Edge-corE

Quick Installation Guide

ECWO5210-L

Outdoor Access Point

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 20cm between the radiator & 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: ECWO5210-L

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

• Radio: EN 50392

• 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 Edgecore Networks Corporation. The use of software or firmware not provided and supported by Edgecore Networks Corporation. 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.

Preface

The **ECWO5210-L** is a rugged multi-mode, high-end dual radio 802.11 b/g/n + ac MIMO Access Point (AP), specifically designed for building municipal or campus wide wireless networks in harsh outdoor environments. There are two system modes that can be used for dual purposes. It can be deployed as a traditional multi-wireless Access Point (AP) or a Relay. The ECWO5210-L access points make wireless communication fast, secure and easy.

The die-cast Aluminum sealed ECWO5210-L is rust-free and IP68 compliant. It is high wind load resilient and is designed to operate in a wide range of temperature. Flexible deployment with a variety of antennas allows ECWO5210-L to easily serve clients located in different directions as well as for coverage extension.

This Quick Installation Guide (including FAQ Instruction Guide) provides instructions for getting started with the ECWO5210-L.

Package Contents

1. Edgecore ECWO5210-L x 1
2. Quick Installation Guide (QIG) x 1
3. Mounting Kit x 1
4. Ground Cable x 1
5. Waterproof M12 Connector Pack x 1
6. Waterproof RJ45 Connector Pack 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.

System Overview

ECWO5210-L

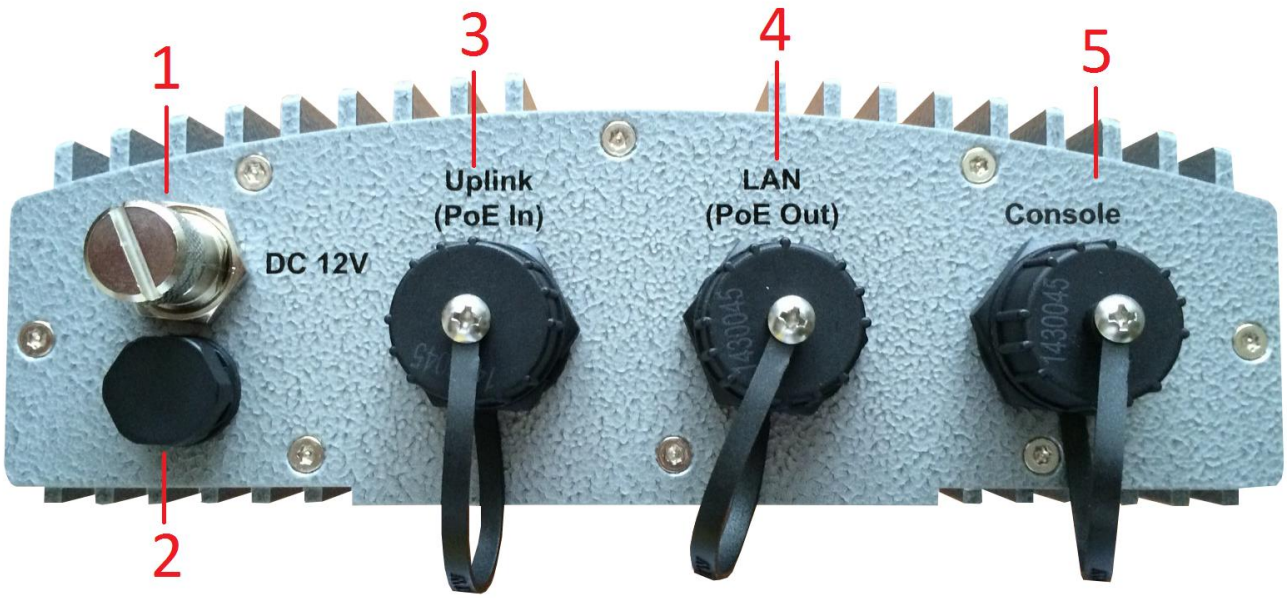
Top

N-type Connector x 4	For connecting to an antenna (RF Card A x 2, RF Card B x 2) Connector marked –1 is for the primary antenna when the AP is not in 802.11n or 802.11ac mode. Utilize all connectors for optimized MIMO performance.

