Quick Installation Guide

EAP110 V1.10

Enterprise Access Point

Copyright Notice

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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

CE CAUTION

Declaration of Conformity with Regard to the 1999/5/EC (R&TTE Directive) for

European Community, Switzerland, Norway, Iceland, and Liechtenstein

Model: EAP110

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;

• EMF: EN 50385:2002

• EMC: EN 301.489-1, EN 301.489-17

• 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 EAP110 is a high-end 802.11n/b/g 2.4GHz MIMO Access Point (AP) with the best price/ performance for wireless connectivity in enterprise and industrial applications and is compliant with the latest industrial wireless security standards.

EAP110 makes the wireless communication fast, secure and easy. It supports business grade security such as IEEE802.1X, and Wi-Fi Protected Access (WPA and WPA2).

EAP110 also features multiple ESSIDs with VLAN tags and multiple Virtual APs; great for enterprise applications, such as separating the traffics of different departments using different ESSIDs. The PoE LAN port can receive power from Power over Ethernet (PoE) sourcing device. Its metal case is IP50 anti-dust compliant, which means that EAP110 is well suited to WLAN deployment in industrial environments.
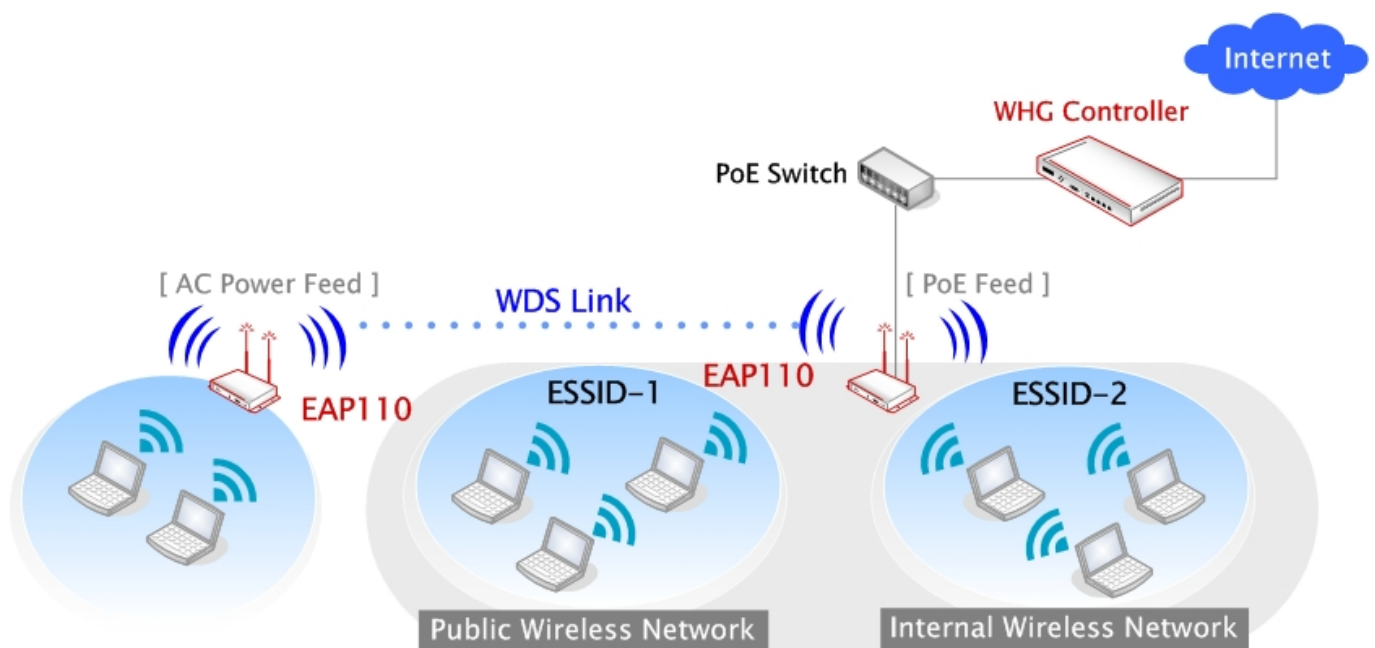
This Quick Installation Guide provides instructions and reference materials for getting started with 4ipnet EAP110.

