

Ronto Enterprise Networking Solution

RAP750W-311A User Manual

This manual includes the Controller, Enterprise Access Points and Ethernet Switches installation and configuration. All of the Access Points and Ethernet Switches are managed by Controller.

Supports model list

Type	Description
Enterprise Access Point	RAP630C-311G, RAP630W-311G, RAP630W-211G RAP7110C-341X, RAP750W-311A
Ethernet Switch	RSW226G-1PV, RSW226G-1P, RSW226G-1V RSW226G-1, RSW226G-2PV, RSW210G-2PV, RSW210G-1PV, RSW210G-1V

Type	Description
Enterprise Access Point Controller	RCN205G-1PV

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1. Abstract

Our network status dashboard simplifies the task of managing the entire network. With its user-friendly interface, you can effortlessly monitor and control the status of your network in real-time.

The dashboard presents an intuitive overview of key network metrics, such as availability, performance, and security alerts. You can easily navigate through interactive charts and graphs to gain valuable insights and quickly identify any issues.

With just a few clicks, you can take proactive measures to optimize network performance, minimize downtime, and ensure a seamless experience for your users. Our user-friendly network status dashboard empowers you to handle network management with ease and efficiency.

The **Table** below shows the overview of each page.

Name	Description
Dashboard	Offers comprehensive information, including controller details, Traffic Overview, Client Table, Wi-Fi Quality, and Internet Health, all presented through intuitive charts for easy understanding of the network's current status
Topology	Displays a network topology, where each node is labeled as either a Controller, EAP, or end-user device. Additionally, each node is identified by name and provides relevant information
Connected Devices	lists all connected devices includes EAPs and client-devices and displays detail information about each of them
Statistics	provides statistics of upload, download and services
Wi-Fi Insights	shows a comprehensive list of Wi-Fi access points (APs) around the network
Settings	shows all other setup include Wi-Fi, Network, Internet, Static Route, Firewall, Port Forwarding, and System

2. Installation

2.1 RCN205G-1PV Hardware Installation

RCN205G-1PV Indoor Enterprise Network Controller Quick Setup Guide

This Quick Setup Guide provides step-by-step instructions on how to install and begin using your RCN205G-1PV Indoor Enterprise Network Controller (Controller).

2.1.1 RCN205G-1PV Hardware Specification

Models	RCN205G-1PV
Dimension H x W x D (mm)	55.1x194.5x140.5
Ports	
1GBase-T PoE+ LAN Ports	4
1GBase-T WAN Port	1
Power over Ethernet ports	4 x 802.3at (30W/port)
LCD	
LCD touch panel	1.3"
Power and Cooling	
Max. PoE power budget (Watt)	60
PoE Output	54VDC · 0.55A, Max.30Watt (port 1-4)
Rated Voltage	54V DC
Rated Current	1.2 A
Power options	External Power Adapter 100~240AC input, 54V DC output
Airflow	without fan
Operating Temperature	0°C~40°C / 32°F~104°F
Operating Humidity	10% ~ 95% · No Condensation

2.1.2 Overview

Upon following the steps outlined in this guide, you will be able to access the RCN205G-1PV Ronto Controller, allowing you to manage wired and wireless network.



FIGURE 1: RCN205G-1PV Controller: Front View.

2.1.3 Package Contents

A complete RCN205G-1PV installation package includes all of the following items:

- RCN205G-1PV Controller.
- 54V 1.2A power adapter.
- Service Level Agreement/Limited Warranty Statement (Optional).
- Declaration of Conformity (Optional).
- Regulatory Statement (Optional).
- This Quick Setup Guide (Electrical).

2.1.4 Required Hardware Tools

- Admin PC (computer) with an Ethernet port.
- Cat 5e (or better) Ethernet cable.
- RCN205G-1PV 54V 1.2A power adapter.

2.1.5 Installation Steps

> Step 1:

Connecting Your Controller to the Computer

1. Using the RCN205G-1PV 54V 1.2A Power adapter to connect your Controller. The system power on and then the LCD starts to show the message. FIGURE 2: RCN205G-1PV Controller DC in jack on Rear Panel.

FIGURE 2: RCN205G-1PV Controller DC in jack on Rear Panel

 Please note:

1. Please use the power adapter shipped with the device. The different power adapter will damage the device.
2. The Controller has embedded a BT module with internal antennas. When the Controller is installed, the antennas are at least more than 20 centimeters of a person's body.



2. Using an Ethernet cable, connect your computer network port to the LAN port on the Controller. Refer to Figure 3.

FIGURE 3: RCN205G-1PV Controller Ethernet ports on Front Panel.



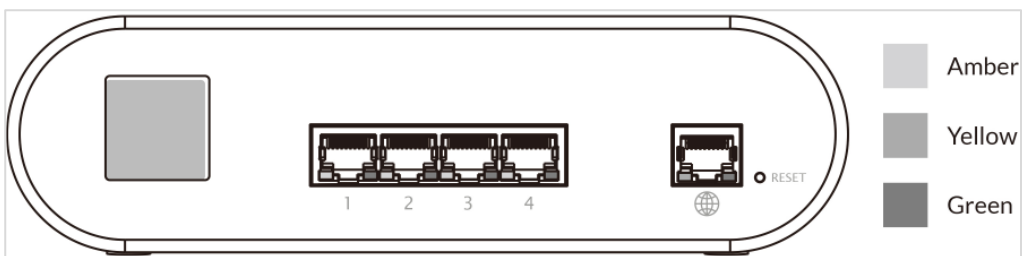
TABLE 1: RCN205G-1PV Front Ports.

No.	Label	Description
1.		10/100/1000 Mbps In Port: RJ-45 Ethernet port.
2.	1,2,3,4	10/100/1000 Mbps In Port: RJ-45 Ethernet port - Support 802.3af/at PoE.
3.	RESET	This is a reset button to reset the Controller to factory default.

3. Verify that the LCM panel show the “Ready for Setup”.

4. The LED indicators are shown in below TABLE 2.

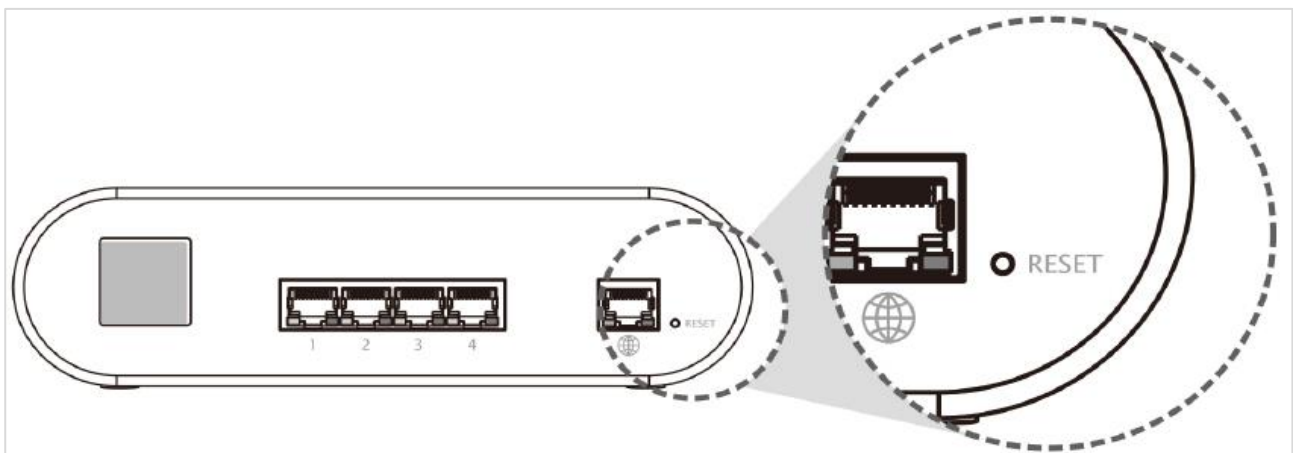
TABLE 2: RCN205G-1PV LED Indicators.



LED Indicator	Color	Behavior	Function Descriptions
1, 2, 3, 4 (for LAN ports)	Green	Solid	The port links up.
	Green	Blinking	There are transmitting or receiving Ethernet packets in this port.
	Green	Solid	The port is providing PoE power to PD.
	Amber	Solid	The port links up at 1Gbps speed.
	Green	Blinking	There are transmitting or receiving, Ethernet packets in this port.
	Green	Solid	The port links up at 10M/100M speed.
	Yellow	Blinking	There are transmitting or receiving Ethernet packets in this port.

5. The RESET button behaviors are shown in below **TABLE 3**.

TABLE 3: RCN205G-1PV RESET Button Function Description.



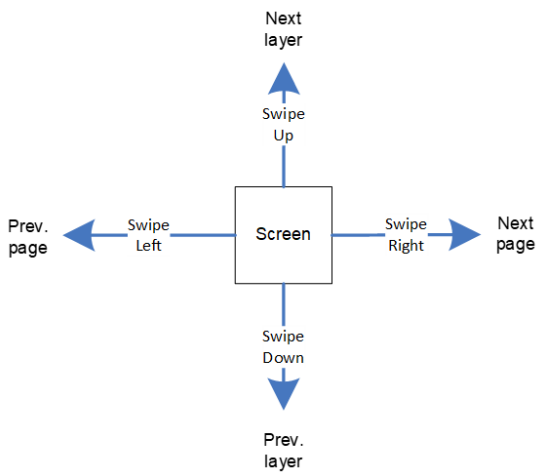
Press time	Function Description
< 1 second	The system will reboot.
> 6 seconds	The system will reset the configuration to factory default.

2.1.6 Controller LCD Touch Screen

2.1.6.1 Swipe Screen Description

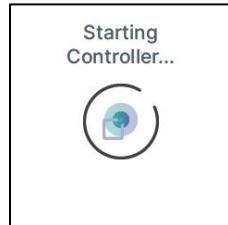
Swipe Screen	Action	Description/ Function
Layer I	Press	Type Layer II Screen
	Swipe Up/ Download	Next Layer / None
	Swipe Right/ Left	Previous / Next Page(Item)
Layer II	Press	None
	Swipe Up/ Download	Next Layer / Previous
	Swipe Right/ Left	Previous / Next Page
Screen-Saver ¹	Press	Stop

The Controller becomes idle and the screensaver will activate after 5 minutes.

	Up swipe	Next Layer
	Down Swipe	Previous Layer
	Right / Left Swipe	Item Check
	Click	Enter / Monitor Protection Cancel

- Controller

*Layer0-1 :Starting
Controller...*



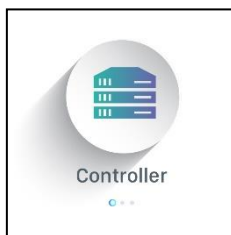
Controller is booting up

Ready for Setup(Web)

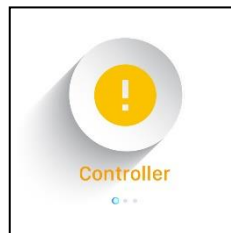


Ready for Setup / Install
the local interface.