Back

Ground Connector	For connecting the ground wire

Bottom



1	**M12 DC Connector**	DC input (12V) is supported on ECWO5210-L
2	**Ventilation Valve**	Due to extreme weather conditions, water vapor in the ECWO5210-L may condense. The valve allows ventilation to prevent moisture buildup within the ECWO5210-L.
3	**Uplink (PoE Connector)**	For connecting to the Power Sourcing Equipment (PSE)
4	**Ethernet LAN**	Attach Ethernet cables here for connecting to the wired local network
5	**Console**	The system can be configured via a serial console port. The administrator can use a terminal emulation program such as Microsoft's Hyper Terminal for troubleshooting purposes.

Hardware Installation

The following are the basic installation steps which can be used for testing and configuring the ECWO5210-L.

Installation Steps:

Step 1. Connect an antenna to the connector.

Step 2. Connect the Ethernet Port of ECWO5210-L to the POWER & DATA OUT Port of the PSE.

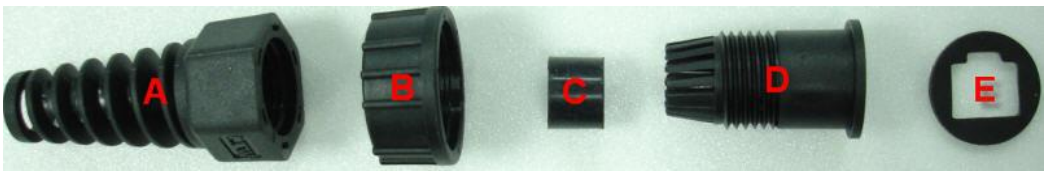
Step 3. Connect one end of an Ethernet cable to the Data Port of PSE and the other end to the computer.

Step 4. Power on the PSE in order to supply power to the ECWO5210-L.

Installing the Waterproof Connection Pack:

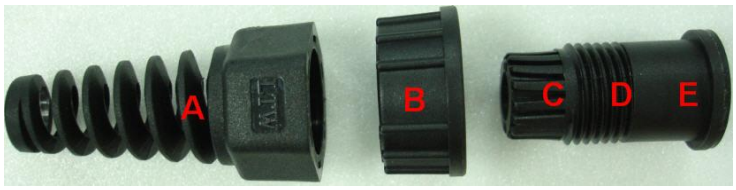
A connector pack as shown in the figure below is included with the system.

Parts Included: 5 Parts – Part-A ~ Part-E

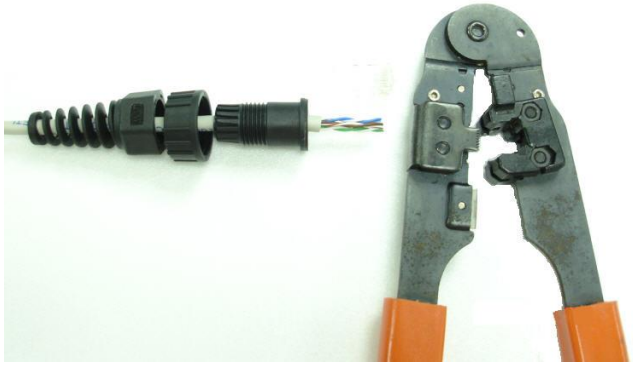


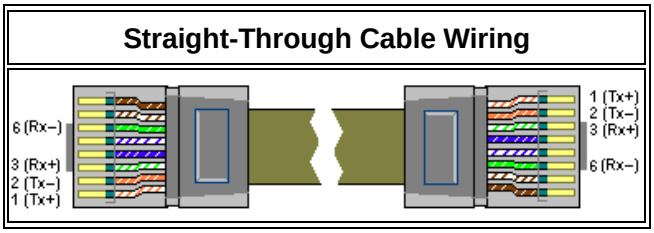
Step 1. Take the white sticker off Part E and attach it to Part-D.

Step 2. Plug Part-C into Part-D. There will be three main parts as shown below.



Step 3. Insert the cable through the main parts and install a RJ-45 connector using straight-through method (both ends are in the same wiring order: 1 (Tx+), 2 (Tx-), 3 (Rx+), 6 (Rx-)).





