold for more than 5 seconds to reset to factory default.
3	WES Button	WDS Easy Setup. Press the button to build up a WDS link with another peer.
4	LED Indicators	4 LED lights are available. What the numbers stand for is listed at the bottom of the panel.
5	Uplink (PoE) Port	Offers uplink connection. This port can be used to connect to a controller, gateway, or directly to the Internet. PoE is also supported
6	LAN 1- 2 Ports	Attach Ethernet cables here to connect to the wired local network.
7	Phone Jack	The telephone line can bypass if the EAP747 is placed on the socket.

Hardware Installation

Please follow the steps mentioned below to install the hardware of EAP747:

1. Place the EAP747 at the best location.

- a) The best location for EAP747 is usually at the center of your intended wireless network.
- b) If admin would like to mount the EAP747 on the wall (on a socket), the figure below indicates how the mounting kit can be used on the back of the device. Screw the panel to the EAP747, and then turn the panel clockwise to fasten it with the AP.

2. Connect the EAP747 to your network device.

Connect one end of the Ethernet cable to the Uplink port of EAP747 and the other end of the cable to a switch, a router, or a hub. EAP747 is then connected to your existing wired LAN network.

There are two ways to supply power over to EAP747.

3. Connect the DC power adapter to the EAP747 power socket.

EAP747 Uplink port is capable of receiving DC currents. Connect an IEEE 802.3af-compliant PSE device (e.g. a PoE-switch) to the Uplink port of EAP747 with the Ethernet cable.

Now, the Hardware Installation is complete. For more information on installing the wall and ceiling mount kit, please refer to the Mounting Kit Installation Guide provided.



- *Using a different power adapter may damage this system.*
- *To verify the wired connection between EAP747 and you switch / router / hub, please also check the LED status indicator of the respective network devices.*

Getting Started

4ipnet EAP747 supports web-based configuration. When hardware installation is complete, EAP747 can be configured through a PC by using a web browser such as Mozilla Firefox 2.0 or Internet Explorer version 6.0 and above.

The default values of LAN IP address and subnet mask of EAP747 are:

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

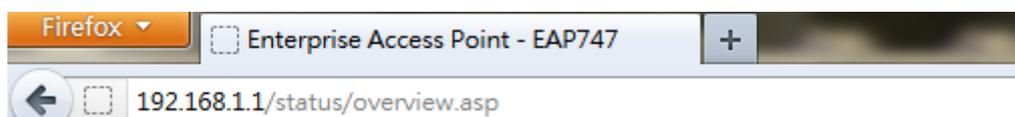
Steps:

1. To access the Web Management Interface, connect the administrator PC to the LAN port of EAP747 via an Ethernet cable. Then, set a static IP address on the same subnet mask as EAP747 in TCP/IP of your PC, such as the following example:

IP Address: 192.168.1.100

Subnet Mask: 255.255.255.0

2. Launch the web browser on your PC by entering the IP address of EAP747 (**https://192.168.1.1**) in the address field, and then press **Enter**.



Example of entering EAP747's default IP Address via a web browser

3. The following Admin Login Page will appear. Enter "**admin**" for both the *Username* and *Password* fields, and then click **Login**.



Administrator Login Page

- After a successful login to EAP747, a **System Overview** page of the Web Management Interface will appear, as depicted below.

System Overview

System

System Name	Enterprise Access Point - E...
Firmware Vers...	1.00.00
Build Number	1.5-1.5408
Location	
Site	EN-A
Device Time	1970/01/01 08:00:56
System Up Time	0 days, 0:00:56

Radio Status

MAC Address	00:C0:CA:5F:87:A4
Band	802.11g+n
Channel	6
TX Power	Highest

LAN Interface

MAC Address	00:1F:D4:01:F4:F9
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

AP Status

Profile Name	BSSID	ESSID	Security Type	Online Clients	Tun
VAP-1	00:C0:CA:5F:8...	4ipnetAP-A1	None	0	

CAPWAP

Status: Disabled

IPv6

Status: Disabled

The Web Management Interface - System Overview Page

- To logout, simply click on the **Logout** button at the upper right hand corner of the interface to return to the Administrator Login Page. Click **OK** to logout.

Common Settings

Step 1. Change Administrator's Password

The screenshot shows the 'Change Password' page in the 4IPNET web interface. At the top, there is a main menu with icons for System, Wireless, Firewall, Utilities, and Status. Below this is a sub-menu with tabs for Change Password, Backup & Restore, System Upgrade, Reboot, and Upload Certificate. The 'Change Password' tab is active. The page content includes a breadcrumb trail 'Home > Utilities > Change Password' and a title 'Change Password'. The form contains the following fields:

- Name :** admin
- Old Password :** [Text Input Field]
- New Password :** [Text Input Field] *up to 32 characters
- Re-enter New Password :** [Text Input Field]

Change Password Page

- Click on the **Utilities** icon on the main menu, and select the **Change Password** tab.
- Enter the old password and then a new password with a length of up to 32 characters, and retype it in the **Re-enter New Password** field.
- Click **SAVE** to save the changes.

