



Handbook

EAP738

Enterprise Access Point

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FCC CAUTION

This equipment has been tested and found 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.

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

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device is restricted to **indoor** use when operated in the 5.15 to 5.25 GHz frequency range.

- ※ FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **28cm** between the radiator & your body.

CE CAUTION

Hereby, 4ipnet, inc. declares that the radio equipment type EAP738 is in compliance with Directive 2014/53/EU.

Frequency Range and Transmit Power

Frequency range (MHz)	Max. transmit power (dBm)
2412-2472	20 dBm
5150-5350	23 dBm
5500-5700	30 dBm

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK

This device is restricted to indoor use.

Input Power

Power from PoE: IEEE802.3af

Operation Temperature

0°C (32°F) to 40°C (104°F)

Model - EAP738

The device has been tested and passed the requirements of the following standards, and hence fulfills the EMC and safety requirements of RED within the CE marking requirement.

- Radio: EN 300 328 V2.1.1, EN 301 893 V2.1.1
- EMC: EN 301 489-1 V2.1.1, EN 301 489-17 V3.1.1
- EMC: EN 55032:2015 + AC:2016 Class B, EN 55024:2010 + A1:2015 including the followings:
EN 61000-4-2, EN 61000-4-3, EN 61000-4-4,
EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

Safety: EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

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.
- Requirements in
AT/BE/BG/CZ/DK/EE/FR/DE/IS/IE/IT/EL/ES/CY/LV/LI/LT/LU/HU/MT/NL/NO/PL/PT/RO/SI/SK/TR/FI/SE
/CH/UK/HR. 5150MHz ~ 5350MHz is for indoor use only.
- In order to ensure compliance with the exposure recommendations to electromagnetic fields, the device should be used at a minimum distance of 20cm from the body.

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干擾。

在 5.25 ~ 5.35 兆赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

For UNII 產品 (5GHz WLAN/WIFI)

[警語內容]

使用此產品時應避免影響附近雷達系統之操作。

MPE [警語]

「電磁波曝露量 MPE 標準值 1mW/cm²，本產品使用時建議應距離人體 28cm」

減少電磁波影響，請妥適使用

Preface

4ipnet EAP738 is a high-end, dual radio 802.11 b/g/n + ac (Wave 2) MIMO Access Point (AP) with the best 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.

EAP738 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). The EAP738 supports multiple point-to-point wireless links to form wider wireless network coverage.

EAP738 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 handbook provides instructions and reference materials to get you started with 4ipnet EAP738.

Package Contents

1. 4ipnet EAP738 x 1
2. Handbook x 1
3. Mounting Kit x 1
4. Power Adaptor (12V) x 1

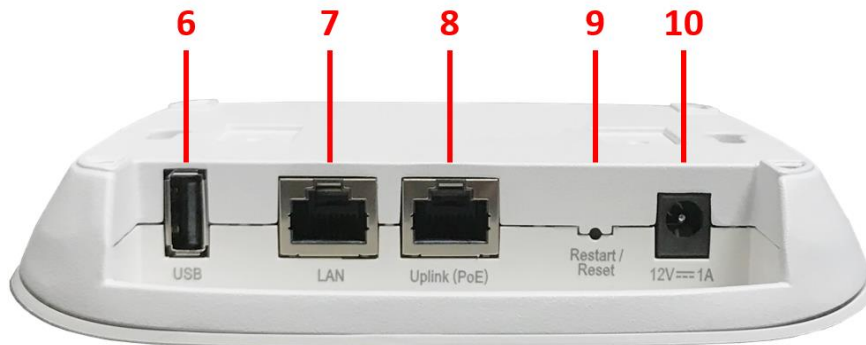


It is recommended to keep the original packing material for possible future shipment when repair or maintenance is required. Any returned product should be packed in its original packaging to prevent damage during delivery.


System Overview



EAP738 Front View



EAP738 Side View

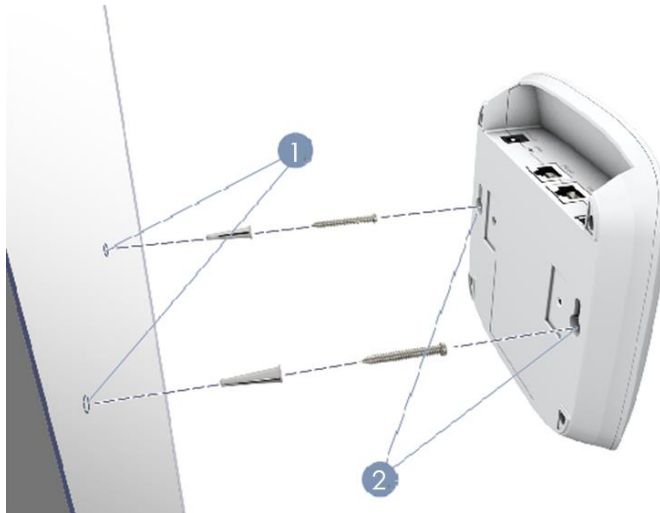
1	Power LED	EAP738 status. The Status LED will start blinking when the restart/reset button is pressed. For the first 5 seconds, the LED will blink slowly (restart), and after 5 seconds, the LED will start blinking quickly (reset).
2	2.4G LED	2.4G Wi-Fi status. The 5G LED will blink when there is 2.4G traffic.
3	5G LED	5G Wi-Fi status. The 5G LED will blink when there is 5G traffic.
4	Uplink LED	Uplink status. The Uplink LED will light up when there is traffic passing through the Uplink port.
5	LAN LED	LAN status. The LAN LED will light up when there is traffic passing through the LAN port.
6	USB Port	USB interface reserved for future use.
7	LAN Port	The ports for connections with LAN side devices.
8	Uplink (PoE) Port	Offers uplink connection. This port can be used to connect to a controller, gateway, or directly to the Internet. 802.3af PoE is also supported.
9	Restart / Reset	Press once to restart the system; to reset the system to factory default settings, hold for more than 5 seconds.
10	12V  1 A	Attach power adaptor here.