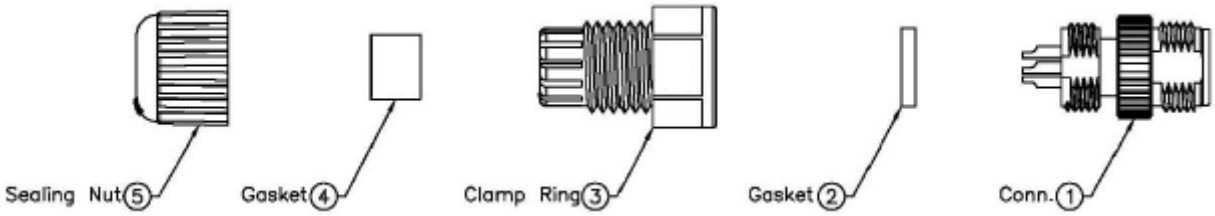
Example after the RJ-45 connector is installed,

Step 4. Plug the RJ-45 Connector into the system and make sure the locking ring is locked in well.

Step 5. Coil waterproof tape to secure the parts of the Waterproof Connector Pack.

Installing the Waterproof Connection Pack (Optional):

The M12 Waterproof Connector Pack is used for DC power supply, and it consists of 5 parts:



Step 1. Pass power cable through the Sealing Nut, Gaskets, and Clamp Ring (items 2-5)

Step 2. Solder power pins with reference to the pin definition below

Pin Assignments
Front View

Pin Number	Pin Definition
1	V+
3	V–
4	NC

Step 3. Seal all connectors and fasten sealing nuts

Now, the Hardware Installation is complete.

Getting Started

Edgecore ECWO5210-L supports web-based configuration. Upon the completion of hardware installation, Access Point can be configured through a PC by using its web browser such as Internet Explorer version 9.0 and above.

The default values of LAN IP address and subnet mask of ECWO5210-L are:

IP Address	192.168.1.10
Subnet Mask	255.255.255.0

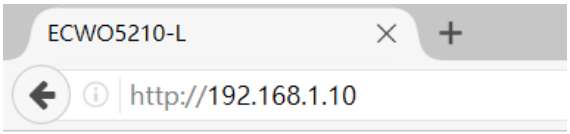
Steps:

1. To access the web management interface, connect the administrator PC to the LAN port of ECWO5210-L via an Ethernet cable. Then, set a static IP address on the same subnet mask as ECWO5210-L 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 ECWO5210-L (**http://192.168.1.10**) at the address field, and then press ***Enter***.

