Quick Installation Guide

ECW5211-L

Enterprise Access Point

Copyright Notice

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, Edgecore Networks Corporation declares that the radio equipment type ECW5211-L 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℃ (32℉) to 50℃ (122℉)

Model - ECW5211-L

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 28cm 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 秭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

Edgecore ECW5211-L is an enterprise-grade, concurrent dual-band 802.11ac Wave 2 indoor access point, with two 2x2:2 MU-MIMO radios that can each transmit data to multiple clients simultaneously.

This Quick Installation Guide provides instructions on how to install the ECW5211-L and to get the network up and running with basic configurations.

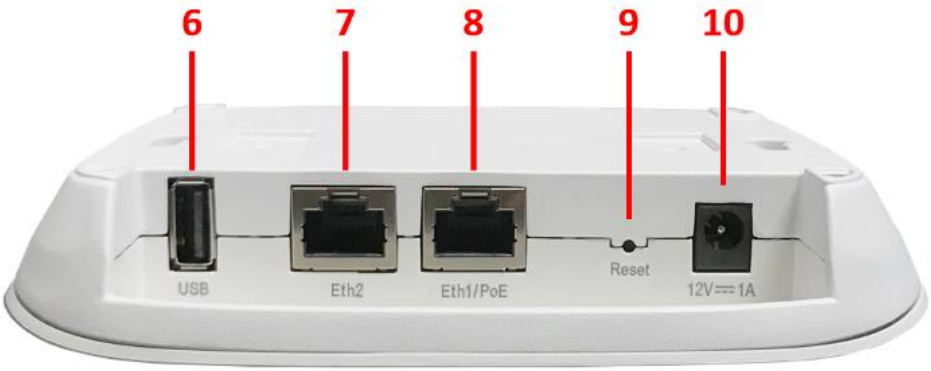
Package Contents

1. ECW5211-L x 1
2. Quick Installation Guide x 1
3. Cell Mounting Kit x 2
4. Wall Mount Screw Set x 1
5. Cushion x 4
6. Power Adapter (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.

Hardware Overview

ECW5211-L Front View



ECW5211-L Side View

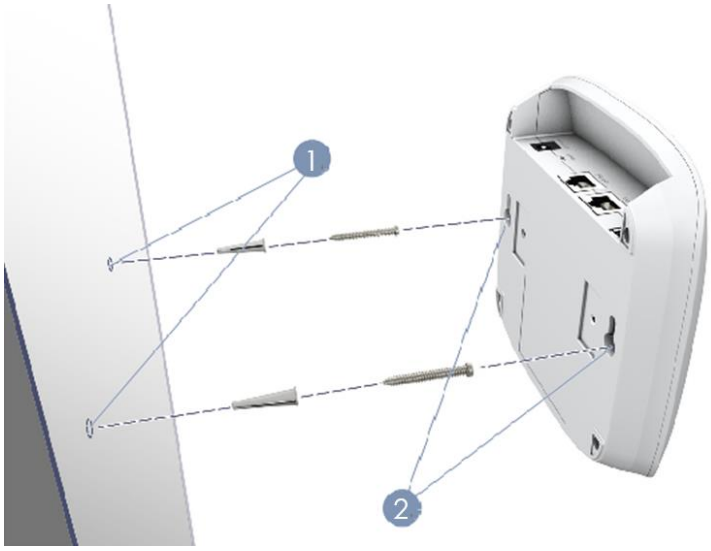
No.	Item Name	Description
1	⏻ LED	Power / Status LED Indicator: (a) Steady green light indicates a proper connection to a power source and normal operation. (b) The LED Indicator will start blinking when the Reset button is pressed: (b1) if pressed and hold for less than 5 seconds - the LED will blink slowly, indicating that the AP is restarting. (b2) if pressed and hold for more than 5 seconds - the LED will blink slowly for the first 5 seconds and then blink quickly, indicating the AP is resetting to factory default settings and restarting.
2	2G-WiFi LED	2.4 GHz Wi-Fi LED Indicator: blinking indicates that the AP is sending or receiving traffic on 2.4 GHz band.
3	5G-WiFi LED	5 GHz Wi-Fi LED Indicator: blinking indicates that the AP is sending or receiving traffic on 5 GHz band.
4	Eth1/PoE LED	Eth1/PoE port status LED Indicator: turned on when traffic is passing through Eth1/PoE port.
5	Eth2 LED	Eth2 port status LED Indicator: turned on when traffic is passing through Eth2 port.
6	USB Port	USB interface reserved for future use.
7	Eth2 Port	RJ-45 port for Ethernet connection with downlink devices.
8	Eth1/PoE Port	RJ-45 port for uplink Ethernet connection and for PoE in. It is the default port that can pass all VLAN traffic to an uplink device (e.g. VLAN switch).
9	Reset Button	Press and release the button quickly (for less than 5 seconds) to restart the AP; to reset the AP to factory default settings, press & hold it for more than 5 seconds.
10	12V ⎓ 1 A	The power socket to attach the power adapter.