Layer1-1 : Controller Screen

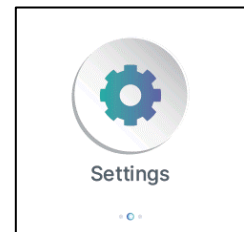


Controller Screen(Error)

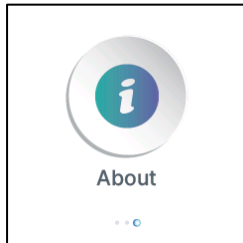


There is a need to update
firmware.

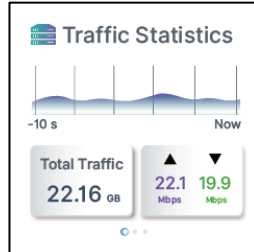
Layer1-2 : Settings Screen



Layer1-3 : About Screen



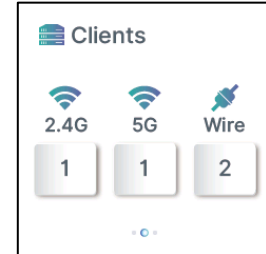
Layer2-1-1 :
Traffic Statistics(Controller)



Function 1: Display total traffic, upload, and download traffic (in kB, MB, and GB) (Update every minute)

Function 2: Display traffic over a period of one month in a chart, with one data point every half day

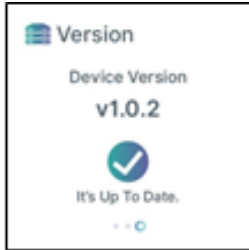
Layer2-1-2 :
Clients(Controller)



Function: Display the number of clients for 2.4G, 5G, and Wired connections

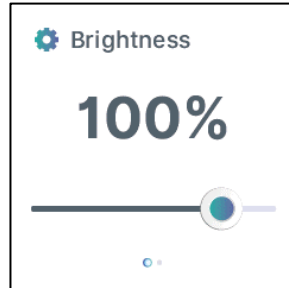
(Update every minute)

*Layer2-1-3 :
Version(Controller)*



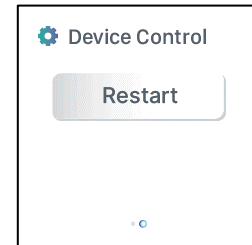
Function: Display the current Controller version

*Layer2-2-1 :
Brightness(Settings)*



Function: Adjust the LCM screen brightness

*Layer2-2-2 :
Device Control(Settings)*



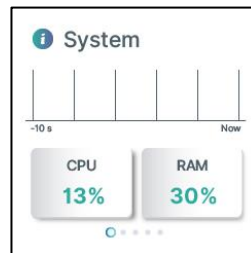
Function: Control Controller restart

Layer2-2-3 : Color(Settings)



Function: Adjust LCM background color

Layer2-3-1 : System (About)



Function 1: Display CPU and RAM usage

(Update every minute)

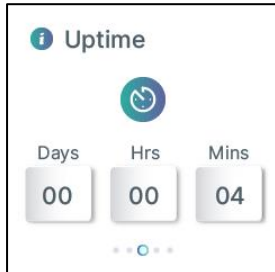
Function 2: Display traffic over a period of 5 hours in a chart, with one data point every 5 minutes

Layer2-3-2 : IP Address (About)



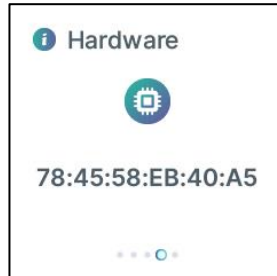
Function: Display WAN and LAN IP addresses (WAN IP address displays as 0.0.0.0 if not connected)

Layer2-3-3 : UpTime(About)



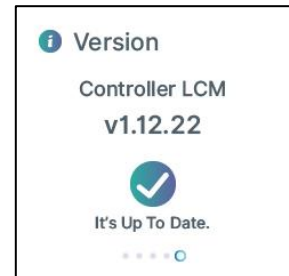
Function: Up Time (Update every minute)

Layer2-3-4 : Hardware (About)

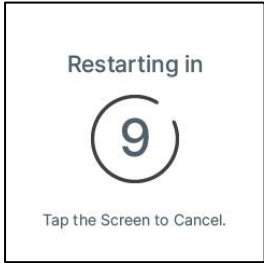


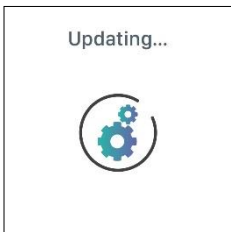
Display Controller's MAC address

Layer2-3-5 : Version (About)

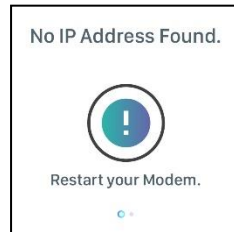


Display Controller's LCM version

Restarting in	Restarting...	Resetting to Factory Defaults...
		
Function: Touch to cancel restart and return to Device Control screen	Restarting in progress	Function: Displayed when Factory Defaults is initiated. Trigger conditions include physical button on the Controller, LCM button, and web operation.

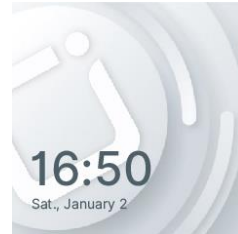
Finishing Up	Updating...
	
	Controller is updating the firmware.

No IP Address Found



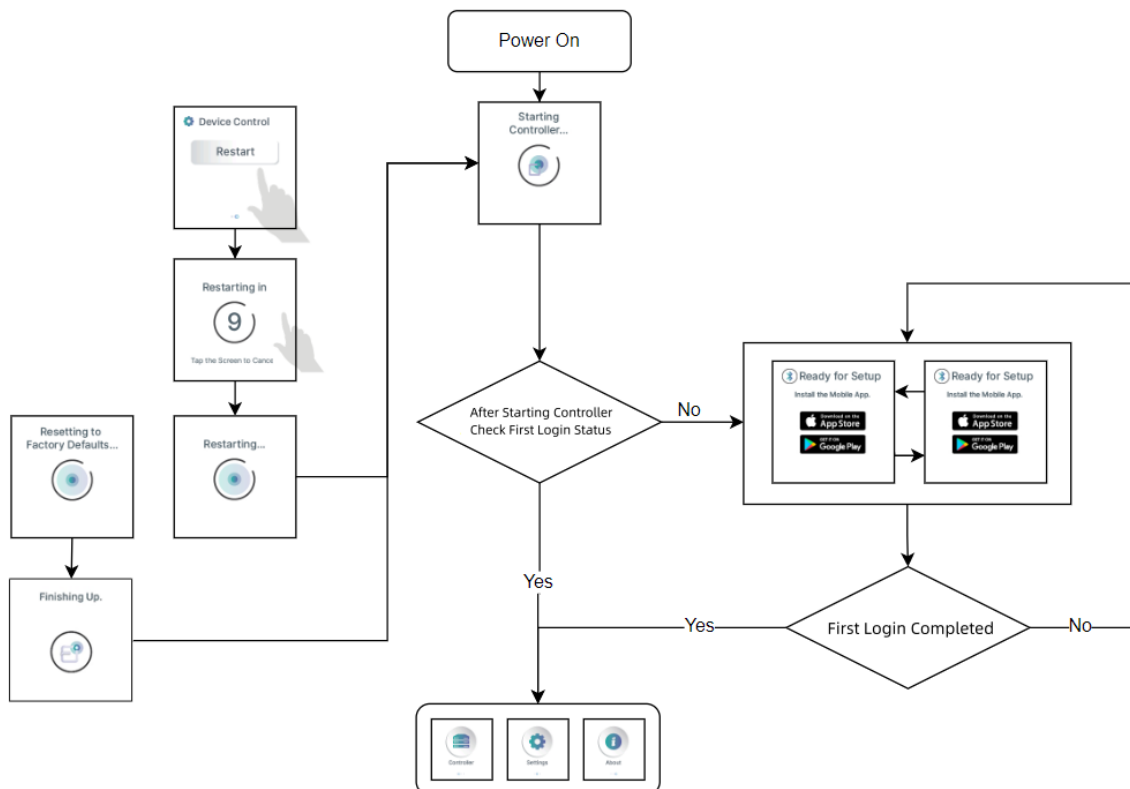
No IP Address Found

Screen-Saver

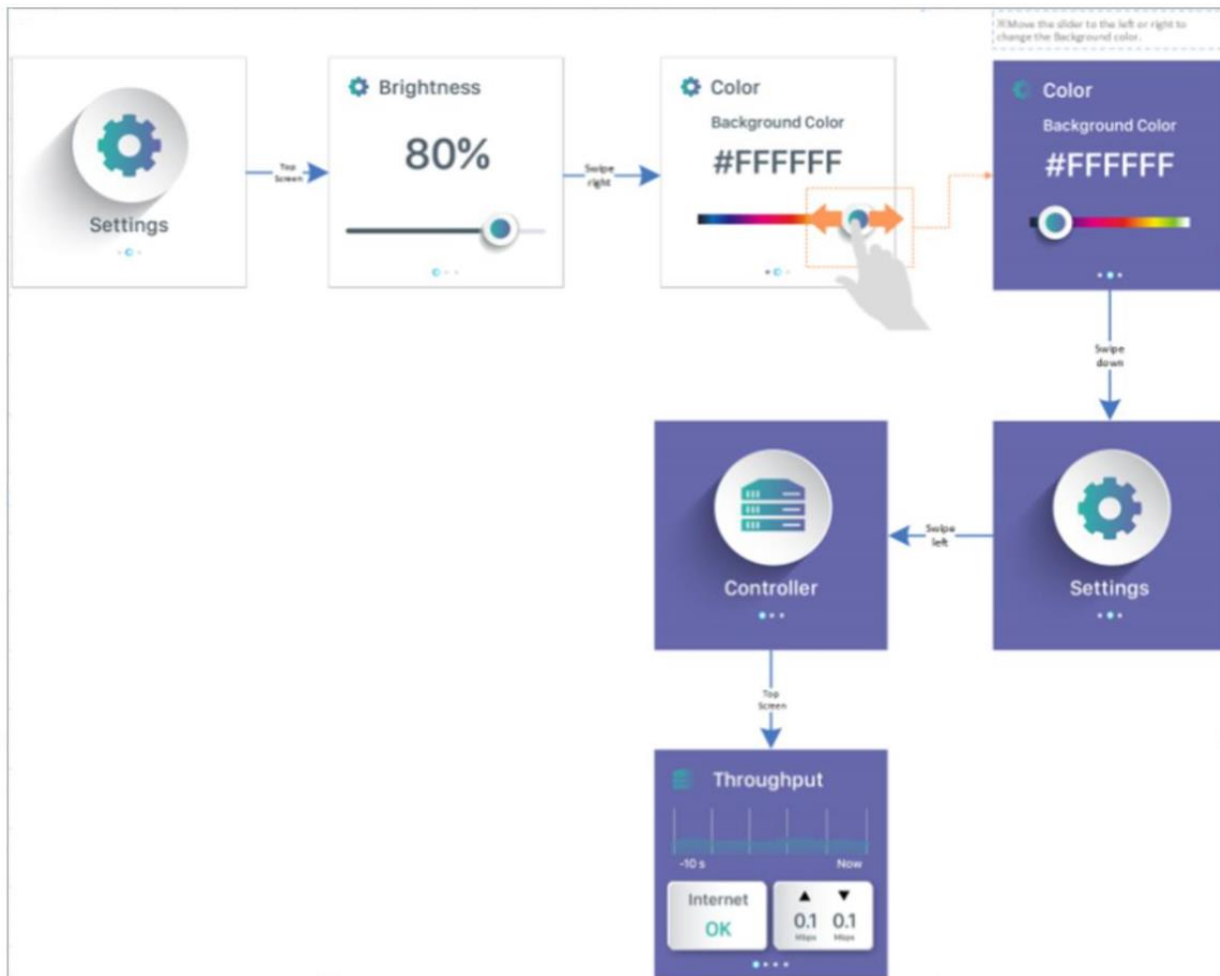


Function: Display current time in 24-hour format (hours:minutes), abbreviated day of the week, month, and date

1. Activation process



- Change Color



2.2 RAP750W-311A Quick Setup Guide

RAP750W-311A is a dual-band Wi-Fi 7 2x2 + 2x2 wall mount indoor access point. Equipped with four 2.5gigabit interfaces with one 2.5 gigabit interface supporting 802.3 bt/at PoE in and one 2.5 gigabit interface supporting 802.3at/af PoE out to other PoE devices, the RAP750W-311A delivers exceptional performance and flexibility to meet the demanding connectivity needs of today's digital world.