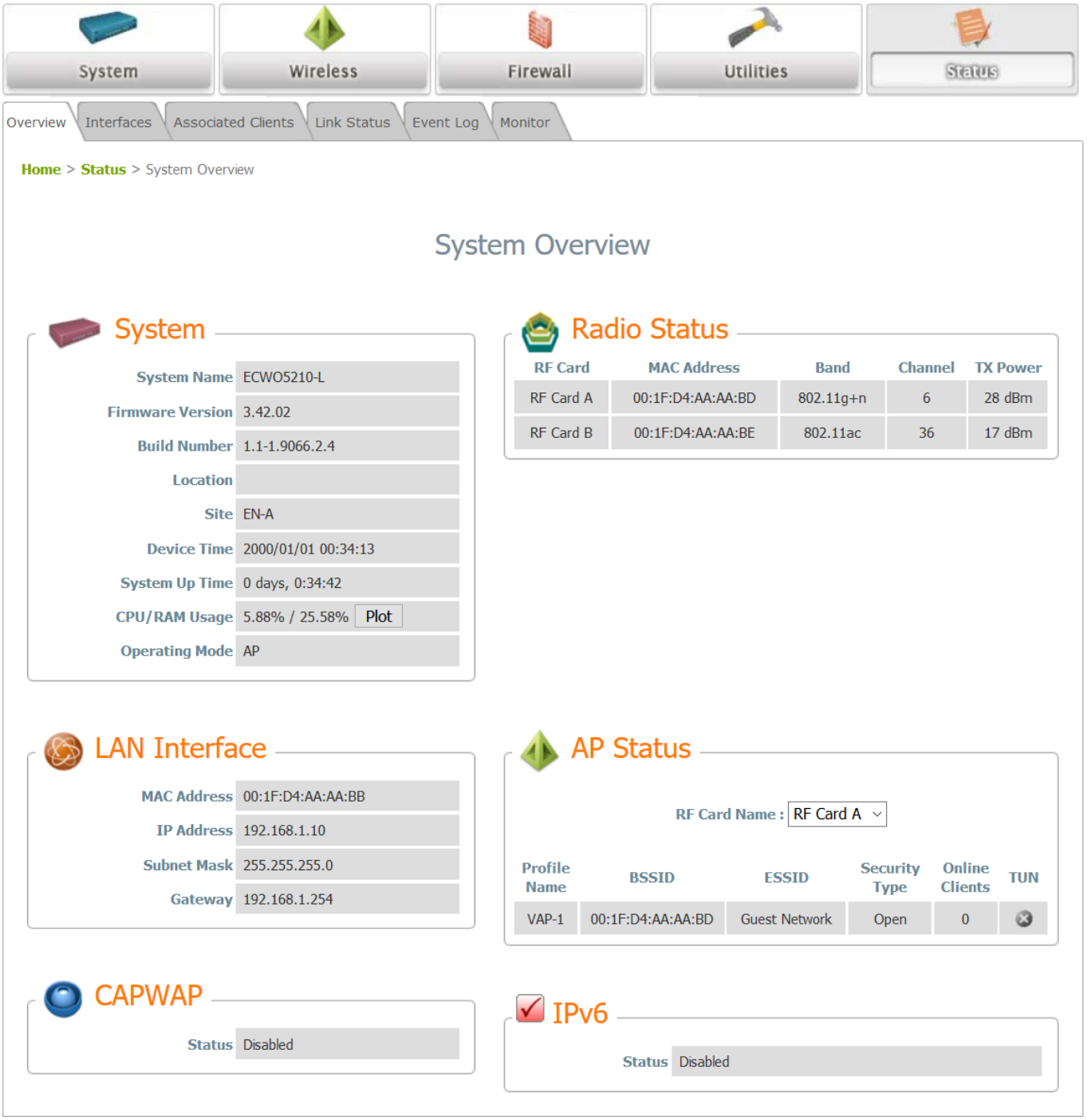


Example of entering ECWO5210-L's default IP Address via a web browser

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

Administrator Login Page

4. After a successful login into ECWO5210-L's Web user interface (Web UI), a **System Overview** page of web management interface will appear, as depicted below.

