

Product Handbook

EAP706 V1.00

Enterprise Access Point

Copyright Notice

This document is protected by USA copyright laws and other laws. Besides, the document is the property of 4IPNET, INC. You may not copy, reproduce, distribute, publish, display, perform, or modify any part of this publication in any form or by any means without prior written permission from 4IPNET, INC. You may not alter or remove any copyright or other notice from copies of the content. All other brand and product names are claimed or registered marks of their respective companies or organizations.

All rights reserved.

To download up-to-date version, please visit www.4ipnet.com.

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.

This device complies with Part 15 of the 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE CAUTION

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

Model: EAP706

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 | <p>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。</p> <p>前項合法通信，指依電信法規定作業之無線電通信。</p> <p>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。</p> |

在5.25 ~ 5.35GHz頻帶內操作之無線資訊傳輸設備，限於室內使用。

Preface

The **4ipnet EAP706 Wall Jack Access Point** is an on-the-wall as well as a ceiling-mounted dual radio Wi-Fi IEEE 802.11b/g/n + a/n/ac 2 X 2 MIMO access point, designed to **blend into a working or a living environment** practically and elegantly with its simplistic yet sleek design.

The compact EAP706 in a small form factor lays snug in a standard wall outlet box. Its side panel features LED status indicators and two RJ45 ports. It has the interfaces to serve both wireless and wired LAN access. The RJ45 pass-through port allows phone or IP-based devices to pass through EAP706 without the need for additional outlets.

When coupled with the 4ipnet WHG series Controller, the EAP706 supports Tunnel-based AP Management, and comes with all standards demanded by enterprise applications, including business-grade security (802.1X, WPA and WPA2), and multiple ESSIDs with VLAN tags to separate the traffics of different departments. A centralized WLAN management allows enterprises and organizations to support a wide array of value added applications, such as load balancing, bandwidth control, and access control. The patent-pending 4ipWES (Press-n-Connect) technology bridges multiple EAP706s at the touch of a button, which enables a quick and automatic WDS Easy Setup by pressing the WES button on EAP706. Extending wireless network coverage is a breeze, be it across conference rooms or along hallways.

EAP706's high performance, security and optimal invisibility make it a perfect choice of wireless connectivity for your business.

Package Contents

1. 4ipnet EAP706 x 1
2. Quick Installation Guide (QIG) x 1
3. Power Adapter (DC 12V) x 1 (Optional)
4. Mounting Screws x 2
5. Mounting Panel x 1
6. Mounting Plate Lock Tool x 1
7. Detachable Antenna x 4



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

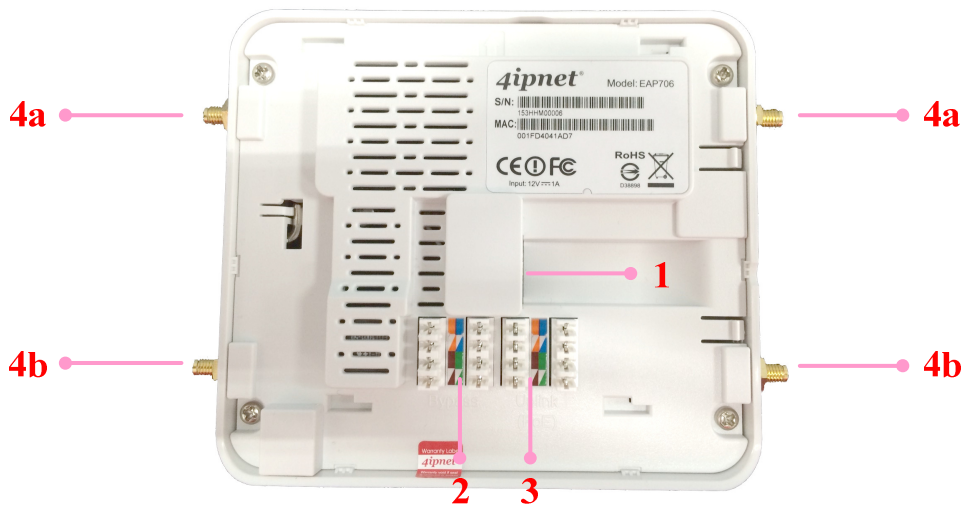
Lower Panel



EAP706 Lower Panel

1	LAN 1 – 2 Ports	Attach Ethernet cables here to connect to the wired local network.
2	Bypass	RJ45 Passthrough for phone or IP devices
3	DC Jack 12V	Attach the power adaptor here.