This part provides step-by-step instructions on how to install and begin using your RAP750W-311A.

2.2.1 RAP750W-311A Hardware Specification

Model	RAP750W-311A
Dimension H x W x D (mm)	178x90x25(mm)
Ports	
2.5G Base-T PoE+ LAN Ports	3
2.5G Base-T WAN Port	1
Power over Ethernet ports	PoE-in 1 x 802.3bt (45W/port) PoE-out 1 x 802.3at (30W/port) (One of the ports supports PoE output. The PoE output function requires 802.3bt PoE+ input)
Wireless specification	
Antennas	Two dual-band antennas: 2.4 GHz 2 x 2.69 dBi 5GHz 2 x 3.33 dBi One Bluetooth antenna: Ble X1 X 1.78 dBi
Maximum number of wireless device connections	256
Wireless networking standards	IEEE 802.11 be/ax/ac/n/g/b/a
Wireless network frequencies	2.4GHz / 5GHz
Signal rates	2.4 GHz: 688 Mbps 5 GHz : 4323 Mbps
Power supply	
Max. PoE power budget (Watt)	45
Rated Voltage	54V DC
Rated Current	1.1 A
Operating Temperature	0°C~40°C / 32°F~104°F
Operating Humidity	10% ~ 95% , Non-condensing

2.2.2 Overview

Upon following the steps outlined in this guide, you will be able to access the RAP750W-311A Access Point Wall Switch, allowing you to offer wired and wireless network access to users. Subsequently, this document will refer to the RAP750W-311A Access Point Wall Switch as the RAP750W-311A.

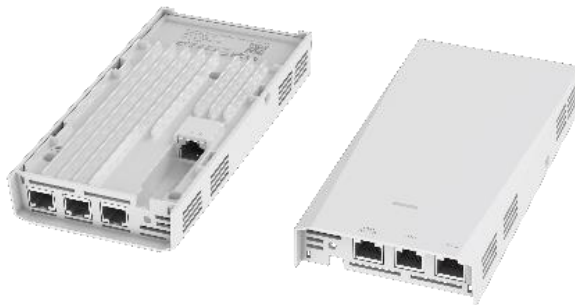


FIGURE 1: RAP750W-311A Access Point: Top View and Back View.

2.2.3 About Peripheral Devices

The RAP750W-311A can provide power to PoE-powered devices, with the supplied power contingent on the PoE power delivered to the RAP750W-311A. The LAN + PoE Out port is designated for PoE-powered peripheral devices, such as IP Phone and IP camera.

TABLE 1: RAP750W-311A AP Ports

No.	Label	Description
1.	2.5G ETH PoE	1 x 10/100/1000/2500 Mbps RJ-45 Ethernet port (supports 802.3at/bt PoE in)
2.	2.5G ETH PoE	1 x 10/100/1000/2500 Mbps RJ-45 Ethernet port (supports 802.3af/at PoE out)
3.	2.5G ETH	2 x 10/100/1000/2500 Mbps RJ-45 Ethernet port
4.	Reset Switch	Resets the AP

2.2.4 Package Contents

A complete RAP750W-311A installation package includes all of the following items:

- RAP750W-311A Access Point.
- One mounting kit, including Two 1-inch No. 8 steel pan-headPhillips sheet metal screws, two anti-theft screws, two coupling nuts and wall-mount anchors.
- One wall plate bracket.
- Service Level Agreement/Limited Warranty Statement (Optional).
- Declaration of Conformity (Optional).
- Regulatory Statement (Optional).
- This Quick Setup Guide (Electrical). Required Hardware Tools

2.2.5 Required Hardware Tools

- A Controller (Confirm that "Controller" has completed the first registration).
- Cat 6A (or better) Ethernet cable.
- Customer-supplied IEEE 802.3at/bt-compliant PoE Switch and customer-supplied Ethernet cable.
- No. 2 Phillips screwdriver and T10 Torx driver for the mounting bracket screws.
- (Optional) One or two separate bypass cables run through the outlet box..

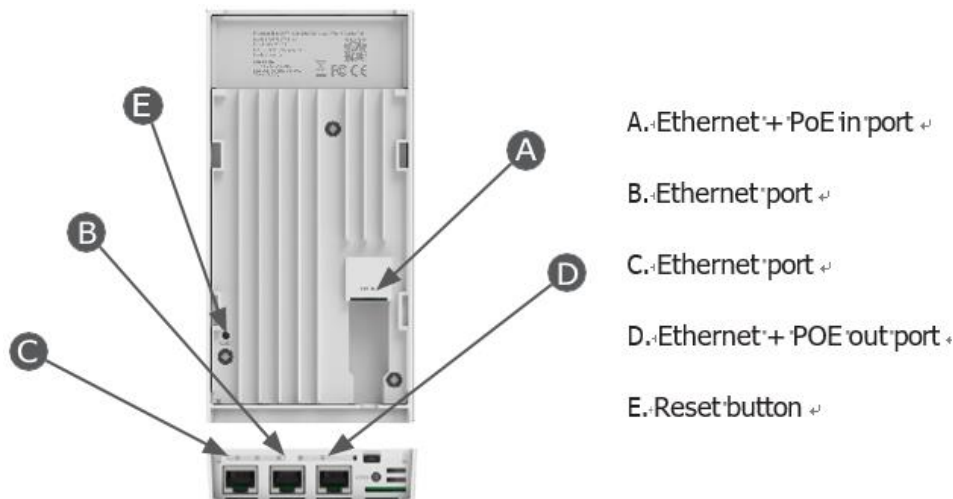
2.2.6 Installation Steps

> Step 1:

Connecting Your Controller to the AP

1. Using an Ethernet cable to connect one of your Controller LAN port to the PoE port of the AP. Refer to Figure2.

FIGURE 2: RAP750W-311A AP Ports on Bottom Panel.



2. Verify that the PWR LED (front side) on the AP is lit a steady blue.

> Step 2:

Login Controller website for setting

1. Using an Ethernet cable to connect your computer network port to one of the LAN ports on the Controller.
2. Open a browser (we recommend Chrome) on the computer to visit <https://192.168.1.1>. You will be directed to the Controller login page.
3. Access the login page, input your registered account password, and then click "Sign in" to access the Controller dashboard.

> Step 3:

Checking and find your EAP

 Please note:

The Controller must be directly connected to the EAP through one of the Ethernet ports.

1. Navigate to the "Topology" section in the left menu. The EAP you intend to adopt will be shown in the "Pending Adoption" block at the bottom of the page.
2. Click "Connected Devices/EAP" on the left Menu.
3. The EAP will appears in the EAP list with the status as "Pending" .
4. Navigate to the "Topology" section located in the left menu.
5. Locate the EAP icon and its corresponding MAC address in the pending adoption block. Once confirmed, proceed by clicking on the appropriate icon. The onboarding process will start.
6. During the adoption process, the status will indicate "Onboarding...". Once the process is successfully completed, the new EAP will seamlessly integrate into the current "topology" and its machine LED will display a blue light.

> Step 4:

Placing the AP in Your Site

1. Position the AP in its designated location, ensuring it is accessible for network connections. For detailed installation, please consult the "Mounting Instructions" below.
2. Connect the Cat5 cable to the PoE in port of the AP, and to a convenient power source (e.g., Controller LAN port, PoE Ethernet Switch or PoE Ethernet injector).

 Please note:

To establish the connection between the AP and the convenient power source, it is essential to utilize a Cat 5e (or better) Ethernet cable.

3. Verify that the Uplink port LED is lit. After a short pause to re-establish the connection, you can test the AP.

> Step 5:

Verifying the Installation

1. Using any wireless-enabled computer or mobile device to search for default SSID cyfi_25g and connect to it.
2. Once connected, open a web browser and access any public website.

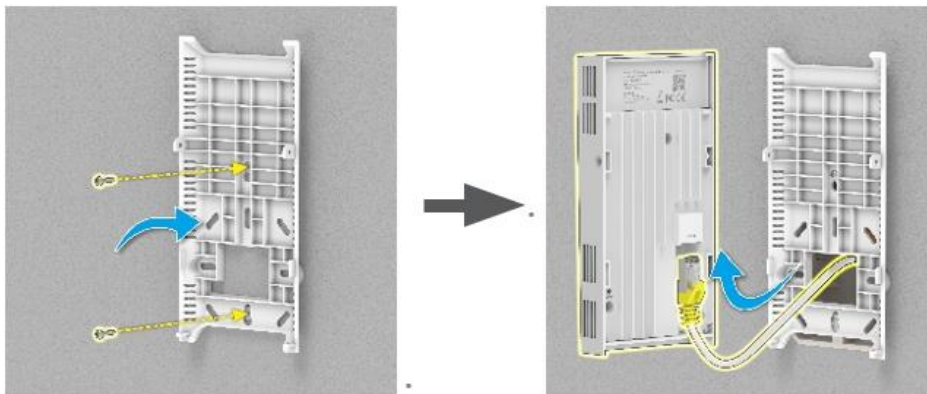
Congratulations! Your wireless network is now active and operational.

> Step 6: Mounting Instructions

Over-the Socket wall mount installation

1. Align the mounting bracket with the screw holes on the wall outlet box, and insert screws through both the bracket and the screw holes.
2. Make sure that the mounting bracket is securely fastened on the wall.

FIGURE 3>4: Attaching the mounting bracket to a single-gang wall outlet box and plug in the Ethernet cable coming out of the wall to the RJ45.

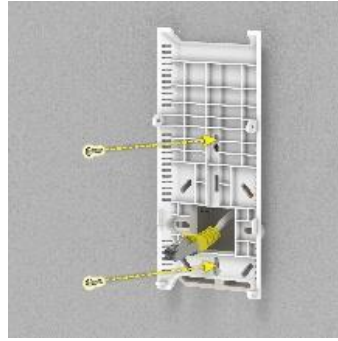


> Step 7:

Attaching the RAP750W-311A to the Mounting Bracket

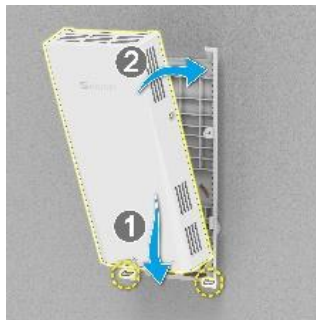
1. Make sure that the mounting bracket is securely fastened as described in Step 6.
2. If you have bypass cables (usually one or two, if any), make sure that they are draped across one or both of the two upper hooks on the mounting bracket.