Hardware Installation

Please follow the steps mentioned below to install the hardware of EAP738:

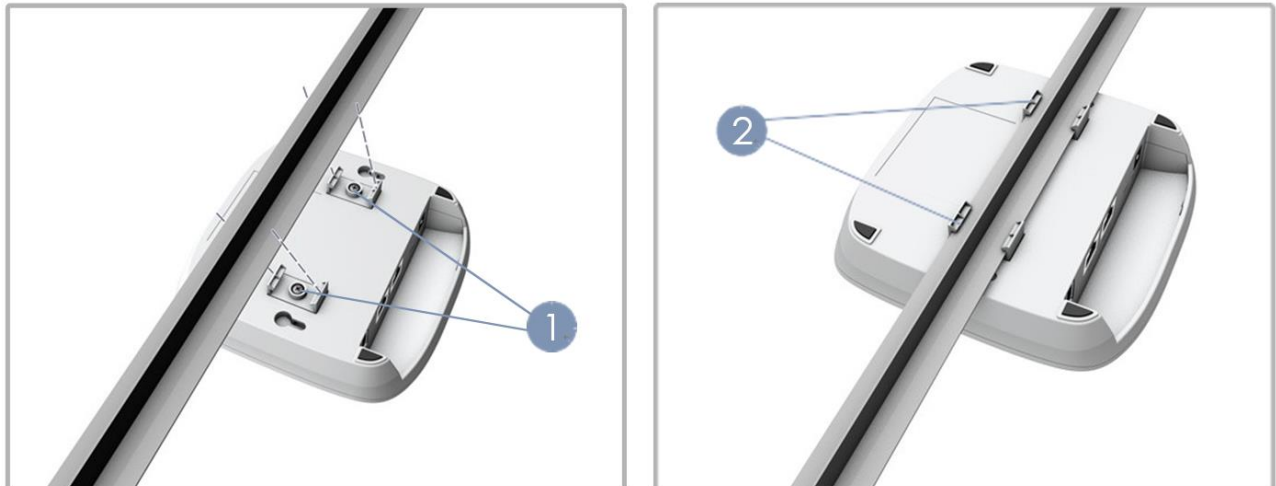
1. Mount EAP738.

(a) Mounting on a Wall



1. Set two screws in the wall 128 mm (5.0 in.) apart.
2. Slide EAP738's wall mounting slots down onto the screws so that the unit is secure.

(b) Mounting on a Ceiling T-Bar



1. Use the included screws to attach two ceiling-mount T-bar clips to the back of EAP738.
2. Push EAP738 onto the ceiling T-bar until it clicks securely in place.

2. Connect EAP738 to your network device.

Connect one end of the Ethernet cable to the Uplink (PoE) port of EAP738 and the other end of the cable to a switch, a router, or a hub. EAP738 is then connected to your existing wired LAN network.

3. Power on EAP738.

There are two ways to supply power over to EAP738.

- EAP738 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 EAP738 with the Ethernet cable.
- Connect a 12V/1A adaptor to the DC power jack. If needed.

Now, the Hardware Installation is complete.



- *Using a different power adapter may damage this system.*
- *To verify the wired connection between EAP738 and you switch / router / hub, please also check the LED indicator of the respective network devices.*

Getting Started

4ipnet EAP738 supports web-based configuration. When hardware installation is complete, EAP738 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 EAP738 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 Uplink port of EAP738 via an Ethernet cable. Then, set a static IP address on the same subnet mask as EAP738 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 EAP738 (**http://192.168.1.1**) in the address field, and then press **Enter**.



Example of entering EAP738'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 EAP738, a **System Overview** page of the Web Management Interface will appear, as depicted below.