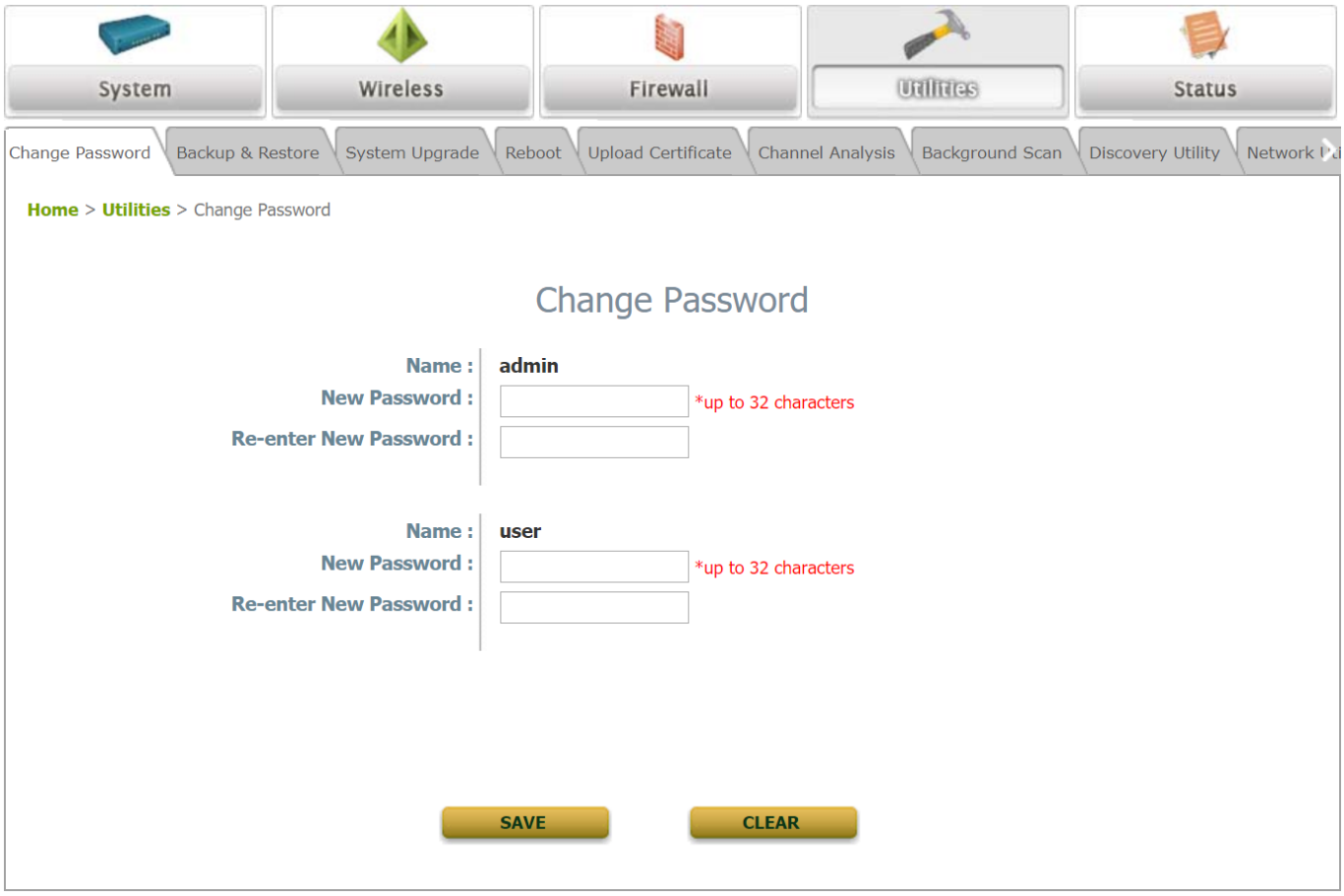


The Web Management Interface - System Overview Page

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.