FIGURE 5: Make sure the mounting bracket is securely.



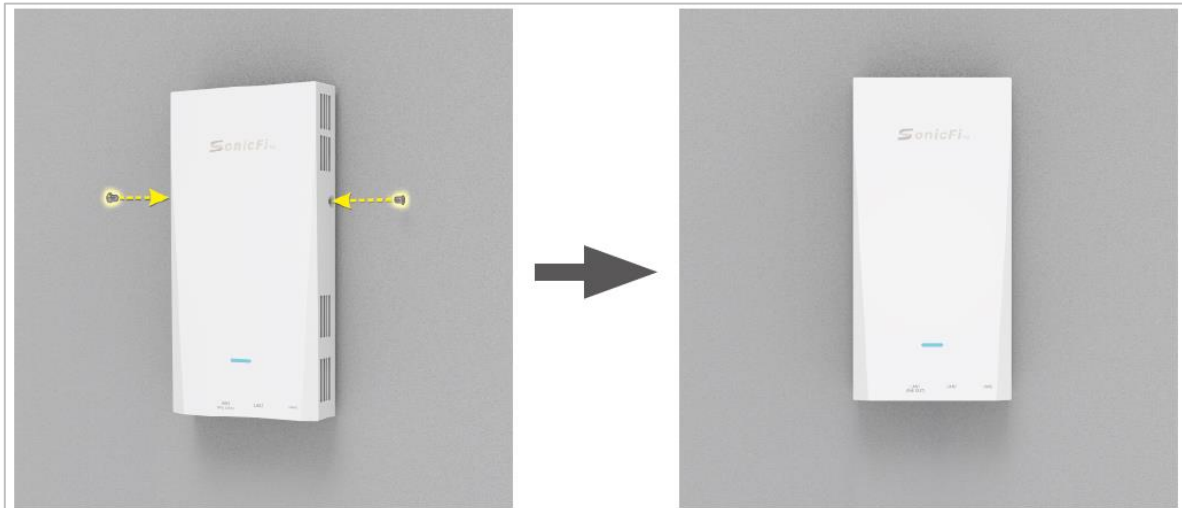
3. Pull the uplink Ethernet cable from the outlet box, and insert it into the Ethernet port in the back panel of the RAP750W-311A.
4. The mounting bracket has two lower hooks that fit into slots on the bottom of the RAP750W-311A. Rest the bottom of the RAP750W-311A on the lower hooks, and tilt the RAP750W-311A until it is up against the mounting bracket.
5. Align the screw holes on the left and right sides of the RAP750W-311A with the corresponding screw holes on both sides of the bracket.

FIGURE 6: Fit into slots on the bottom of the RAP750W-311A



6. Use a T10 Torx driver to screw the factory-supplied Torx flat head machine screws through the RAP750W-311A screw holes into the threaded inserts on the sides of the mounting bracket.
7. Confirm whether it can start normally.

FIGURE 7>8: RAP750W-311A setup is complete by using screws inserted into the threaded inserts on the sides.



>Step 8:

Testing the RAP750W-311A Operation

After a short pause to re-establish the Internet connection, you can test the RAP750W-311A.

1. Using any wireless-enabled PC or mobile device, search for and select the wireless network you previously configured.
2. If you can connect, open a browser and navigate to any public website.
3. Using any wired PC or other device and an Ethernet cable, plug into an Ethernet port on the bottom of the RAP750W-311A.
4. Open a browser and navigate to any public website.
5. Repeat Step 3 and Step 4 in this procedure for the other Ethernet ports on the bottom of the RAP750W-311A.
6. Verify that all connected devices are working correctly.

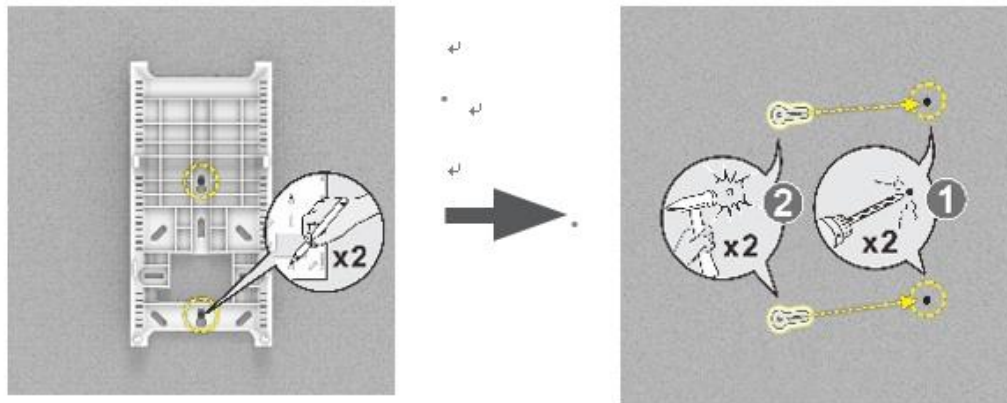
Congratulations! Your RAP750W-311A is active and ready for use.

>Step 9: Mounting Instructions

Generic wall mount installation

1. Attach the RAP750W-311A mounting bracket to a wall.
2. Mark the positions of the two screw holes.
3. After removing the mounting bracket, proceed with drilling.
4. Retrieve two coupling nuts from the kit and use a hammer to secure them into the wall, creating screw holes.

FIGURE 9>10: Mark the positions of the two screw holes and make the screw holes.



5. Align the mounting bracket with screw holes, inserting screws through the holes in the bracket and the newly drilled screw holes.
6. Make sure that the mounting bracket is securely fastened on the wall.
7. Take the uplink Ethernet cable and insert it into the WAN port in the bottom of the RAP750W-311A.

FIGURE 11>12: Mounting bracket to a wall and insert into the WAN port in the bottom side.

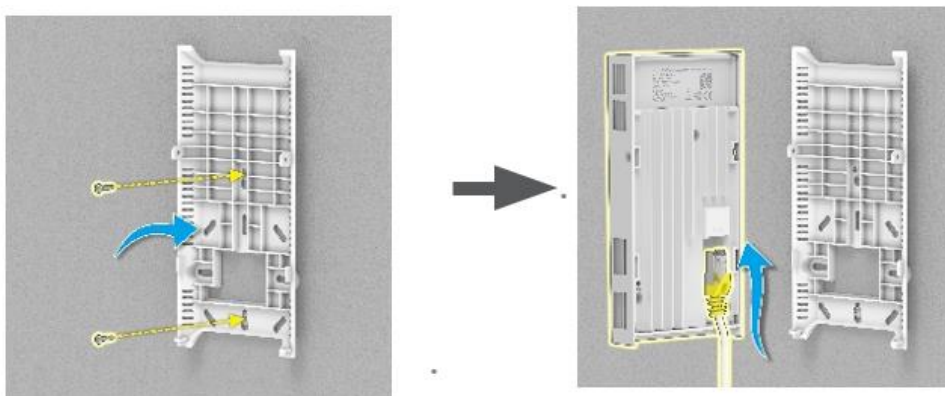
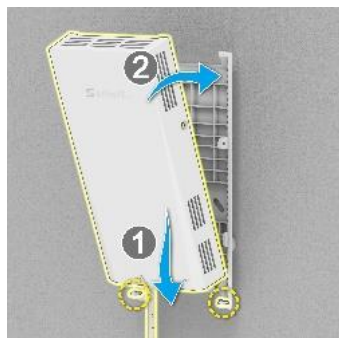


FIGURE 13: Fit into slots on the bottom of the RAP750W-311A



8. The mounting bracket has two lower hooks that fit into slots on the bottom of the RAP750W-311A. Rest the bottom of the RAP750W-311A on the lower hooks, and tilt the RAP750W-311A until it is up against the mounting bracket.
9. Align the screw holes on the left and right sides of the RAP750W-311A with the corresponding screw holes on both sides of the bracket.
10. Use a T10 Torx driver to screw the factory-supplied Torx flat head machine screws through the RAP750W-311A screw holes into the threaded inserts on the sides of the mounting bracket.
11. Confirm whether it can start normally.

FIGURE 14: Using the screw into the threaded inserts on the sides.



>Step 10:

Testing the RAP750W-311A Operation

After a short pause to re-establish the Internet connection, you can test the RAP750W-311A.

1. Using any wireless-enabled PC or mobile device, search for and select the wireless network you previously configured.
2. If you can connect, open a browser and navigate to any public website.
3. Using any wired PC or other device and an Ethernet cable, plug into an Ethernet port on the bottom of the RAP750W-311A.
4. Open a browser and navigate to any public website.
5. Repeat Step 3 and Step 4 in this procedure for the other Ethernet ports on the bottom of the RAP750W-311A.
6. Verify that all connected PoE-powered devices are working correctly.

Congratulations! Your RAP750W-311A is active and ready for use.

FIGURE 15: RAP750W-311A set up image.



2.3 Warnings and Cautionary Messages



Warning: This product does not contain any serviceable user parts.

Warning: Installation and removal of the unit must be carried out by qualified personnel only.



Caution: Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge when handling this equipment.

Caution: Do not plug a phone jack connector in the RJ-45 port. This may damage this device.

Caution: Use only twisted-pair cables with RJ-45 connectors that conform to FCC standards.

Caution: A proper grounding system is crucial. To ensure it meets local and national electrical codes, we recommend consulting a qualified installer who can handle the grounding process.

Caution: Secure mounting extends your device's life and prevents hazards. Follow the provided instructions carefully. For complex installations or additional support, consider consulting a qualified installer for proper wall or ceiling attachment.

Important Disclaimer:

Improper mounting of this device can lead to damage to the equipment and potential safety hazards. **We do not install on insecure walls or ceilings.** To ensure the safety and longevity of your

device, please follow the provided mounting instructions carefully. If you are unsure about the installation process or require assistance, consult a qualified installer for professional mounting services.

SonicFi will not be liable for any damages or injuries resulting from improper mounting.

This product is intended to be supplied by a UL listed (Certificate) power supply, output rated 54Vdc, 1.1A minimum, Tma 40degree C minimum, if need further assistance, please contact manufacture or UL File owner or brand owner further information.

2.3.1 Regulatory Notice and Statement



Federal Communication Commission Interference Statement

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 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.

This statement applies to all models. (RAP750W-311A)

FCC Caution: 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.

IMPORTANT NOTE:

RAP750W-311A 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 44cm between the radiator & your body.

FCC regulations restrict the operation of this device to indoor use only.

**RAP750W-311A Revised CE Notice:**

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

The frequency and the maximum transmitted power in EU are listed below:

Wi-Fi

2412-2472MHz: 19.84 dBm

5180-5320MHz: 22.87 dBm

5500-5700MHz: 28.51 dBm

BT

2.4G : 9.9 dBm

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

Hereby, SonicFi Inc. declares that the radio equipment type RAP750W-311A is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

<http://www.SonicFi-networks.com/help-center/download>

3. Login a Controller

The following are the procedures that how to login the Controller.