Package Contents

1. 4ipnet EAP110 x 1
2. Quick Installation Guide (QIG) x 1
3. CD-ROM (with User's Manual and QIG) x 1
4. Power Adapter (DC 5V) x 1
5. Antenna x 2

⚠️ *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.*

Network Layout with EAP110s

System Overview

Connector Panel

EAP110 Connector Panel

1	5V ⎓ 1A	Attach the power adapter here.		
2	LAN(PoE)	Attach the Ethernet cable here for connecting to wired local network. This port supports PoE as well which can be connected to a PSE (power sourcing equipment) as an alternative power sourcing.		
3	WES	Press to start running WES process.		
		WES Role	Master (Press for more than 3 seconds until the WLAN LED blinks twice and then release)	Slave (Press once until the WLAN LED starts blinking and then release right away)
		WES Start	WLAN LED BLINKING SLOWLY	WLAN LED BLINKING QUICKLY
		WES Success	WLAN LED ON constantly for 5 seconds	
		WES Fail	WLAN LED OFF for 5 seconds	
3	Reset	Press and hold the button for more than 10 seconds until WLAN LED OFF. WLAN ON while reset is successful.		
4	Antenna Connector	Attach two dipole antennas here.		

LED Panel

EAP110 LED Panel

1	**LAN LED**	LED ON indicates LAN cable is connected; OFF indicates no connection; BLINKING indicates transmitting data.
2	**WLAN LED**	LED ON indicates wireless is ready.
2	**WES LED**	To indicate WES status.

	Master (Press for more than 3 seconds until the WLAN LED blinks twice and then release)	Slave (Press once until the WLAN LED starts blinking and then release right away)
WES Role		
WES Start	WLAN LED BLINKING SLOWLY	WLAN LED BLINKING QUICKLY
WES Success	WLAN LED ON constantly for 5 seconds	
WES Fail	WLAN LED OFF for 5 seconds	

3	**Power LED**	LED ON indicates power on; OFF indicates power off.

Hardware Installation

Please follow the steps mentioned below to install the hardware of EAP110:

1. **Place the EAP110 at a best location.**

   The best location for EAP110 is usually at the center of your wireless network.

2. **Connect EAP110 to your network device.**

   Connect one end of the Ethernet cable to the LAN port of EAP110 and the other end of the cable to a switch, a router or a hub. EAP110 is then connected to your existing wired LAN network.

3. **There are two ways to supply power over to EAP110.**

   (a) Connect the **DC power adapter** to the EAP110 power socket.

   > ⚠️ *Please only use the power adapter supplied with the EAP110 package. Using a different power adapter may damage this system.*

   (b) EAP110 is a powered device (PD) that can be powered up by PoE. Connect an IEEE 802.3af-compliant PSE device, e.g. a PoE-switch, to the LAN port of EAP110 by the Ethernet cable.

Now, the Hardware Installation is completed.

> ⚠️ *To double verify the wired connection between EAP110 and your switch/router/hub, please check the LED status indication of these network devices.*

Getting Started

4ipnet EAP110 supports web-based configuration. Upon the completion of hardware installation, EAP110 can be configured through a PC by using its 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 EAP110 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 EAP110 via an Ethernet cable. Then, set a static IP address on the same subnet mask as EAP110 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 EAP110 (**https://192.168.1.1**) at the address field (**"https"** is used for a secured connection), and then press *Enter*.
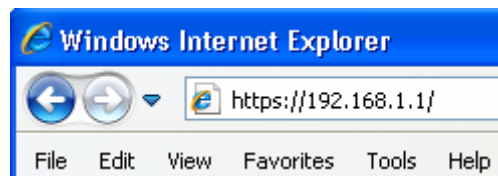
Example of entering EAP110'sdefault IP Address via a web browser

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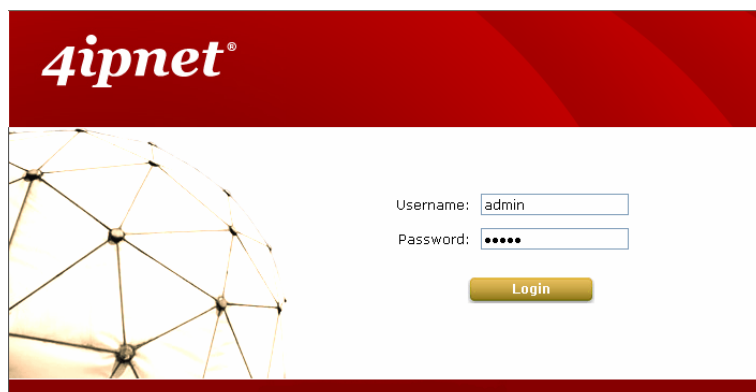
Administrator Login Page

4. After a successful login into EAP110, a **System Overview** page of web management interface will appear, as depicted below.

The Web Management Interface - System Overview Page

5. 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.