Hardware Installation

Please follow the steps below to install the hardware of ECW5211-L:

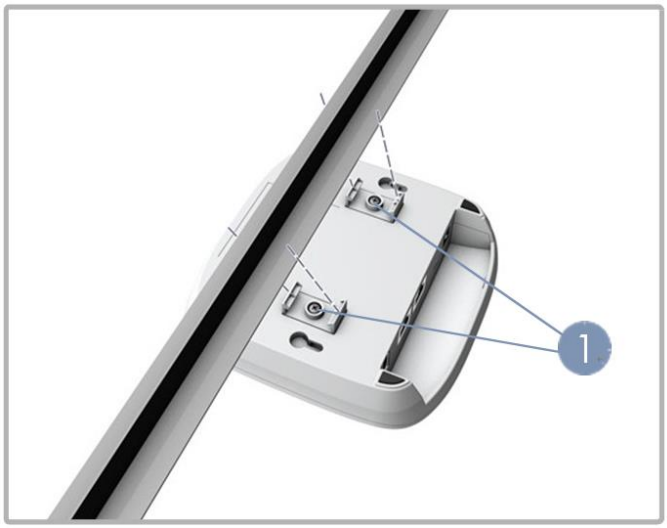
1. Mount ECW5211-L.

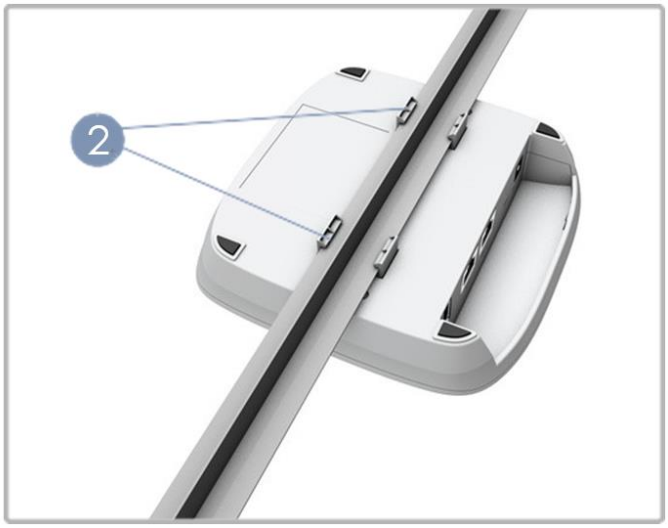
(a) Mounting on a Wall



1. Set two screws in the wall 128 mm (5.0 in.) apart.
2. Slide ECW5211-L'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 ECW5211-L.
2. Push ECW5211-L onto the ceiling T-bar until it clicks securely in place.

2. Connect ECW5211-L to the wired network.

Connect the Eth1/PoE port of the AP to a switch in the existing wired LAN network with an Ethernet cable.

3. Power on ECW5211-L.

There are two ways to supply power over to ECW5211-L.

a) Connect an IEEE 802.3af-compliant PSE device (e.g. a PoE switch) to the Eth1/PoE port of the AP with an Ethernet cable.

b) Connect the 12V/1A power adapter to the DC power jack.

- *Using a different power adapter may damage this system.*
- *To verify the wired connection between ECW5211-L and you switch / router, please also check the LED indicator of the respective network devices.*

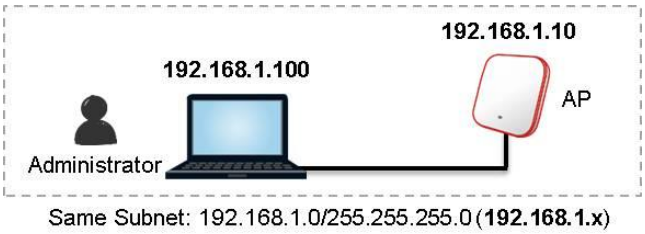
Initial Configuration

To set up the ECW5211-L for the first time, administrators need to perform initial configuration to assign an IP address and other information necessary for the AP to communicate with the local gateways.

Step 1. Login to the AP

The AP has a web-based interface for configuration and management. To access the Web Management Interface (WMI) for the first time, follow the steps below.