 Please note:

If there is no WAN connection, the account created should be a Local account. If there is a WAN connection, the account created should be a Cloud + Local account.

Step 1, Open a browser (we recommend Chrome) and visit <https://192.168.1.1> (or <https://sonicfi.wlan.local>).

Step 2, You will be directed to the Controller login page.

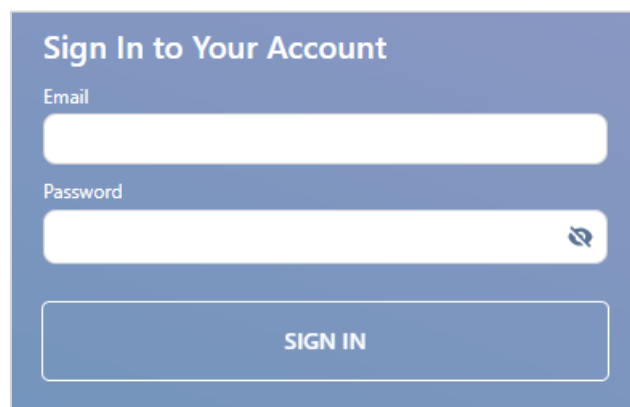
The image shows a login page with a blue background. At the top, it says "Sign In to Your Account". Below this, there are two input fields: "Email" and "Password". The "Email" field is a simple white box. The "Password" field is a white box with a small eye icon on the right side to toggle visibility. Below these fields is a blue button with the text "SIGN IN" in white capital letters.

Figure 1. SMB Controller Login Page

Step 3, To initiate the first login, you need to complete the account registration process. Use the default account / password: `admin@sonicfi.com.tw` / `Eap@12345`.



Sign In to Your Account

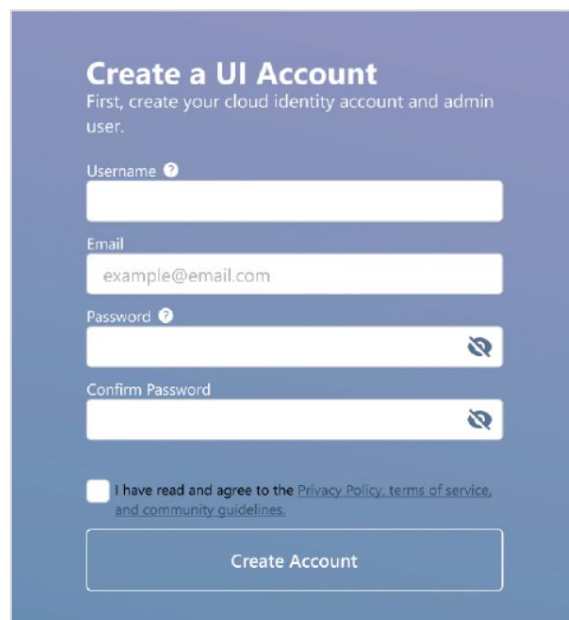
Email
admin@sonicfi.com.tw

Password
Eap@12345

SIGN IN

Figure 2. Sign in Page

Step 4, After entering default account / password, click "Sign in" to access the registration page.



Create a UI Account
First, create your cloud identity account and admin user.

Username
[input field]

Email
example@email.com

Password
[input field]

Confirm Password
[input field]

☐ I have read and agree to the [Privacy Policy, terms of service, and community guidelines.](#)

Create Account

Figure 3. SMB Controller Registration Page

Step 5, On the registration page, you can establish your own new account and password. After entering the required information, simply click "Sign up". It will return to the Login Page.

Step 6, Access the login page, enter your registered account's password, and click "Sign in" to access the Controller dashboard.

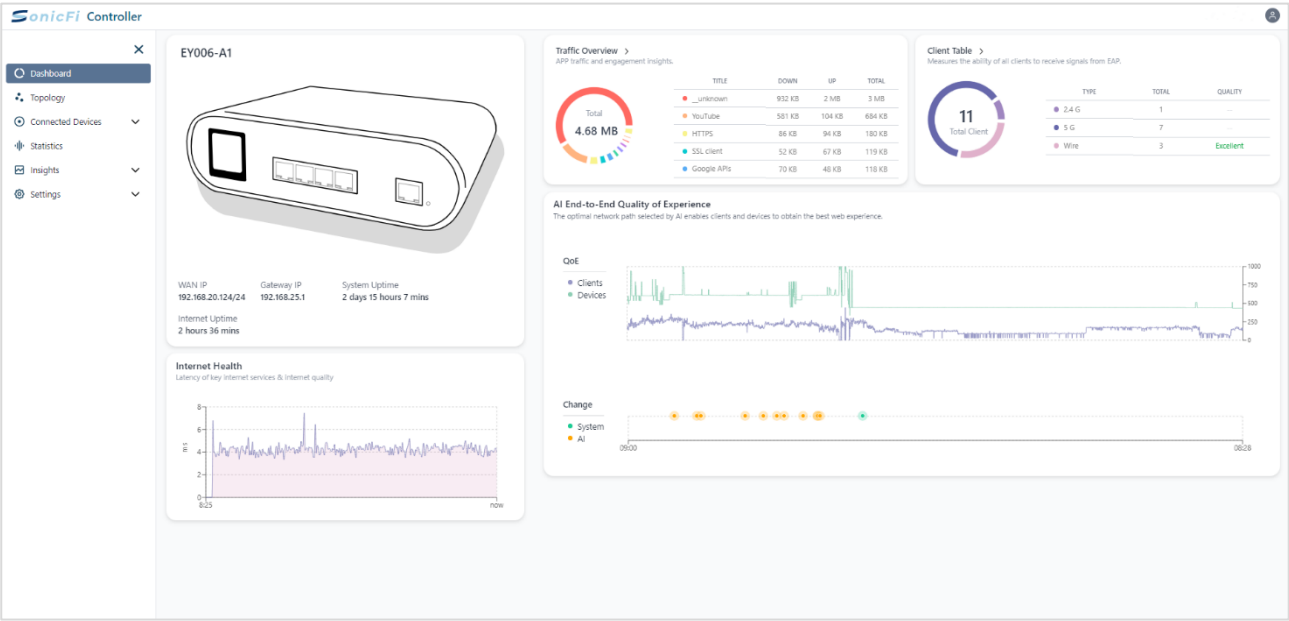


Figure 4. SMB Controller Dashboard Page

7. Onboarding the device

4.1 Enterprise access point on boarding

Once the dashboard page is visible, please follow the below procedures to install an access point. The installation procedures are shown in below.

Note: We strongly suggest user to “onboard” the device first and then put the device in the service location.

Step 1, The initial EAP must be connected to the Controller's LAN port using a network cable.

Step 2, After that, on Topology page of the Controller web GUI, you can locate “pending adoptions” in the bottom-left corner.

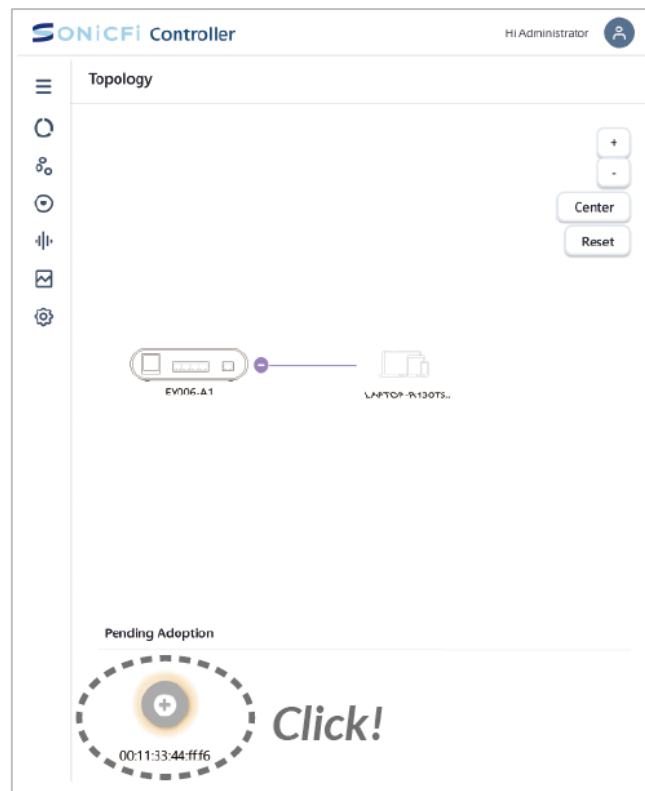


Figure 5. SMB Controller Pending Adoption of Topology Page

Step 3, To adopt the access point, simply click on it and wait for the adoption process to complete. The process may take around two minutes.

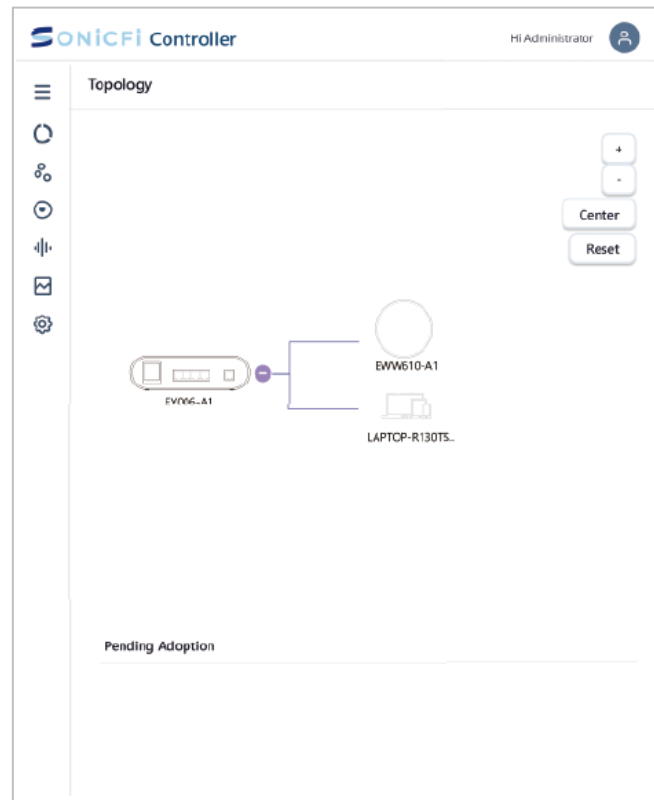


Figure 6. SMB Controller Onboarding of Topology Page

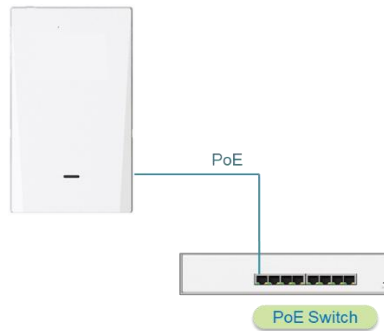
Step 4, For more information about the Controller Web GUI and the usage, please refer to this manual.

Step 5, After setting up the basic network topology, you can adopt other access points through wire or wireless.