Lower Panel



EAP706 back Panel

1	Uplink (PoE) Port	For Uplink connection. This port can be used to connect to a controller, gateway, or directly to the internet. PoE is supported.
2	110 Punchdown Block (Pass-through)	Copper wire punch down for wiring bypass.
3	110 Punchdown Block (Uplink PoE)	Copper wire punch down for Uplink connection. This can be used to connect to a controller, gateway, or directly to the internet. PoE is supported.
4a	SMA Connectors (2.4GHz)	Connect external antennas for RF Card A here
4b	SMA Connectors (5GHz)	Connect external antennas for RF Card B here

Hardware Installation

Please follow the steps mentioned below to install the hardware of **EAP706**:

Step 1. Place the EAP706 at the best location. The best location is usually at the center of your intended wireless network. The EAP706 can be mounted on wall outlets or on any flat surface;

Step 2. Connect one end of the Ethernet cable to the Uplink port and the other end of the cable to a switch, a router, or a hub; or use the 110 punchdown block as your uplink connection. The 110 punchdown block may be connected with the following pin assignment:

Orange	Blue
White Orange	White Blue
Brown	Green
White Brown	White Green

The EAP706 is now connected to your existing wired LAN network.

Step 3. There are three ways to supply power to EAP706

- Connect the DC power adaptor to the power jack socket.
- The Uplink port is capable of receiving PoE. Connect an IEEE 802.3af-compliant PSE device (e.g. a PoE-switch) to the Uplink port of EAP706 with the Ethernet cable.
- Use a standard 110 punchdown tool to punch copper wires onto the punchdown block (pin assignment 568A)

Step 4. Fasten the Access Point to the mounting plate

- Align the Access Point to the mounting plate using the arrow printed on the back of the Access

Point.

- b) Align the Access Point to the 4 hooks and snap Access Point to the mounting plate
- c) To lock/unlock Access Point from the mounting plate, use the Lock Tool provided.

Now, the Hardware Installation is complete.



- *Punch down tools may vary by country. Please contact the 4ipnet Support Team for recommendations if needed.*
- *Please use only the power adapter supplied with the package. Using a different power adapter may damage this system.*
- *To verify the wired connection between the AP and your switch / router / hub, please also check the LED status indicator of the respective network devices.*

Getting Started

4ipnet EAP706 supports web-based configuration. When hardware installation is complete, EAP706 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 EAP706 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 EAP706 via an Ethernet cable. Then, set a static IP address on the same subnet mask as EAP706 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 EAP706 (**http://192.168.1.1**) at the address field, and then press **Enter**.
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 EAP706, a **System Overview** page of the Web Management Interface will appear, as depicted below. The Radio Status and AP Status will be shown.

Overview
Associated Clients
WDS Link Status
Event Log

Home > Status > System Overview

System Overview

System

System Name	Enterprise Access Point
Firmware Version	1.00.00
Build Number	1.5-1.6477
Location	
Site	EN-A
Device Time	1970/01/01 08:15:39
System Up Time	0 days, 0:15:39

Radio Status

MAC Address	00:1F:D4:02:32:F7
Band	802.11g+n
Channel	6
TX Power	Highest

LAN Interface

MAC Address	00:1F:D4:02:32:F6
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	00:1F:D4:02:32:F7	4ipnetAP-A1	Open	0	