Logout

Common Settings

Step 1. Change Administrator's Password

Change Password Page

- ➢ Click on the **Utilities** main menu button, and then 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

| VAP Overview | General | VAP Config | Security | Repeater | Advanced | Access Control | Site Survey |

Home > Wireless > General

General Settings

Band :	802.11g+802.11n
Short Preamble :	○ Disable ● Enable
Short Guard Interval :	○ Disable ● Enable
Channel Width :	20 MHz
Channel :	1
Max Transmit Rate :	Auto
Transmit Power :	Highest
Beacon Interval :	100 *(100 - 500ms)

Wireless General Settings Page

➢ Click on the **Wireless** main menu button, 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 **1** for the channel.

Step 3. Configure VAP (Virtual Access Point) Profile Settings
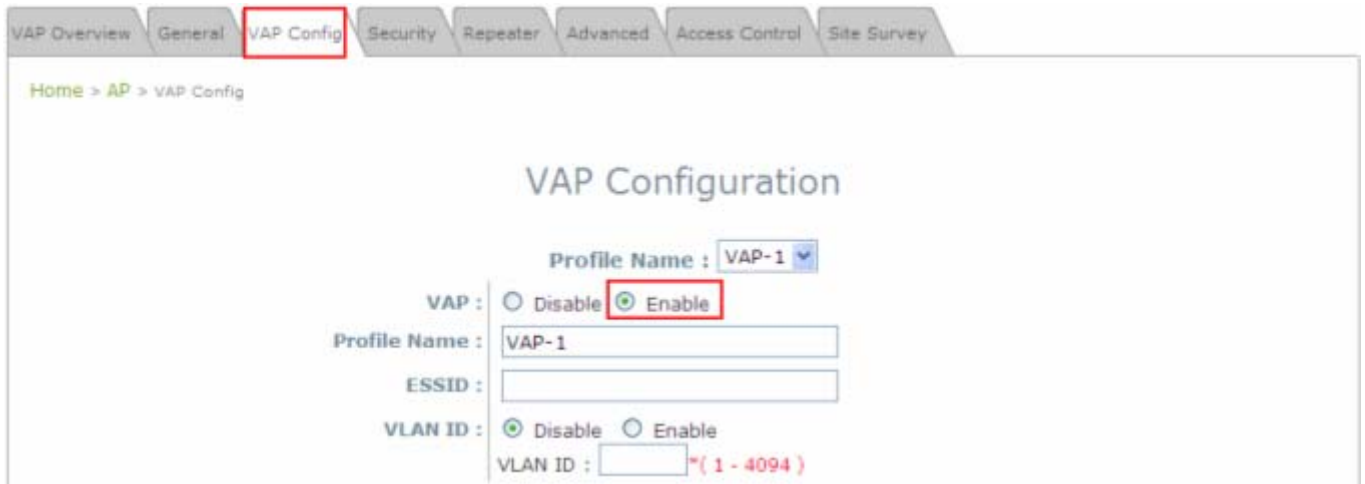
VAP Configuration Page (VAP-1 shown)

➢ EAP110 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.

VAP No.	ESSID	State	Security Type	MAC ACL	Advanced Settings
1	EAP110-1	Enabled	None	Disabled	Edit
2	EAP110-2	Disabled	None	Disabled	Edit
3	EAP110-3	Disabled	None	Disabled	Edit
4	EAP110-4	Disabled	None	Disabled	Edit
5	EAP110-5	Disabled	None	Disabled	Edit
6	EAP110-6	Disabled	None	Disabled	Edit
7	EAP110-7	Disabled	None	Disabled	Edit
8	EAP110-8	Disabled	None	Disabled	Edit

Virtual AP Overview Page

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

VAP Overview | General | VAP Config | Security | Repeater | Advanced | Access Control | Site Survey

Home > Wireless > Repeater Config

Repeater Settings

Repeater Type : WDS

WDS Profile : RF Card A : WDS Link 1

WDS : Disable

MAC Address :

Security type : None

To extend the wireless coverage, EAP110 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** main menu button.
- ➢ Select the **Repeater Settings** tab.
- ➢ Choose **WDS** as the **Repeater Type**.
- ➢ Choose the desired WDS profile:
  (a) Enable the **WDS**.

Enter the **MAC Address** (peer AP) and then Click *SAVE*.

If you use another EAP110 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, but you must reboot the system upon the completion of all configuration settings for the changes to take effect. When clicking *SAVE*, the following message will appear: **"Some modifications have been saved and will take effect after Reboot."**

Congratulations!

Now, 4ipnet EAP110 is installed and configured successfully.

⚠ *After EAP110'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 the configuration settings.*
- ● *For further configuration and backup information, please refer to the User's Manual.*

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