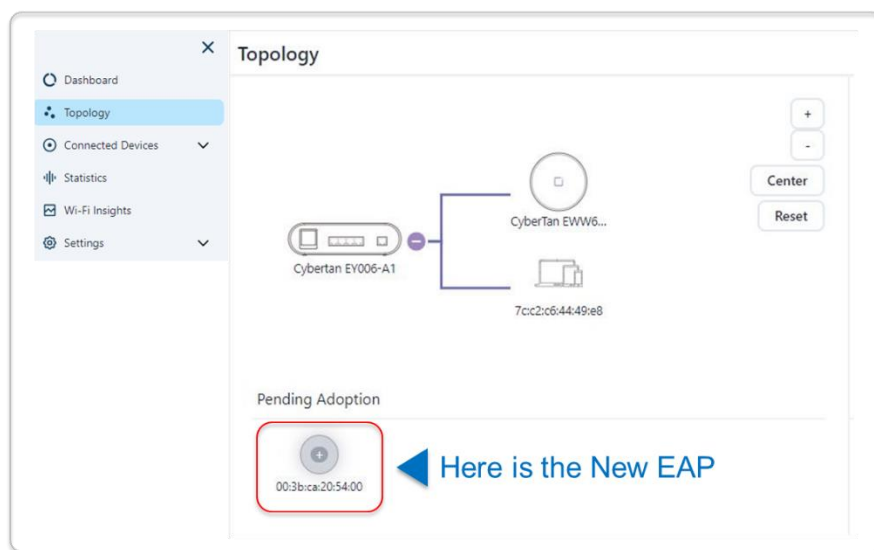
The result can setup the first tier access point which is shown on the above topology page. When user would like to use “wireless backhaul” architecture to install the second tier access point, please follow the below procedures.

Note: We strongly suggest user to “onboard” the device first and then put the access point in the service location.

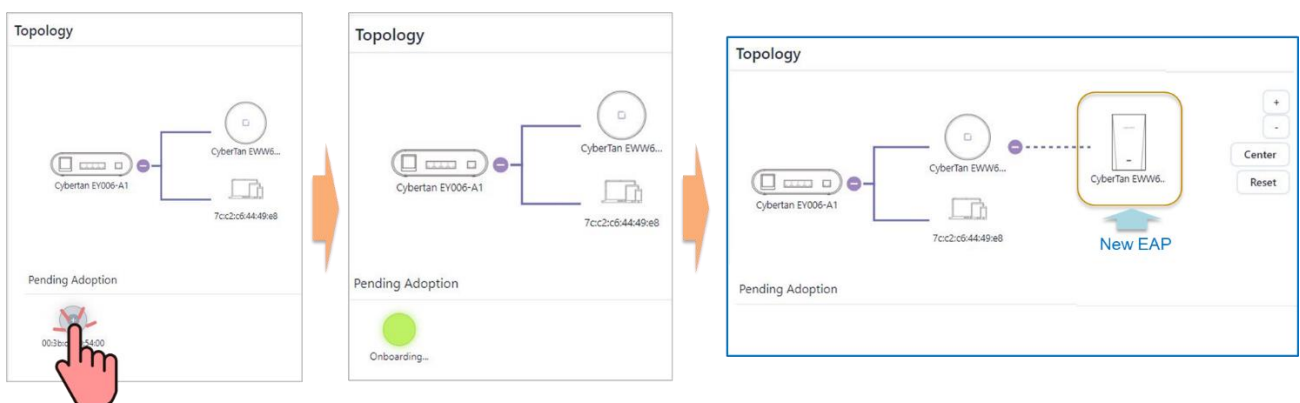
Step 1, The EAP can power on by PoE. Please find a PoE Switch or PoE injector to connect to “UPLink (PoE In)” port of EAP.



Step 2, Access the topology page of Controller. Waiting the new EAP shows on the “pending adoption” area.



Step 3, Click the new EAP and then this EAP adds on the topology automatically.



4.2 Ethernet Switch on boarding

When Ethernet Switch is connecting to network, the Switch can onboard automatically. User doesn't need to click any icons. The following is an example to show the network topology.

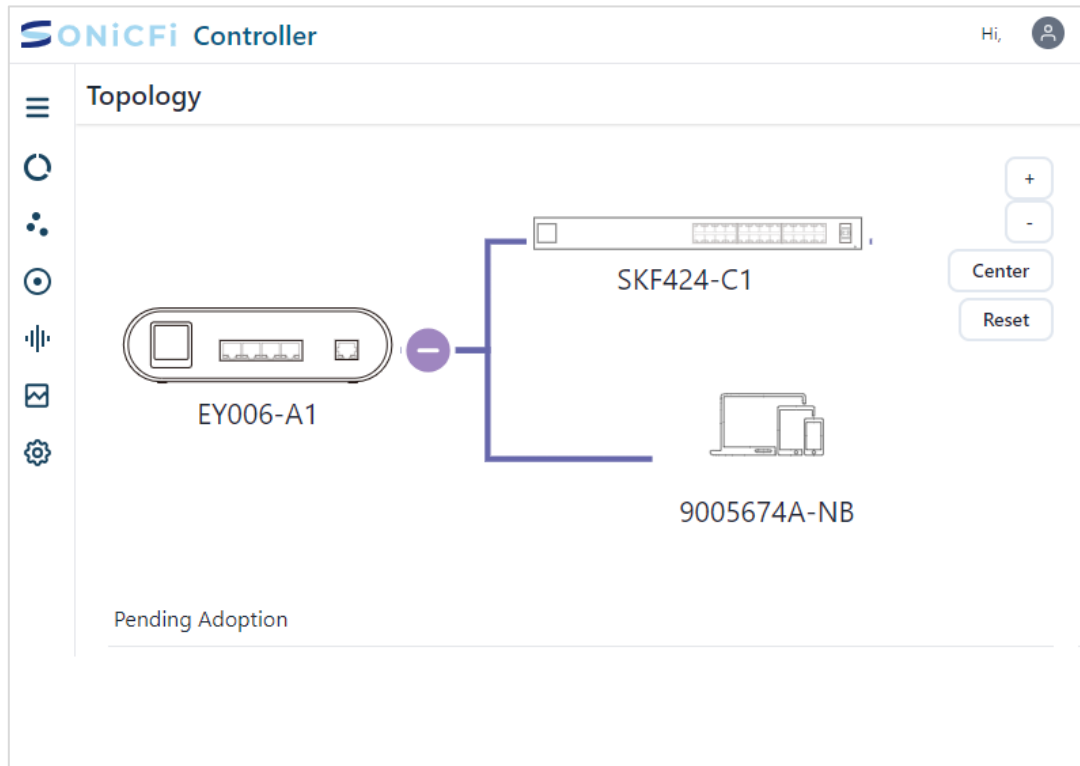


Figure 7. Switch Onboarding of Topology Page

8. Functionalities

5.1 Dashboard Page

The information provided on the Dashboard page includes Controller information, Traffic Overview, Client Table, Wi-Fi Quality, and Internet Health. Most of the information is presented in the form of charts to facilitate users in quickly understanding the status. Controller Information provides below information.

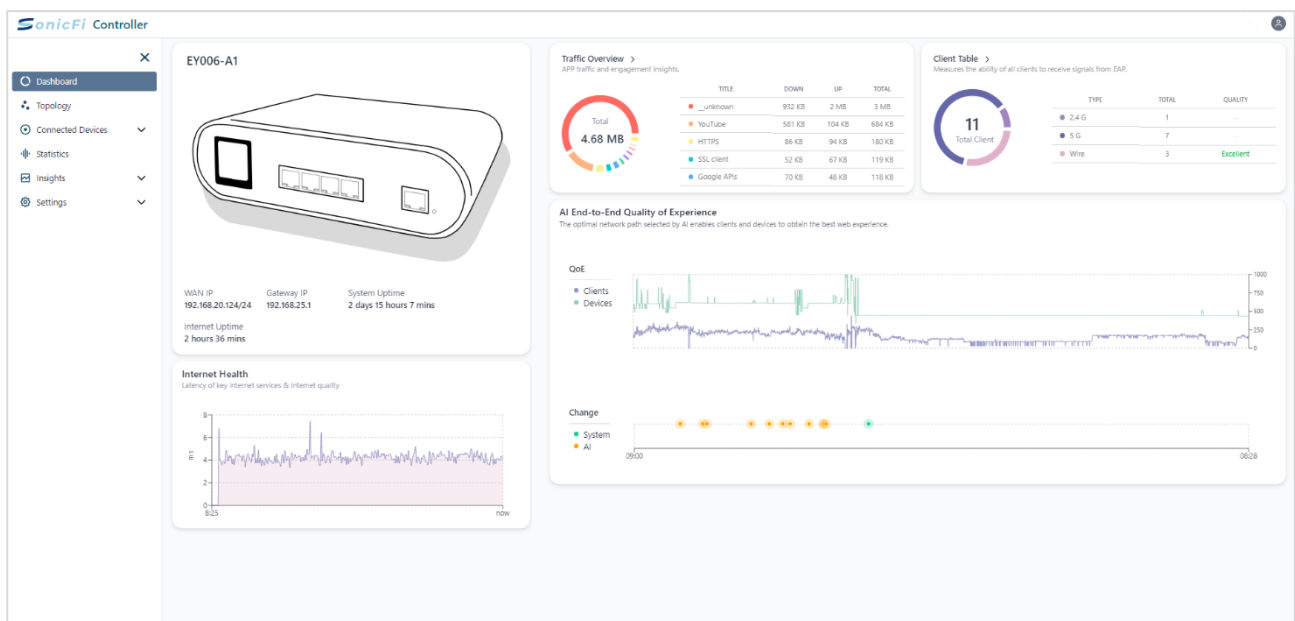


Figure 8. Dashboard overview

- **WAN IP, Gateway IP, System Uptime** (the amount of time since the system was last rebooted or turned on), **Internet Uptime** (the amount of time that an internet connection has been available), and **Internet Health** (include latency of internet services and usage of broadband)
- **Traffic Overview**, presented in chart form, shows that network service uses the most data and provides information on upload, download, and total usage for each service.
- **Client Table** shows how many clients connected and what kind of connection type (2.4G, 5G, or wired) they used. It shows us the quality of each connection type as well. Wi-Fi Quality uses chart to present user's internet experience or quality of experience (QoE).
- **Internet Health** shows latency of key internet services and internet quality in chart.



Figure 9. AI End-to-End Quality of Experience (QoE-AI)

The QoE-AI feature utilizes algorithms to automatically detect and correct network quality issues to maintain a stable connection.

On the graph, you will see System and AI markers on the timeline. The System markers indicate where manual configuration changes have been made to the network. The AI markers show when the algorithms have adjusted the network conditions automatically.

The current Controller algorithm score is maxed out. The displayed Clients and Devices scores are relative algorithm scores benchmarked against the Controller.

The QoE-AI algorithms continuously monitor metrics like speed, latency, and reliability to proactively fix problems. When performance drops below defined thresholds, it will make corrections to settings and adjust parameters to restore optimal wireless quality. The self-healing intelligence maximizes network uptime and ensures the best end user wireless experience with no manual intervention required.