CAPWAP

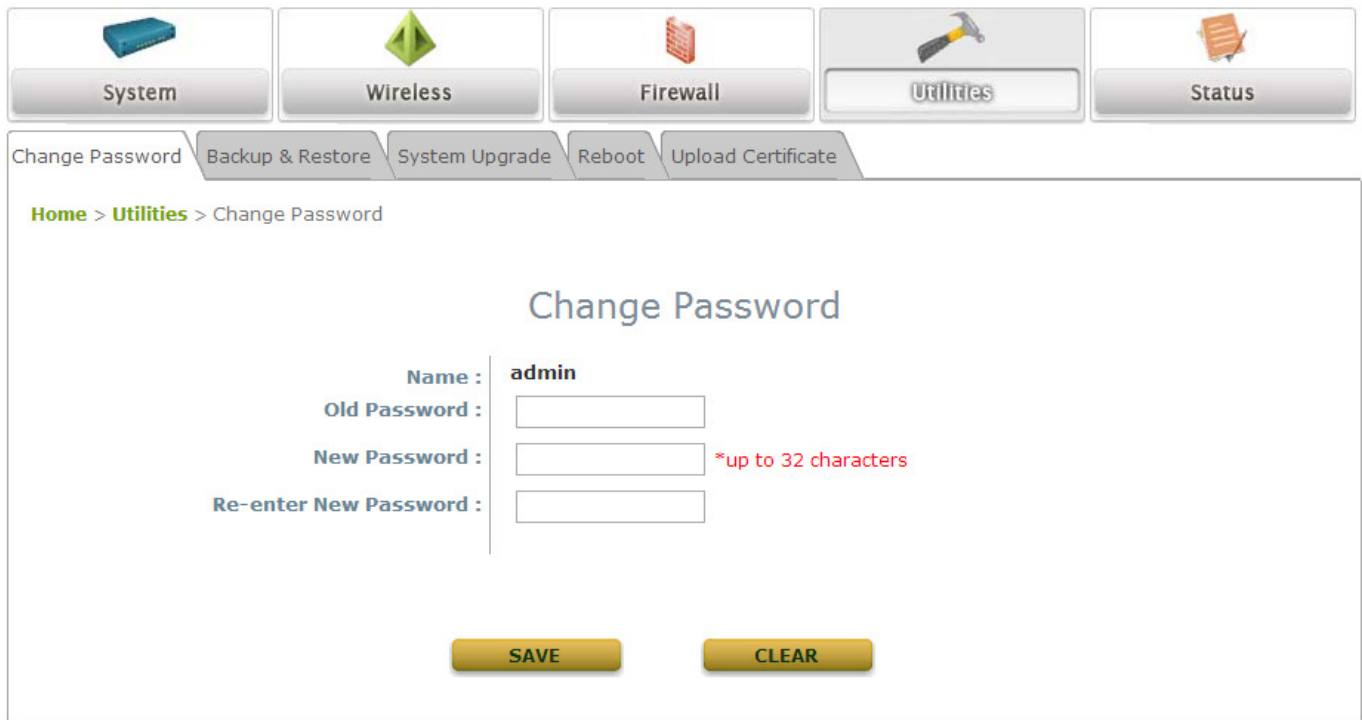
Status	Disabled
--------	----------

The Web Management Interface - System Overview Page

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

Common Settings

Step 1. Change Administrator's Password



Change Password Backup & Restore System Upgrade Reboot Upload Certificate

Home > Utilities > Change Password

Change Password

Name : admin

Old Password :