Common Settings

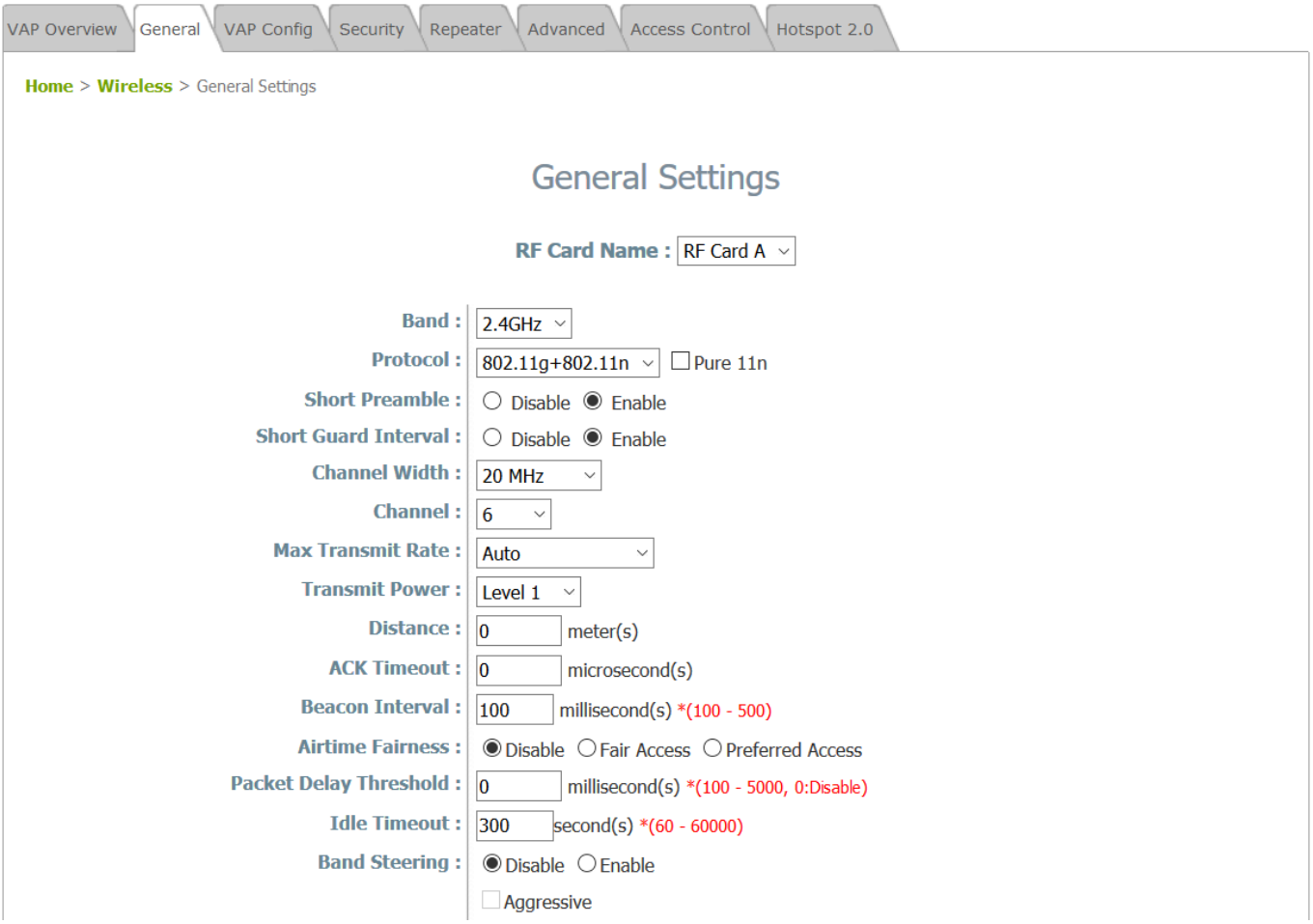
Step 1. Change Administrator's Password



Change Password Page

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



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:

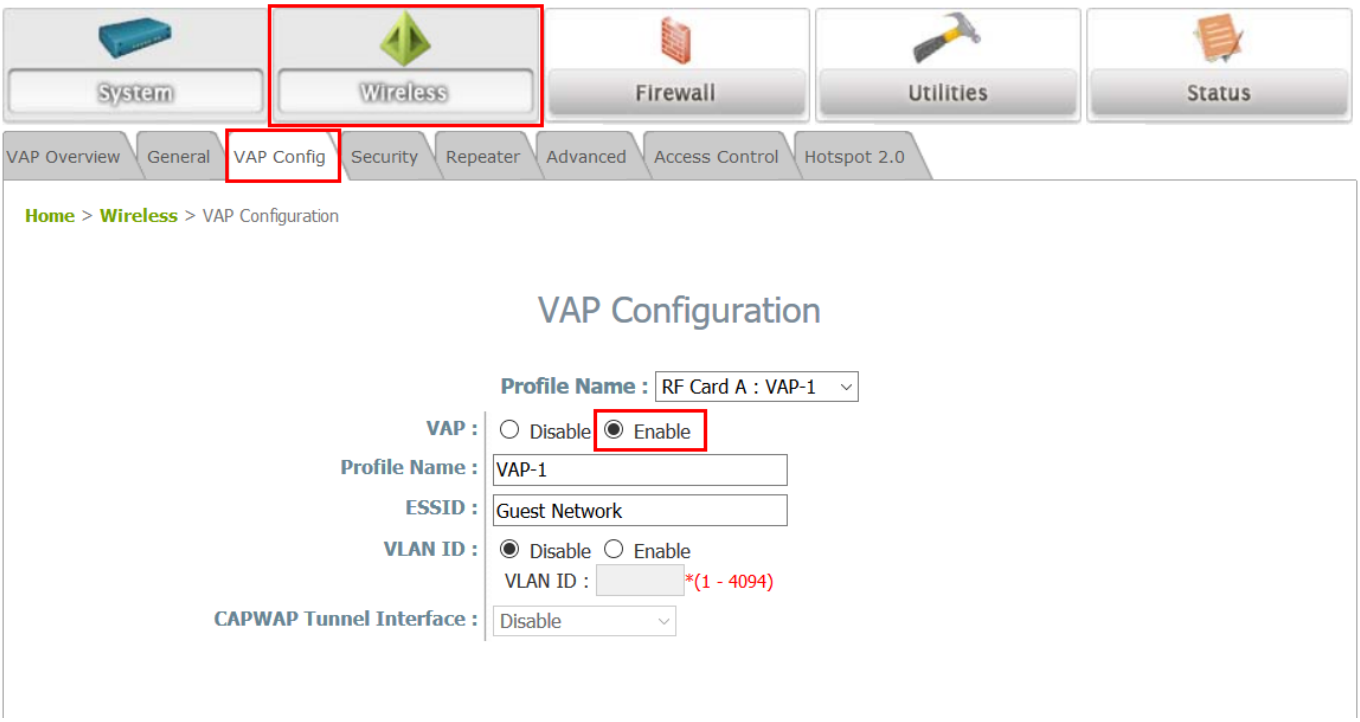
  Select your preferred **Band**, **Protocol** and **Channel** for you wireless connection. For example, select **2.4GHz** for the band, **802.11g+802.11**n for the protocol and **6** for the channel.