Step 2. Configure General AP (Access Point) Settings

The screenshot shows the 'General Settings' page for wireless configuration. At the top, there are navigation tabs: VAP Overview, General (selected), VAP Config, Security, Repeater, Advanced, and Access Control. Below the tabs, the breadcrumb path is 'Home > Wireless > General'. The main heading is 'General Settings'. The configuration options are as follows:

- Band:** 802.11g+802.11n (dropdown menu), with a checkbox for 'Pure 11n'.
- Short Preamble:** Radio buttons for 'Disable' and 'Enable' (selected).
- Short Guard Interval:** Radio buttons for 'Disable' and 'Enable' (selected).
- Channel Width:** 20 MHz (dropdown menu).
- Channel:** 6 (dropdown menu).
- Max Transmit Rate:** Auto (dropdown menu).
- Transmit Power:** Highest (dropdown menu).
- ACK Timeout:** 0 (input field), with a note: *(0 - 255, 0:Auto, Unit:4 micro seconds)
- Beacon Interval:** 100 (input field), with a note: *(100 - 500ms)

Wireless General Settings Page

- Click on the **Wireless** icon on the main menu, and then select the **General** tab.
- Determine the **Band** and **Channel** settings:
Select your preferred **Band** and **Channel** for you wireless connection. For example, select **802.11g+802.11n** for the band and 6 for the channel.

Admin should be aware of Dynamic Frequency Selection (DFS) mandated on some channels of the 5GHz band. When an EAP747 detects interference, this mechanism will limit the ability to broadcast the SSID on one of the channels listed below:

- **Note:**
 - 1) **Country Code: 840 (US)**
DFS Channels: 52 56 60 64 100 104 108 112 116 120 124 128 132 136 140
 - 2) **Country Code: 250 (EU)**
DFS Channels: 52 56 60 64
-

Step 3. Configure VAP (Virtual Access Point) Profile Settings

VAP Configuration Page (VAP-1 shown)

- EAP747 supports up to 8 virtual APs (VAPs).
- Configure VAP profile settings :
 - (a) Select the **VAP Configuration** tab to configure the settings of the desired VAP.
 - (b) Enable a specific VAP from the drop-down menu of **Profile Name** and configure related settings below.
- Check VAP status :

After finishing VAP configuration, the status of enabled Virtual APs shall be reflected on the VAP Overview page.

System **Wireless** Firewall Utilities Status

VAP Overview **General** VAP Config Security Repeater Advanced Access Control

Home > **Wireless** > VAP Overview

VAP Overview

VAP No.	ESSID	State	Security Type	MAC ACL	Advanced Settings
1	4ipnetAP-A1	Enabled	None	Disabled	Edit
2	4ipnetAP-A2	Disabled	None	Disabled	Edit
3	4ipnetAP-A3	Disabled	None	Disabled	Edit
4	4ipnetAP-A4	Disabled	None	Disabled	Edit
5	4ipnetAP-A5	Disabled	None	Disabled	Edit
6	4ipnetAP-A6	Disabled	None	Disabled	Edit
7	4ipnetAP-A7	Disabled	None	Disabled	Edit
8	4ipnetAP-A8	Disabled	None	Disabled	Edit

Virtual AP Overview Page

Step 4. Configure WDS (Wireless Distribution System) Settings (Optional)

Home > Wireless > Repeater Config

Repeater Settings

Repeater Type : WDS WES

WDS Profile : RF Card : WDS Link 1

WDS : Disable

MAC Address :

Security type : None

CAPWAP Tunnel Interface :

SAVE CLEAR

To extend the wireless coverage, EAP747 supports up to 4 WDS links for connecting wirelessly to other WDS-capable APs (peer APs). By default, all WDS profiles are disabled.

- Click on the **Wireless** button on the main menu.
- Select the **Repeater Settings** tab.
- Choose **WDS** as the **Repeater Type**.
- Choose the desired WDS profile:
 - (a) Enable **WDS**.
 - (b) Enter the **MAC Address** (peer AP) and then Click **SAVE**.

If you are using another EAP747 as the peer AP, simply repeat the above-mentioned steps to configure another peer AP(s).

► **Note:**

On each and every configuration page, you may click **SAVE** to save the changes of your configured settings, but you must reboot the system for the changes to take effect. After clicking **SAVE**, the following message will appear: **“Some modifications have been saved and will take effect after Reboot.”**

Congratulations!

Now, 4ipnet EAP747 is installed and configured successfully.



After EAP747's network configuration is completed, please remember to change the IP Address of your PC Connection Properties back to its original settings in order to ensure that your PC functions properly in its real network environments.

- ***It is strongly recommended to make a backup copy of your configuration settings.***
- ***For further configuration and backup information, please refer to the User's Manual.***

P/N: 12020120713