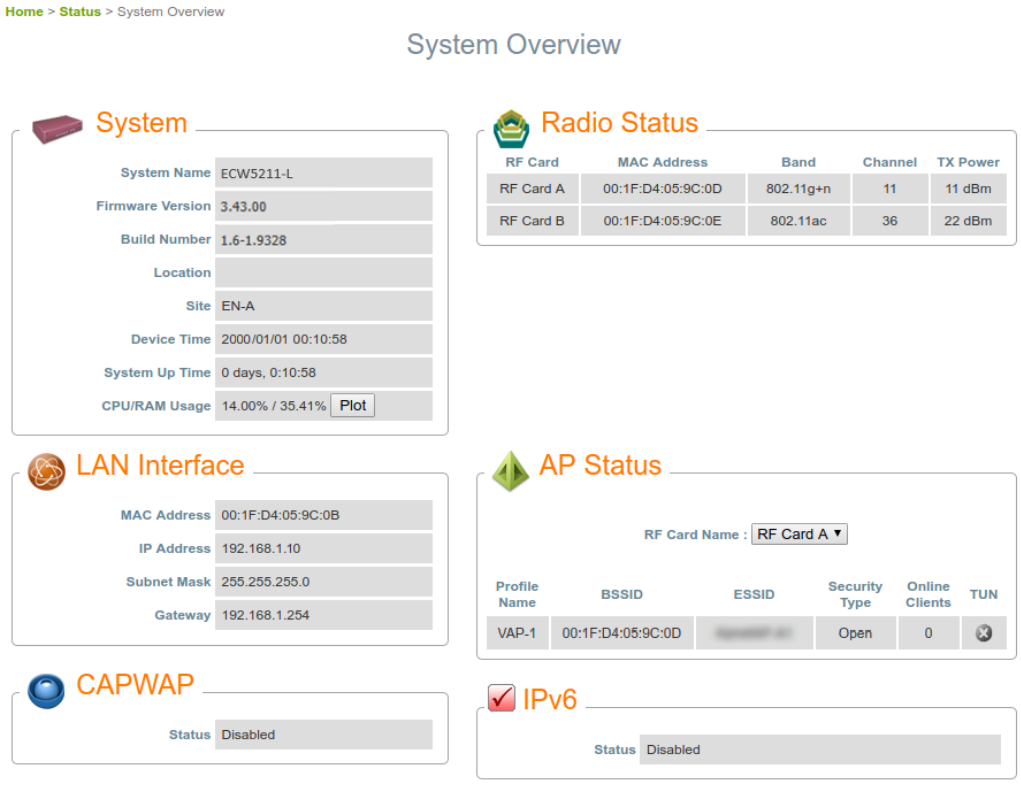
1. Ensure that your administrative PC is manually set to a static IP Address in the same subnet as the AP's (192.168.1.0/255.255.255.0). Connect the PC directly to the Eth2 port of the AP via an Ethernet cable.



2. Launch a web browser and enter the default IP Address of the AP (192.168.1.10) in the address field.

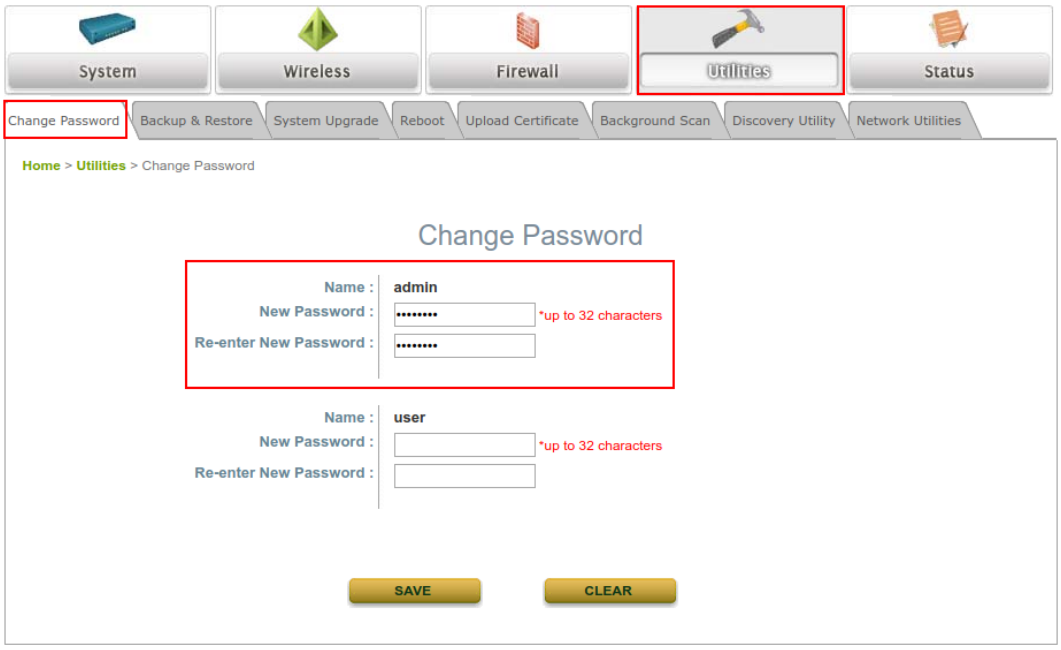
Log in using default Username (**admin**) and Password (**admin**) on the Administrator Login Page:

3. System Overview page of the WMI will appear after login.



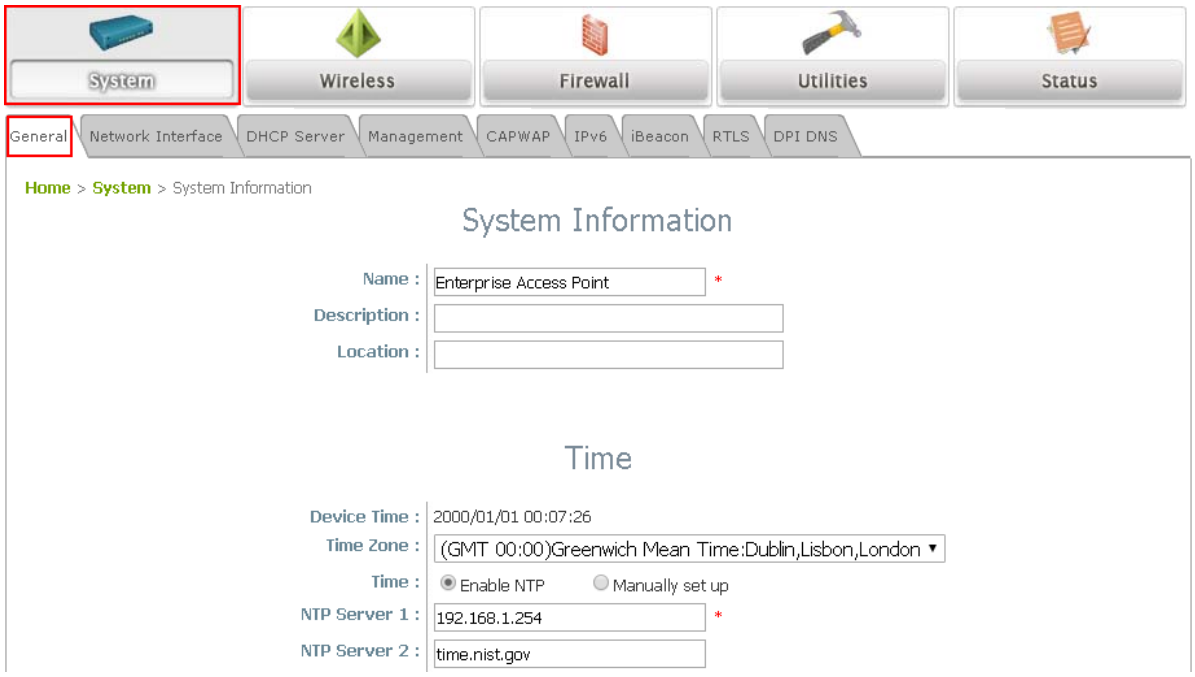
Step 2. Change the administrator's password

- Click on the Utilities icon on the main menu, and select the Change Password tab.
- Enter the New Password and retype it in the Re-enter New Password field.



Step 3. Configure General Information

Go to System General page (Home > System > General) to configure general information for the AP.