Note: Admin should be aware of Dynamic Frequency Selection (DFS) mandated on some channels of the 5GHz band. When an ECWO5210-L detects interference, this mechanism will limit the ability to broadcast the SSID on one of the channels listed below:

1) Country Code: 841 (US)
DFS Channels: 52 56 60 64 100 104 108 112 116 132 136 140 149 153 157 161 165

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

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



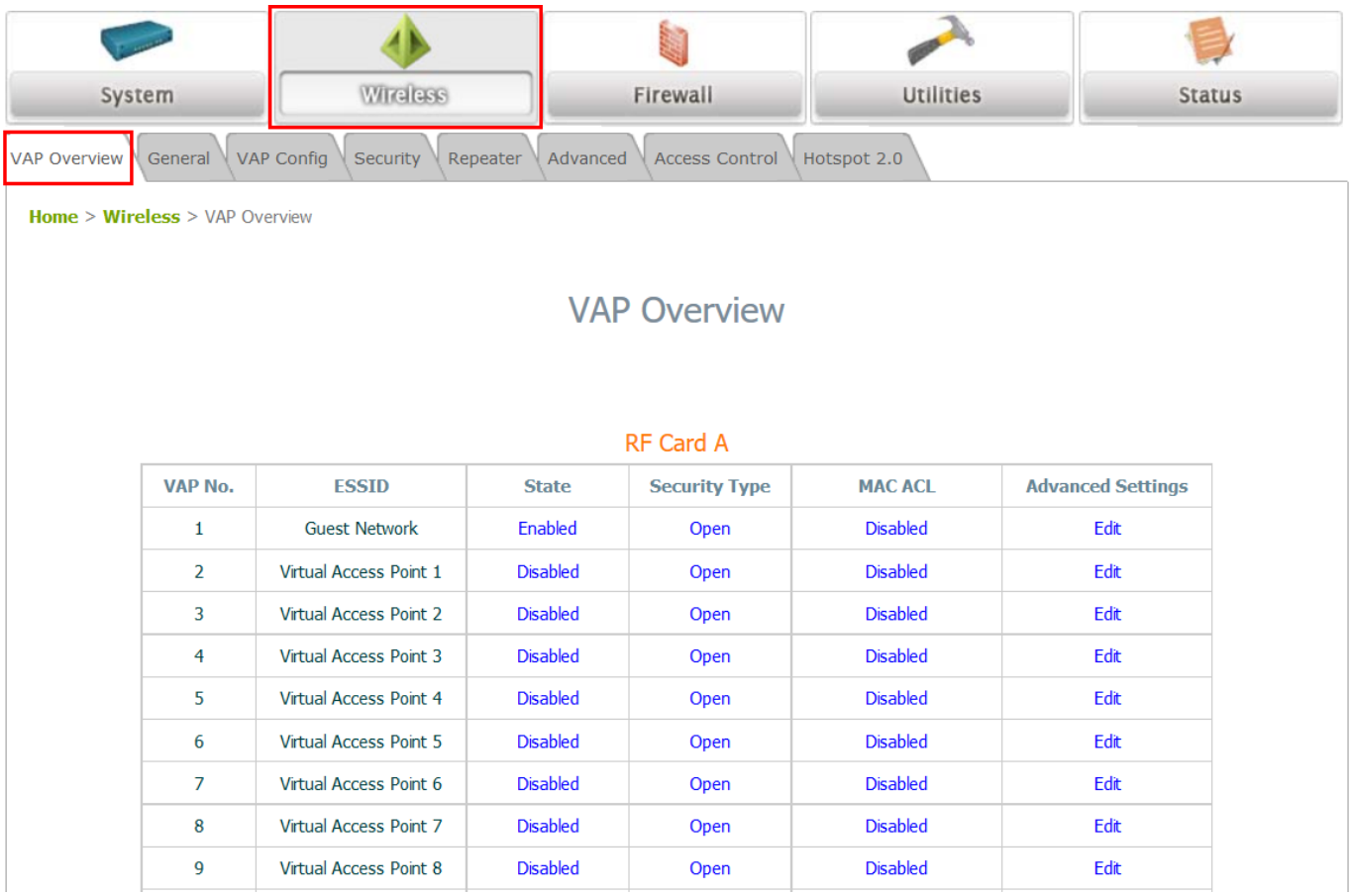
VAP Configuration Page (VAP-1 shown)

- ECWO5210-L supports up to 16 virtual APs (VAPs) per RF card.
- Configure VAP profile settings：

  (a) Select the **VAP Config** 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：