New Password : *up to 32 characters

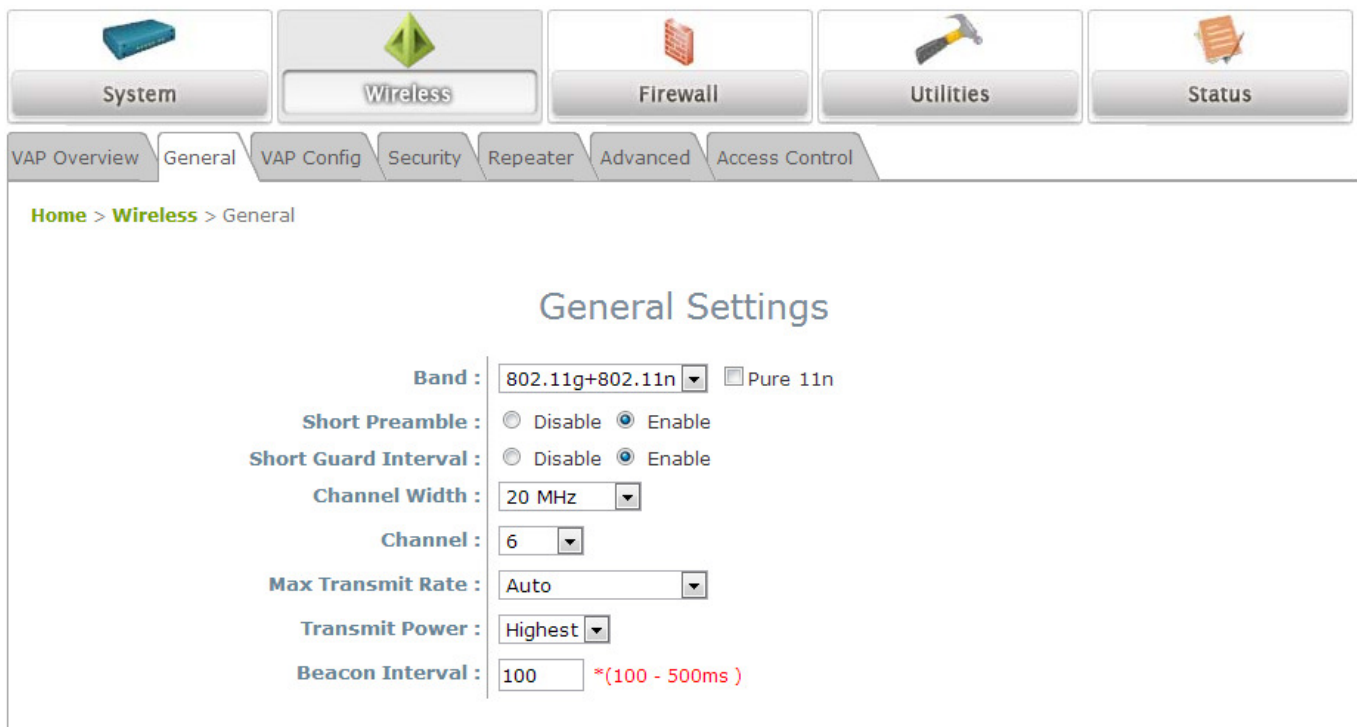
Re-enter New Password :

SAVE **CLEAR**

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



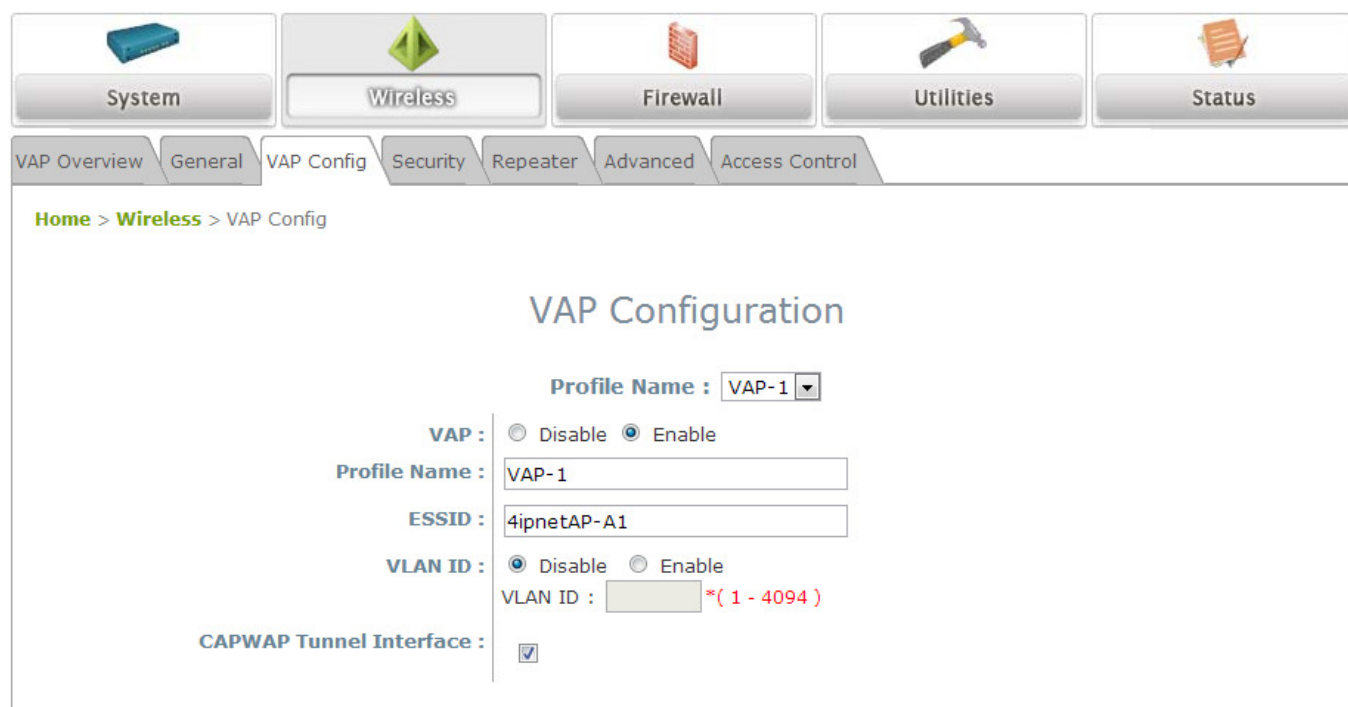
The screenshot shows the 4ipnet management interface. At the top, there are five main menu icons: System, Wireless (highlighted), Firewall, Utilities, and Status. Below these are sub-menu tabs: VAP Overview, General (selected), VAP Config, Security, Repeater, Advanced, and Access Control. The breadcrumb trail reads 'Home > Wireless > General'. The main content area is titled 'General Settings' and contains the following configuration options:

- Band :** 802.11g+802.11n (dropdown menu) ☐ Pure 11n
- Short Preamble :** ☐ Disable ☒ Enable
- Short Guard Interval :** ☐ Disable ☒ Enable
- Channel Width :** 20 MHz (dropdown menu)
- Channel :** 6 (dropdown menu)
- Max Transmit Rate :** Auto (dropdown menu)
- Transmit Power :** Highest (dropdown menu)
- Beacon Interval :** 100 *(100 - 500ms)

Wireless General Settings Page

- Click on the **Wireless** icon on the main menu, and then select the **General** tab.
- Select the RF card you would like to set up.
- 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.

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



Home > Wireless > VAP Config

VAP Configuration

Profile Name : VAP-1

VAP : ☐ Disable ☒ Enable

Profile Name : VAP-1

ESSID : 4ipnetAP-A1

VLAN ID : ☒ Disable ☐ Enable

VLAN ID : *(1 - 4094)

CAPWAP Tunnel Interface : ☒

VAP Configuration Page (VAP-1 shown)

- The EAP706 supports up to 8 virtual APs (VAPs) per radio.
- Configure VAP profile settings :
 - (a) Select the **VAP Configuration** tab to configure the settings of the desired VAP.
 - (b) Choose a specific RF card to set up
 - (c) Enable a selected VAP from the drop-down menu of **Profile Name** and configure related settings below.
 - (d) Check “CAPWAP Tunnel Interface” if you would like data of this VAP to go through the Controller when the Access Point is managed by CAPWAP.
- Check VAP status :

After finishing VAP configuration, the status of the enabled Virtual APs shall be reflected on the VAP Overview page – **at Wireless > VAP Overview**.


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)


System


Wireless


Firewall


Utilities


Status

VAP Overview

General

VAP Config

Security

Repeater

Advanced

Access Control

Home > Wireless > Repeater Config

Repeater Settings

Repeater Type : WDS ☒ WES

WDS Profile : RF Card A : WDS Link 1

WDS : Disable

MAC Address :

Security type : None

CAPWAP Tunnel Interface : ☒

To extend the wireless coverage, EAP706 supports up to 4 WDS links for connecting wirelessly to other WDS-capable APs, or peer APs. By default, all WDS profiles are disabled.

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

If you are using another EAP706 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 EAP706 is installed and configured successfully.



After EAP706'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 back up your configuration settings.***
- ***For further configuration and information, please refer to the User's Manual.***

P/N: V10020150519