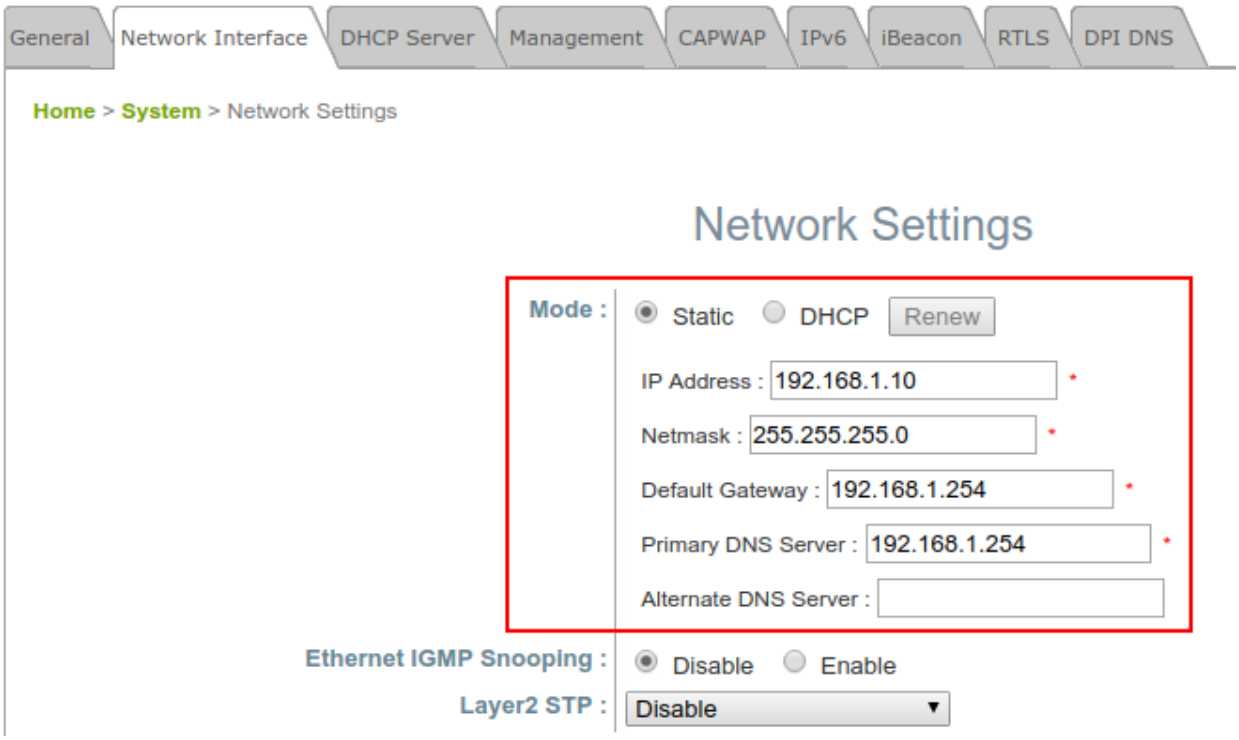


Connect the AP to the Network

The following instructions are the basic steps to establish the wireless coverage of your network. The AP will connect to the wired network through its Eth2 port and enable wireless access to your network.

Step 1. Change IP Settings of the AP

Go to **Network Interface** page (Home > System > Network Interface) to perform configuration of the network settings.

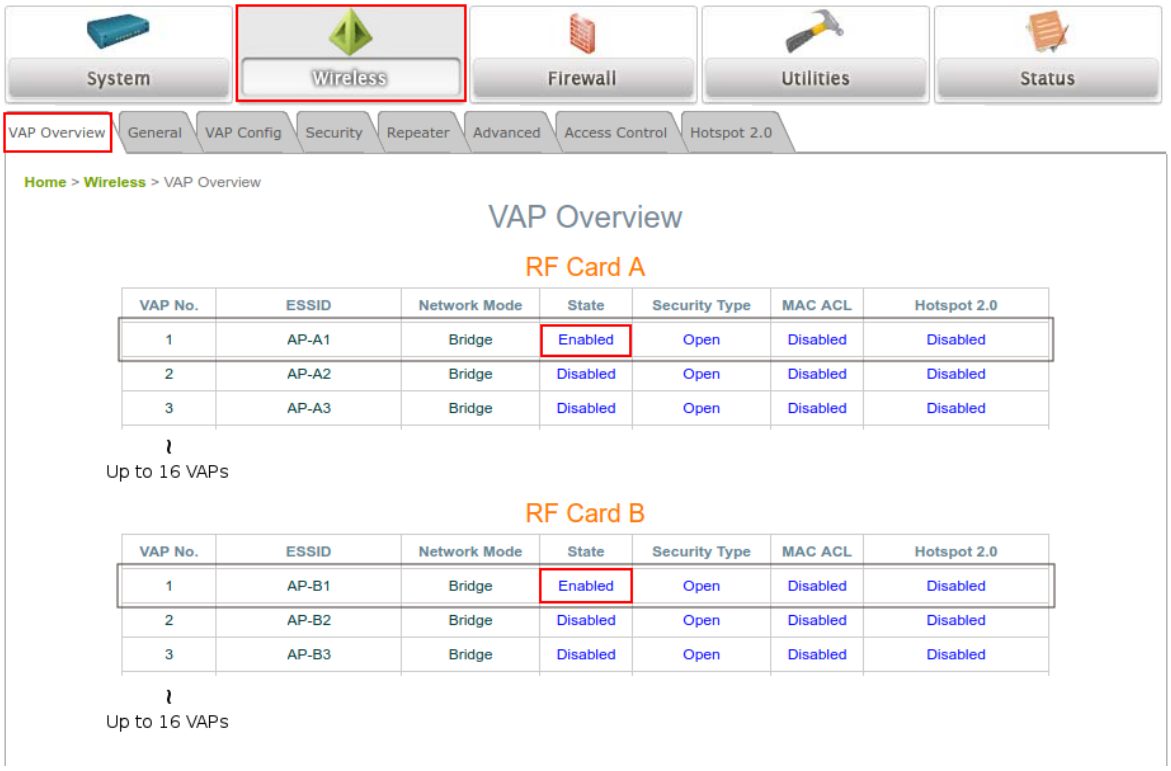


Mode:

- **Static**: Manually fill in appropriate values for the network interface (IP Address, Netmask, Default Gateway, and Primary DNS Server) – in the example above, the AP is still using the default IP address 192.168.1.10.
- DHCP: If the deployment requires that the AP get a dynamic IP Address from the LAN, set Mode to DHCP; Click SAVE to submit the changes.

Step 2. Activate the first SSID for Wi-Fi access

2.1) By default, one Service Set Identifier (SSID) is enabled with the Radio A (RF Card A) and one SSID is enabled with the Radio B (RF Card B). As shown on the VAP Overview page (Home > Wireless > VAP Overview), Virtual Access Point No.1 (VAP-1) profile represents the first SSID available.