Home > Status > System Overview

System Overview

System

System Name	Enterprise Access Point - EAP738
Firmware Version	3.43.00
Build Number	1.6-1.9328
Location	
Site	EN-A
Device Time	2000/01/01 00:19:47
System Up Time	0 days, 0:20:45
CPU/RAM Usage	2.01% / 38.80% <input type="button" value="Plot"/>

Radio Status

RF Card	MAC Address	Band	Channel	TX Power
RF Card A	00:1F:D4:19:B5:64	802.11g+n	11	12 dBm
RF Card B	00:1F:D4:19:B5:65	802.11ac	36	11 dBm

LAN Interface

MAC Address	00:1F:D4:19:B5:62
IP Address	10.71.207.38
Subnet Mask	255.255.0.0
Gateway	10.71.1.254

AP Status

RF Card Name :

Profile Name	BSSID	ESSID	Security Type	Online Clients	TUN
VAP-1	00:1F:D4:19:B5:64	4ipnetAP-A1	Open	0	<input type="checkbox"/>
VAP-8	62:1F:D4:19:B5:64	EAP738_BStest	Open	0	<input type="checkbox"/>

CAPWAP

Status

IPv6

Status

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

Change Password | Backup & Restore | System Upgrade | Reboot | Upload Certificate | Channel Analysis | Background Scan

Home > Utilities > Change Password

Change Password


Name :	admin
New Password :	<input type="text"/> *up to 32 characters
Re-enter New Password :	<input type="text"/>


Name :	user
New Password :	<input type="text"/> *up to 32 characters
Re-enter New Password :	<input type="text"/>


Change Password Page


- Click on the **Utilities** icon on the main menu, and select the **Change Password** tab.
- Enter 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


System


Wireless


Firewall


Utilities


Status

VAP Overview

General

VAP Config

Security

Repeater

Advanced

Access Control

Hotspot 2.0

Home > Wireless > General Settings

General Settings

RF Card Name : RF Card A ▼

Band : 2.4GHz ▼

Protocol : 802.11g+802.11n ▼ Pure 11n

Short Preamble : Disable Enable

Short Guard Interval : Disable Enable

Channel Width : 40 MHz ▼

Channel Width Extension : Above ▼

Channel : 6 ▼

Max Transmit Rate : Auto ▼

Transmit Power : Level 1 ▼

ACK Timeout : 0 *(0 - 255, 0:Auto, Unit:4 micro seconds)

Beacon Interval : 500 millisecond(s) *(100 - 500)

Airtime Fairness : Disable Fair Access Preferred Access

Packet Delay Threshold : 0 millisecond(s) *(100 - 5000, 0:Disable)

Idle Timeout : 300 second(s) *(15 - 999)

Band Steering : Disable Enable
 Aggressive

Interference Detection :

Adjacent Channel

Utilization Threshold 60 % *(10 - 99, 0:Disable)

Latency 10 second(s) *(10 - 999)

Co-Channel

Utilization Threshold 60 % *(10 - 99, 0:Disable)

Invalid Packet Rate 90 % *(10 - 99)

Latency 10 second(s) *(10 - 999)

WME Configuration :

Transmission Rate Threshold : 0 kbps *(0:Disable)

Wireless General Settings Page

- Click on the **Wireless** icon on the main menu, and then select the **General** tab.
- Determine the **Band**, **Protocol** and **Channel** settings:
Select your preferred **Band**, **Protocol** and **Channel** for you wireless connection. For example, select **2.4GHz** for the band, **802.11g+802.11n** for the protocol and **6** for the channel.

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

Home > Wireless > VAP Configuration

VAP Configuration

Profile Name : RF Card A : VAP-1

VAP : Disable Enable

Profile Name : VAP-1

ESSID : 4ipnetAP-A1

VLAN ID : Disable Enable
VLAN ID : *(1 - 4094)

CAPWAP Tunnel Interface : Disable

VAP Configuration Page (VAP-1 shown)

- 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 Hotspot 2.0

Home > Wireless > VAP Overview

VAP Overview

RF Card A

VAP No.	ESSID	State	Security Type	MAC ACL	Advanced Settings
1	4ipnetAP-A1	Enabled	Open	Disabled	Edit
2	4ipnetAP-A2	Disabled	Open	Disabled	Edit
3	4ipnetAP-A3	Disabled	Open	Disabled	Edit
4	4ipnetAP-A4	Disabled	Open	Disabled	Edit
5	4ipnetAP-A5	Disabled	Open	Disabled	Edit
6	4ipnetAP-A6	Disabled	Open	Disabled	Edit
7	4ipnetAP-A7	Disabled	Open	Disabled	Edit
8	4ipnetAP-A8	Disabled	Open	Disabled	Edit
9	4ipnetAP-A9	Disabled	Open	Disabled	Edit

Virtual AP Overview Page

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

Home > Wireless > Repeater Settings

Repeater Settings

Repeater Type : WDS

WDS Profile : RF Card A : WDS Link 1

WDS : Enable

WDS Link Address : 0A:1F:D4:07:60:93 *Please use it as the peer's Remote AP MAC Address

Remote AP MAC Address :

Security Type : None

CAPWAP Tunnel Interface :

To extend the wireless coverage, EAP738 supports WDS links on each RF card 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 **Remote AP MAC Address** (peer AP) and then Click **SAVE**.

If you are using another EAP738 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 APPLY.”**

Congratulations!

Now, 4ipnet EAP738 is installed and configured successfully.



After EAP738'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.***

P/N: V34320180122