SonicFi Controller

Dashboard

Topology

Connected Devices

Client

Switch

Statistics

Insights

Settings

Client Devices

SEARCH

STATUS	NAME	CONNECTION	IP ADDRESS	CHANNEL	QUALITY	SIGNAL	RX RATE	TX RATE	HISTORY
Online	68:79:08:c7:49:f1	ethernet	192.168.25.254	---		---	1.00 Gbps	1.00 Gbps	---
Online	9035683A-NB	5G	192.168.25.55	124		-51	0.21 Gbps	0.54 Gbps	
Online	RacordeAir	5G	192.168.25.171	124		-55	0.58 Gbps	0.14 Gbps	
Online	46:fe:76:47:20:2f	5G	192.168.25.178	124		-62	0.32 Gbps	0.27 Gbps	
Online	86:a0:78:21:0c:2f	5G	192.168.25.149	124		-51	0.86 Gbps	86.00 Mbps	
Online	M2101K7BNV	5G	192.168.25.68	124		-57	0.43 Gbps	0.12 Gbps	
Online	Galaxy-A53-5G	5G	192.168.25.42	124		-58	0.43 Gbps	0.14 Gbps	
Online	M2103K19G	5G	192.168.25.94	124		-41	0.43 Gbps	78.00 Mbps	
Online	9035796A-NB	5G	192.168.25.222	128		-43	6.00 Mbps	0.19 Gbps	
Online	SQA-PC2	2.4G	192.168.25.126	11		-52	13.00 Mbps	1.00 Mbps	

Showing 1 to 10 of 12 results

<

1

>

Figure 10. Client Devices Details

5.2 Topology Page

The Topology page displays a network topology, where each node is labeled as either a Controller, EAP, or end-user device. Additionally, each node is identified by name and provides relevant information.

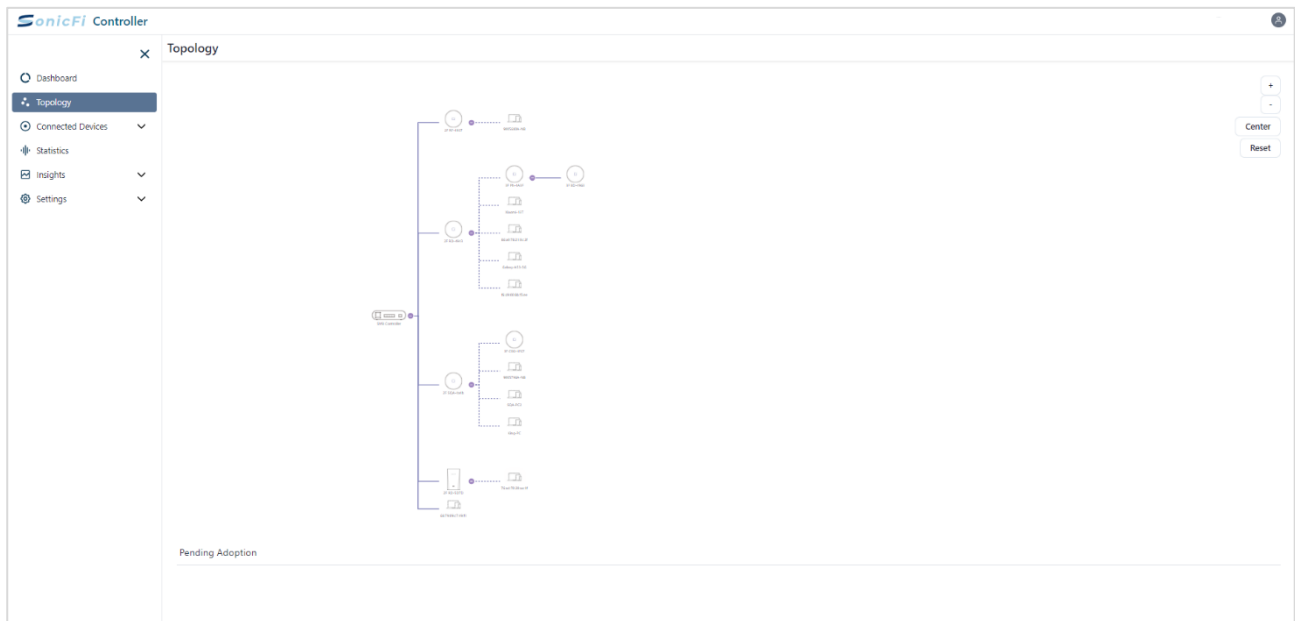


Figure 11. Topology Page

When you click on a node in the network topology, detailed information about the node will appear on the right side of the screen. The type of node will determine what information is displayed in addition to the overview section.

In the Overview tab of the Controller nodes, you'll find information on the Controller Model, Clients, General, WAN, Downlink, and Statistics.

- **Controller Model**- This section provides information about the specific model of the Controller device. It typically includes details like the model name, hardware version, and potentially other unique identifiers.
- **Clients** - This section displays a list of all the client devices that are currently connected to the Controller. For each client, it shows information such as the client's name, connection status, and the quality or strength of the connection.

- **General** - This section contains general information about the Controller device itself. It may include details like the Controller's IP addresses (both WAN and LAN), MAC address, system uptime, memory usage, and CPU load average.
- **WAN** - This section focuses on the Wide Area Network (WAN) connection of the Controller. It provides information about the WAN IP address, internet download and upload speeds, the associated Internet Service Provider (ISP), and various network activity metrics like download/upload packets and bytes, as well as the current download and upload activity levels.
- **Downlink** - This section lists the SonicFi devices that are connected to the Controller. For each connected SonicFi device, it displays the device name and the quality or strength of the connection.
- **Statistics** - This section presents a visual representation, typically in the form of a chart or graph, of the Controller's resource utilization over time. It may include metrics like CPU usage and RAM usage, allowing you to monitor the performance and load on the Controller device.

These parameters provide a comprehensive overview of the Controller's configuration, connected devices, network status, and system performance, giving you a detailed understanding of the Controller's operational state.

Additionally, the Port tab lists all the ports on the Controller and displays the status of each, including Speed, Activity, TX Counts, and RX Counts. Lastly, in the Settings tab, you'll find options to restart or factory reset the Controller, as well as the ability to use the Controller to ping other devices.

- **Speed** - This parameter indicates the current link speed of the port, typically measured in bits per second (bps) or megabits per second (Mbps). It shows the negotiated speed between the port and the connected device, reflecting the maximum supported speed of the port and the connected device.
- **Activity** - This parameter represents the current activity or traffic level of the port. It provides an indication of whether the port is actively transmitting or receiving data, and the relative level of that activity.

- **TX Counts** - TX stands for "Transmit". This parameter shows the total number of packets or bytes that have been transmitted through the port. It represents the outgoing traffic or data sent from the Controller through the port.
- **RX Counts** - RX stands for "Receive". This parameter shows the total number of packets or bytes that have been received through the port. It represents the incoming traffic or data received by the Controller through the port.

These parameters give you a detailed view of the port-level activity and performance on the Controller, allowing you to monitor the network traffic, understand the utilization of each port, and potentially identify any issues or bottlenecks related to the port connections.

In the Overview tab of the Controller nodes, you can find several information sections. The Controller Model Info Section displays the WAN IP, IP Address, and Device Version. The Clients section provides a list of all clients connected to the Controller, including their status, name, and quality of connection. In the General Section, you can find information such as IP Address (WAN), IP Address (LAN), MAC Address, Uptime, Memory Usage, and Load Average. The WAN Section provides details on the IP Address, Speed, ISP, Down Pkts/Bytes, Up Pkts/Bytes, Down Activity, and Up Activity. The Downlink Section lists all SonicFi devices connected to the Controller and their respective device name and quality of connection. Finally, the Statistics Section shows a chart displaying CPU and RAM usage.

- **WAN IP** - This is the public IP address of the Controller on the Wide Area Network (WAN). It represents the external IP address that the Controller uses to communicate with the internet.
- **IP Address** - This is the local IP address of the Controller on the Local Area Network (LAN). It's the internal IP address used by devices on the same LAN to communicate with the Controller.
- **Device Version** - This parameter represents the firmware version or software version running on the Controller device. It's an important identifier for the specific software/firmware that the Controller is using.
- **MAC Address** - The MAC (Media Access Control) address is a unique hardware identifier assigned to the network interface of the Controller. It's a 12-digit hexadecimal number that uniquely identifies the Controller on the network.
- **Uptime** - This parameter shows the total time the Controller has been continuously powered on and running. It's a measure of the Controller's reliability and stability.
- **Memory Usage** - This indicates the current utilization of the Controller's available memory resources. It can help identify if the Controller is experiencing high memory usage, which could impact its performance.
- **Load Average** - This represents the average system load on the Controller over a specific time period. It provides an indication of the overall CPU usage and workload on the Controller.
- **Speed** - This parameter shows the current internet download and upload speeds for the WAN connection. It reflects the actual internet bandwidth available to the Controller.
- **ISP** - This identifies the Internet Service Provider (ISP) associated with the WAN connection.

- **Down Pkts/Bytes** - Down Pkts refers to the number of download packets. Down Bytes refers to the number of download bytes transferred. These metrics provide information about the incoming network traffic.
- **Up Pkts/Bytes** - Up Pkts refers to the number of upload packets. Up Bytes refers to the number of upload bytes transferred. These metrics provide information about the outgoing network traffic.

These parameters collectively provide a comprehensive overview of the Controller's network configuration, performance, and resource utilization, helping you understand the overall state and behavior of the Controller within the network environment.