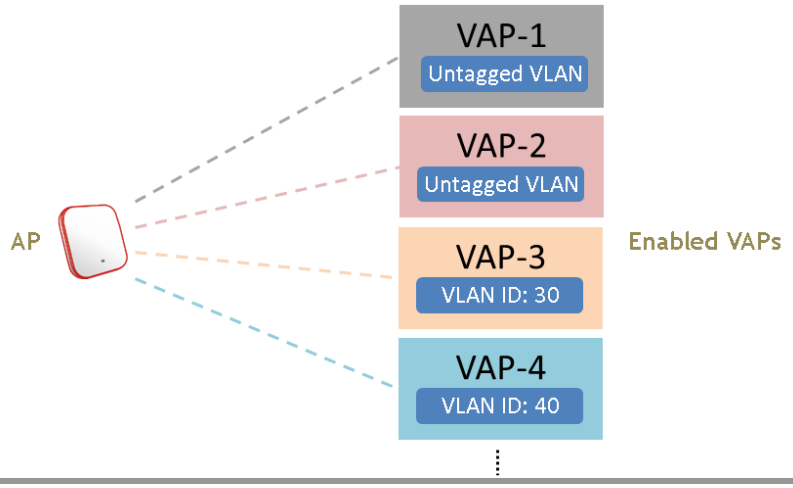
VAP No.	ESSID	Network Mode	State	Security Type	MAC ACL	Hotspot 2.0
1	AP-A1	Bridge	Enabled	Open	Disabled	Disabled
2	AP-A2	Bridge	Disabled	Open	Disabled	Disabled
3	AP-A3	Bridge	Disabled	Open	Disabled	Disabled

VAP No.	ESSID	Network Mode	State	Security Type	MAC ACL	Hotspot 2.0
1	AP-B1	Bridge	Enabled	Open	Disabled	Disabled
2	AP-B2	Bridge	Disabled	Open	Disabled	Disabled
3	AP-B3	Bridge	Disabled	Open	Disabled	Disabled

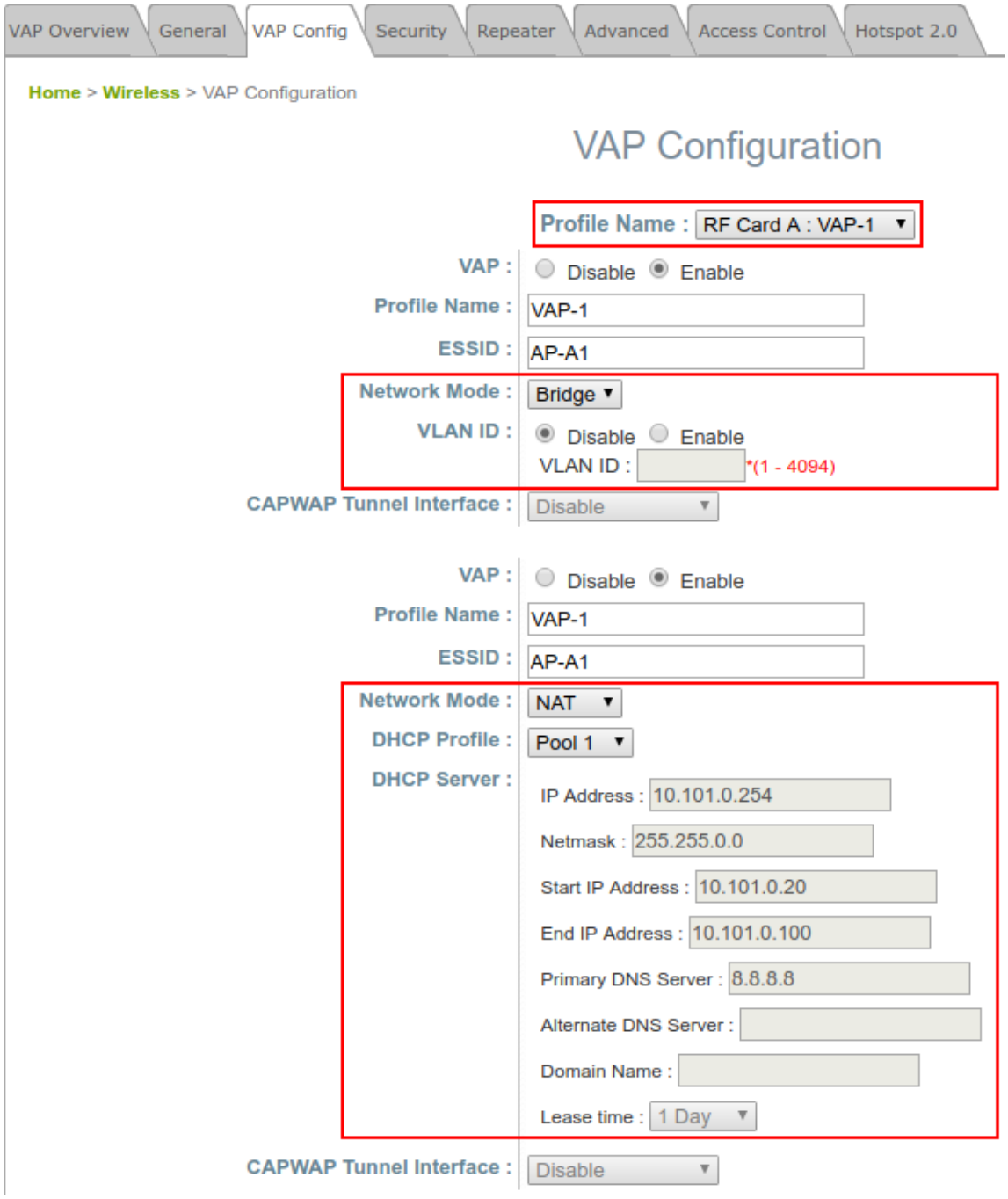
Note:

Virtual Access Point (VAP):

- VAP feature allows a single physical AP device (with a unique, single BSSID) to present itself as multiple discrete APs, as shown in the example diagram below;
- Each VAP can be independently enabled or disabled, with its own settings (e.g. SSID, Network Mode, VLAN ID, Security, etc.), such that the AP is able to support different clients through multiple SSIDs.



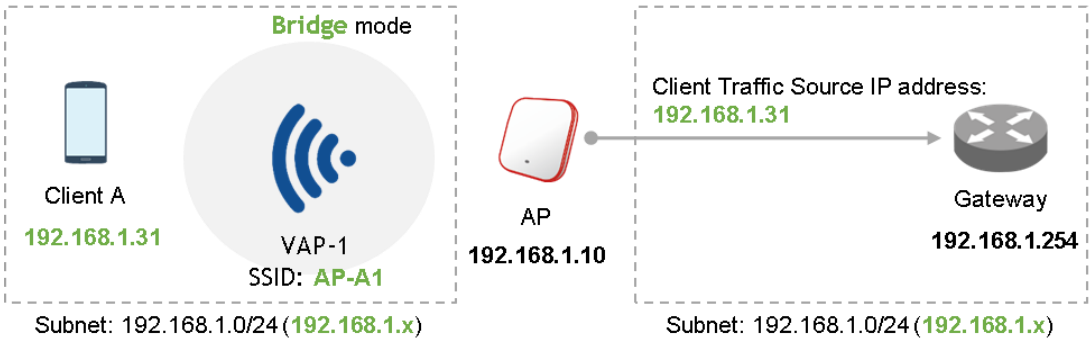
2.2) Click on the State (Enabled) of VAP-1 to configure the profile. This will bring up the following VAP Configuration page.



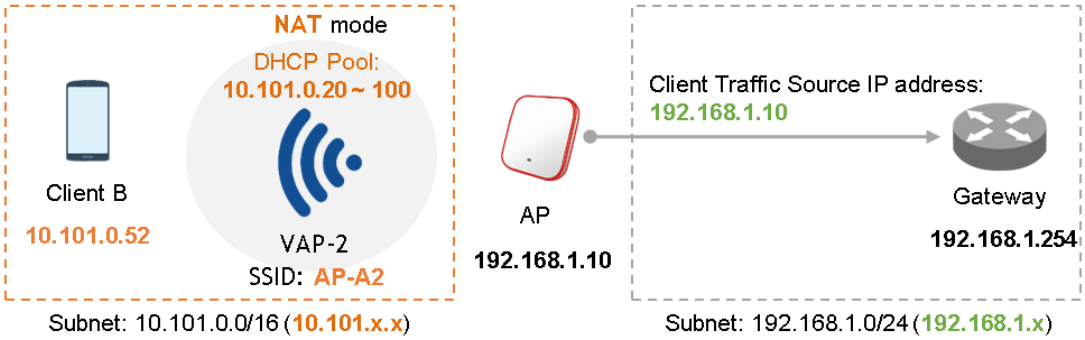
2.3) Select the specific VAP profile (in this case, “RF Card A : VAP-1”). The basic settings of the VAP are collected in the profile as follows:

- **VAP**: Disable or Enable this VAP.
- **Profile Name**: Name of the VAP profile for identity / management purposes.
- **ESSID**: Extended Service Set Identifier (ESSID) serves as an identifier for clients to associate with the specific VAP.

- **Network Mode**:
  - **Bridge** mode – the VAP operates transparently (i.e. no NAT, no DHCP) such that client devices will be assigned a dynamic IP address from a DHCP server on the LAN side. The source IP address of client traffic seen by the uplink gateway/switch will remain the original IP address of the client (in this case, 192.168.1.31, as shown in the diagram below).



  - **NAT** mode – the VAP operates like a Network Address Translation (NAT) device with a built-in DHCP server on this SSID such that client devices will be assigned a dynamic IP address from the configured DHCP pool on this SSID. After NAT conversion, the source IP address of client traffic seen by the uplink gateway/switch will be the IP address of the AP (in this case, 192.168.1.10, as shown in the diagram below).