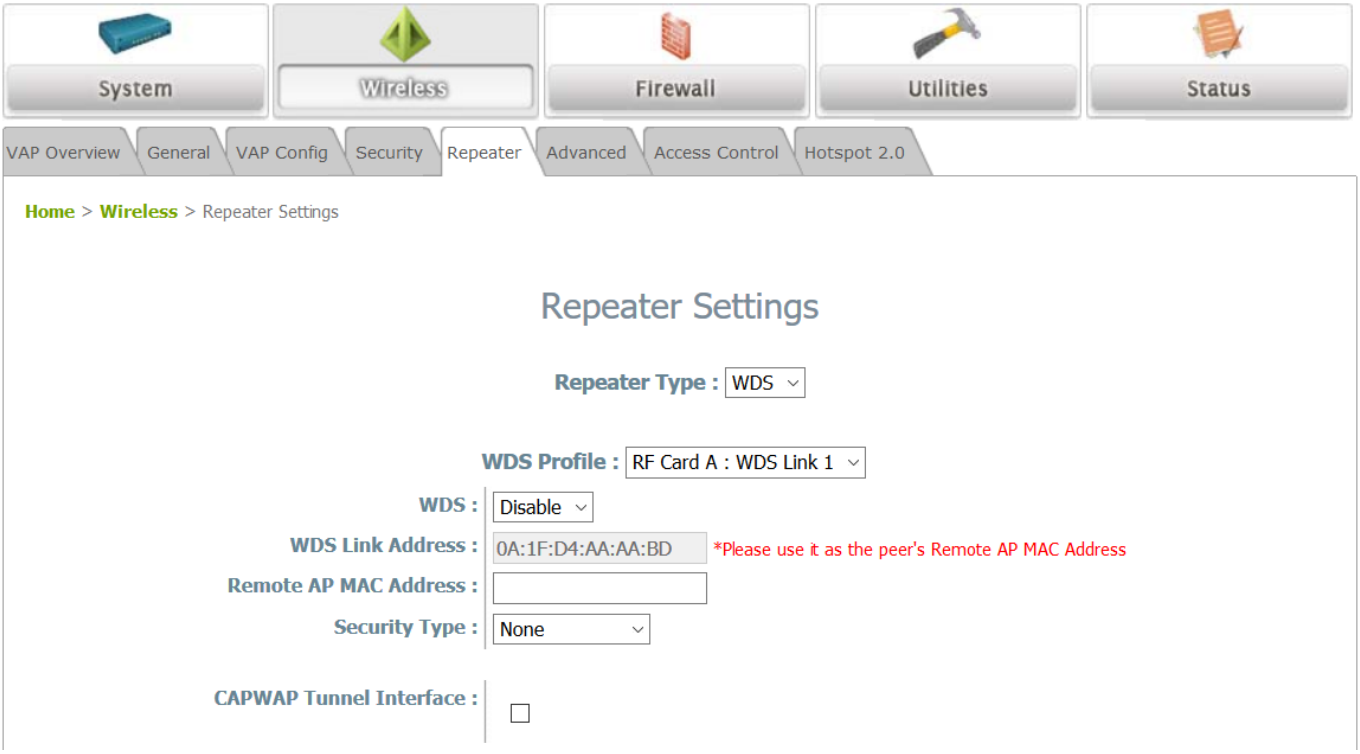
  After finishing VAP configuration, the status of enabled Virtual APs shall be reflected on the VAP Overview page.



VAP No.	ESSID	State	Security Type	MAC ACL	Advanced Settings
1	Guest Network	Enabled	Open	Disabled	Edit
2	Virtual Access Point 1	Disabled	Open	Disabled	Edit
3	Virtual Access Point 2	Disabled	Open	Disabled	Edit
4	Virtual Access Point 3	Disabled	Open	Disabled	Edit
5	Virtual Access Point 4	Disabled	Open	Disabled	Edit
6	Virtual Access Point 5	Disabled	Open	Disabled	Edit
7	Virtual Access Point 6	Disabled	Open	Disabled	Edit
8	Virtual Access Point 7	Disabled	Open	Disabled	Edit
9	Virtual Access Point 8	Disabled	Open	Disabled	Edit

Virtual AP Overview Page

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



To extend the wireless coverage, ECWO5210-L supports up to 8 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** tab.
- Choose **WDS** as the **Repeater Type**.
- Choose the desired WDS profile:
  (a) Enable the **WDS**.
  (b) Enter the **Remote AP MAC Address** (peer AP) and then Click **SAVE**.

If you use another ECWO5210-L 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, Edgecore ECWO5210-L is installed and configured successfully.

After ECWO5210-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 the configuration settings.***

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