- **VLAN ID**: Per-SSID VLAN tagging function – when enabled, clients' traffic which enters the AP through this SSID will be tagged with the configured VLAN ID.
- **DHCP Profile**: Built-in DHCP Server profile; IP settings of DHCP Server are under Home > System > DHCP Server.
- **CAPWAP Tunnel Interface**: Three states indicating the connectivity between AP and Controller, when AP is managed by Controller –
  - **Disable** (No Tunnel): the AP is operating with no CAPWAP Tunnel connection to the Controller
  - **Split Tunnel**: the AP passes only "control" traffic to the Controller via the CAPWAP Tunnel; i.e. "data" traffic will go out locally without passing through the Tunnel
  - **Complete Tunnel**: the AP passes both "control" and "data" traffic to the Controller via the CAPWAP Tunnel

Note:

- VLAN ID is supported only when the VAP is in Bridge mode.
- DHCP Profile and DHCP Server are activated only when the VAP is set to NAT mode.
- If the VAP is in NAT mode, the CAPWAP Tunnel Interface will only work in two states: **Disable** (No Tunnel) or **Split Tunnel**.

Step 3. Configure General Wireless Settings

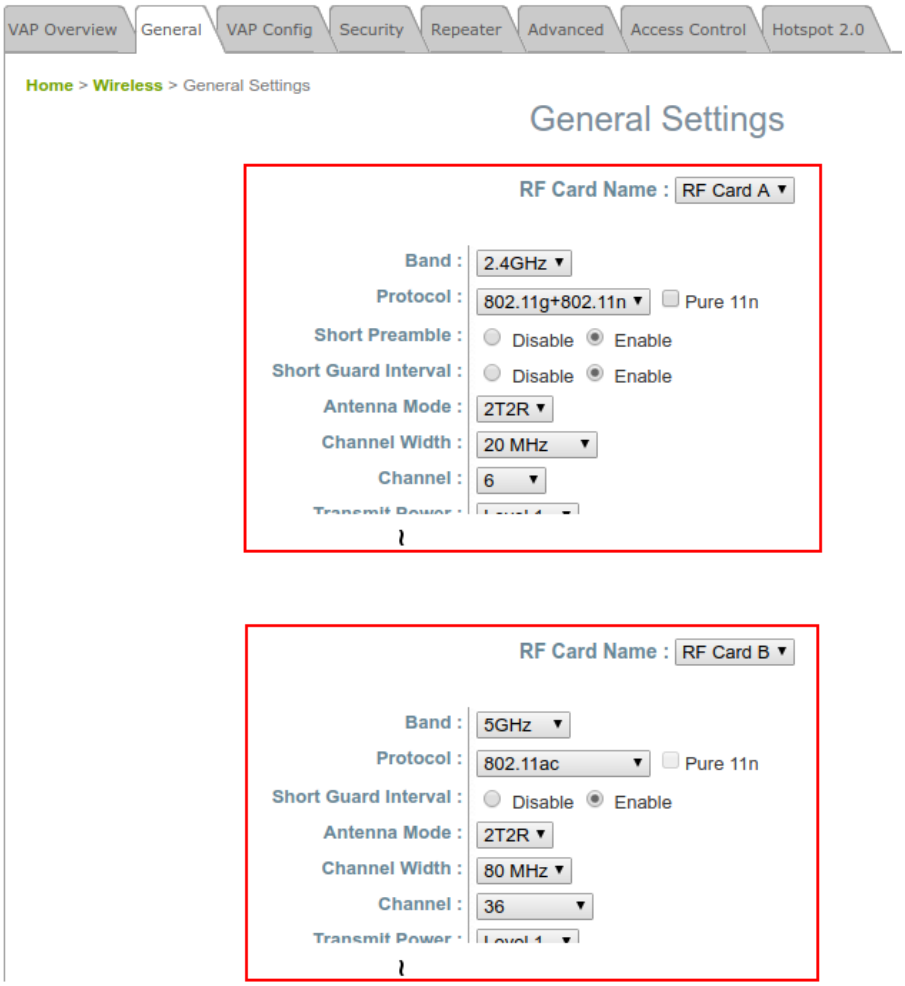
Under Home > Wireless > General, there are global settings for RF Card A and B. RF Card A is operating in 2.4 GHz band and RF Card B is operating in 5 GHz band, both of which are enabled by default.

For initial configuration, you might want to change the default basic settings shown below:

RF Card A – 2.4 GHZ, 802.11g+802.11n, Antenna Mode 2T2R, Channel Width 40 MHz, Channel 6

RF Card B – 5 GHz, 802.11ac, Antenna Mode 2T2R, Channel Width 80 MHz, Channel 36

You can make changes to other settings at a later time.



Well done! After a system restart, the AP should be able to operate with these settings.

Note:

SSID, ESSID, and BSSID:

- Service Set Identifier (**SSID**) is a key identifying the Name of a Wireless LAN.
- Extended Service Set Identifier (**ESSID**) = SSID; multiple physical APs can be configured to use the same SSID such that roaming across multiple physical APs is supported.
- Basic Service Set Identifier (**BSSID**) = MAC address of AP; unique BSSID will be transmitted (in the Beacon management frame) when multiple physical APs broadcast the same ESSID.

After ECW5211-L'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: V34320180420