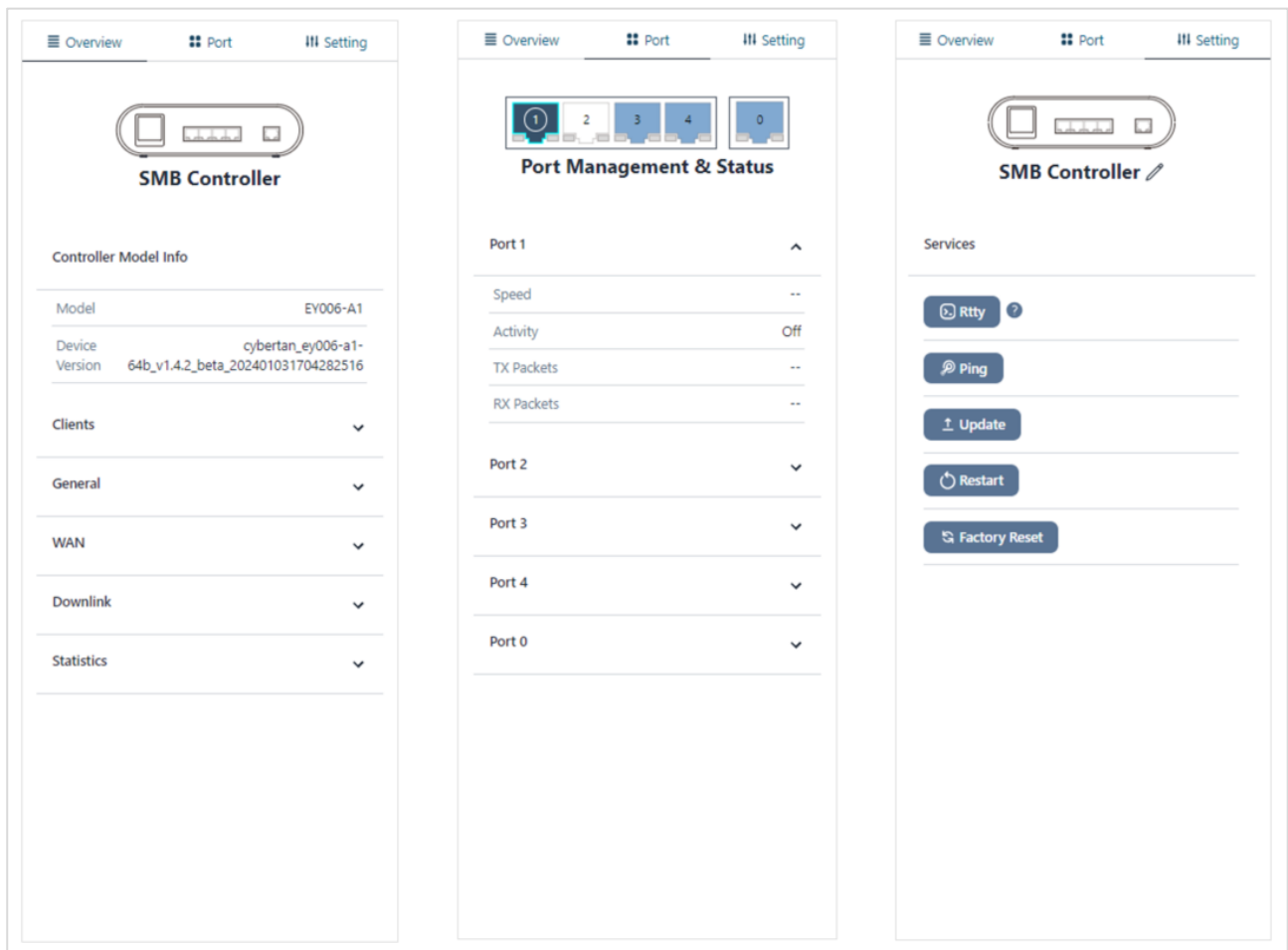


Figure 12. Controller Node Details

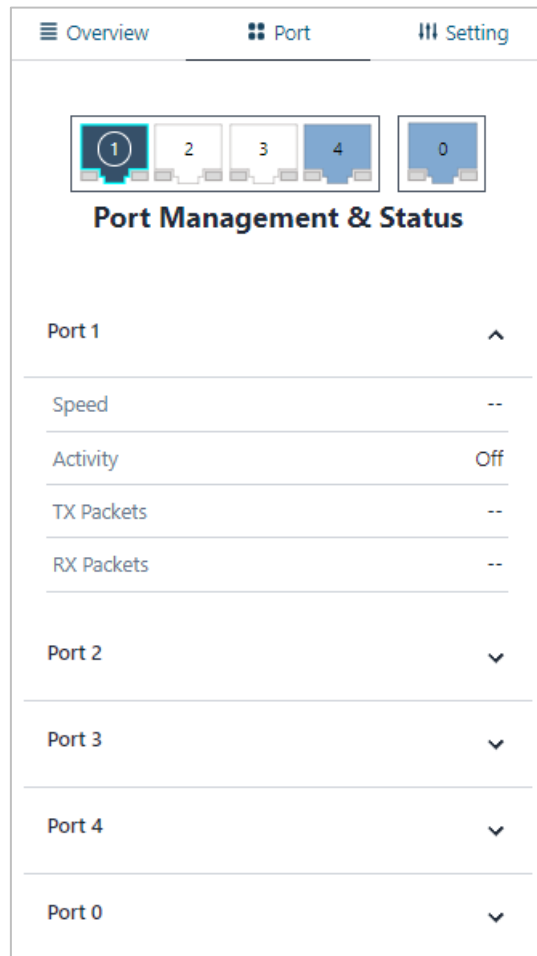


Figure 13. Port Management and Status

Ports

The access point Controller has 5 total ports for network connectivity:

- **Port 0** - This port is used for the WAN (internet) connection. Connect your broadband modem or uplink Switch port to this port using a standard ethernet cable.
- **Ports 1-4** - These ports provide LAN connectivity to connect with the local wired network. Connect Switches, or devices such as computers and printers, to ports 1-4 to allow access to the Controller GUI and traffic monitoring capabilities.

The table displays port statistics and activity:

- **Speed** - The link speed of connections to the ports, such as 100Mbps or 1Gbps.
- **Activity** - Indicates if there is an active wired link detected on the port.

- **TX/RX Packets** - Traffic counters displaying the number of packets transmitted and received on each port. Provides throughput monitoring.

The ports allow the Controller centralized access to both the local LAN and upstream networks for functionality like wireless traffic shaping, bridging between VLANs, and inline packet analysis.

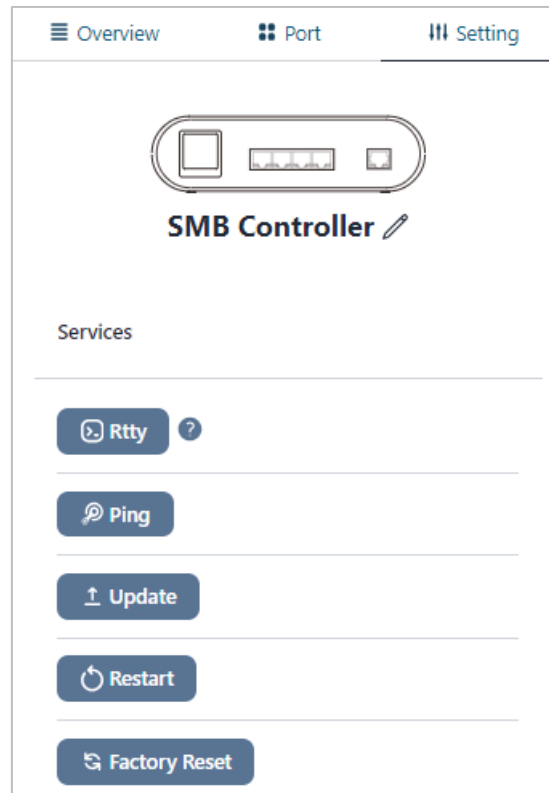


Figure 14. Settings

The settings section allows configuring general options and behaviors for the access point Controller system.

- **Rtty (Terminal)** - Provides command line SSH terminal access directly to the Controller's linux shell for advanced users. Allows troubleshooting issues through additional utilities and debugging info.
- **Ping** - Allows the user to perform a ping operation to a specified IP address or hostname to check network connectivity to a remote system. Provides detailed ping output including transfer times and packet loss to aid in network troubleshooting and monitoring network quality.
- **Update** - Manually check and install firmware updates for the Controller if a new version is available. Keeps system up-to-date.
- **Restart** - Performs a graceful reboot of the Controller system. Ensures proper shutdown and restart of all monitoring systems unlike hard power cycling.

- **Factory Reset** - Reset the system to original default state, removing all custom config. Used when Controller is being relocated or all local settings need cleared.

The settings provide control over core Controller operations for change management workflows independent of config profiles.

The Overview tab for EAP nodes provides information on the EAP model, clients, general settings, uplink (wired/wireless), and air stats (2.4G, 5G). In addition, the Traffic Statistics tab displays the total data download/upload usage in separate charts and lists all services and their corresponding data usage for both download and upload through the EAP. Finally, within the Settings tab, users can manage the EAP by updating, locating, restarting, factory resetting, or removing it.

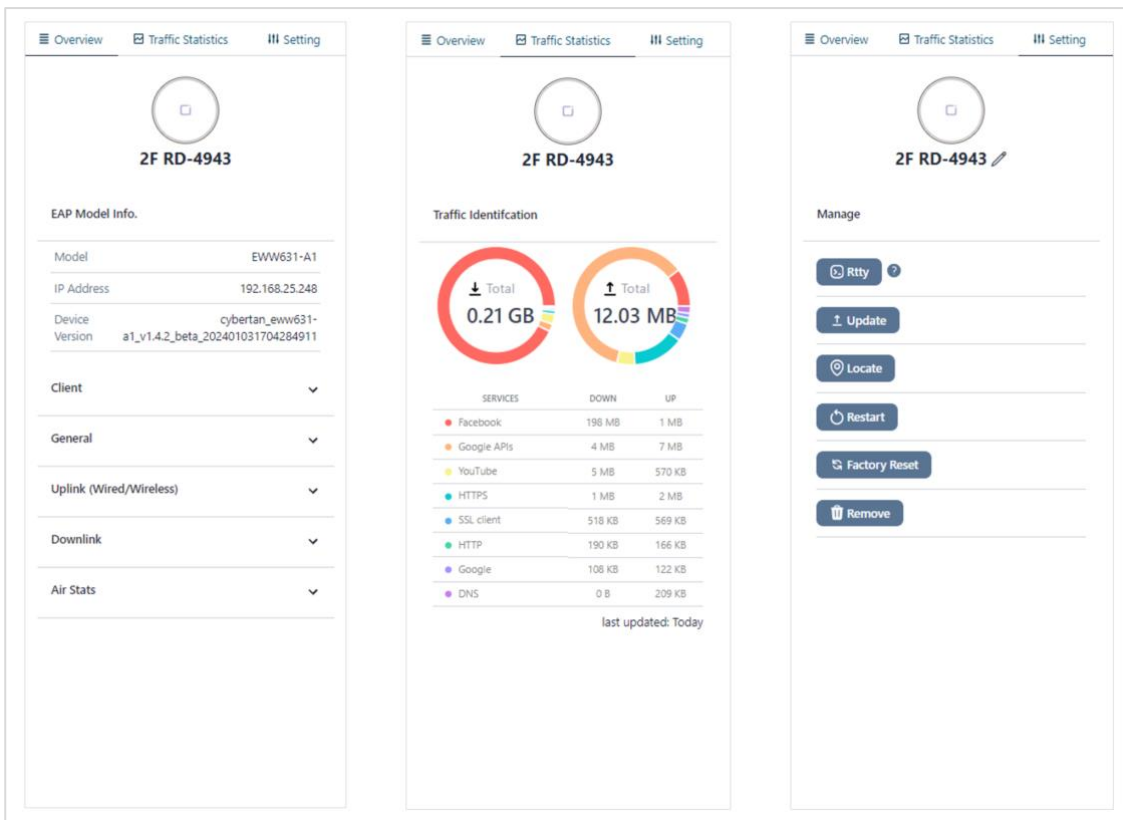


Figure 15. EAP Node Details

In the EAP nodes' Overview tab, you can access various sections with different types of information. The EAP Model Info Section displays important information such as the Model Name, IP Address, and Device Version.

- **Model Name** - This refers to the model name or product name of the Controller device. It identifies the specific hardware model of the Controller, which can be useful for determining its capabilities and features.

- **IP Address** - This parameter represents the IP address of the Controller. There are typically two IP addresses shown:
 - WAN IP Address: The public IP address of the Controller on the Wide Area Network (WAN).
 - LAN IP Address: The local IP address of the Controller on the Local Area Network (LAN).
- **Device Version** - This parameter indicates the firmware or software version running on the Controller device. It's an important piece of information that helps identify the specific software/firmware release installed on the Controller. Knowing the device version can be useful for understanding the features and capabilities available, as well as for ensuring you have the latest updates and security patches.

These three parameters - Model Name, IP Address, and Device Version - provide fundamental information about the Controller. The Model Name identifies the hardware, the IP Addresses show the network connectivity, and the Device Version indicates the software/firmware version. Together, these details give you a basic understanding of the Controller's configuration and capabilities.

Additionally, the Clients section provides a comprehensive list of all connected clients, including their name, channel, signal (RSSI), and connection quality.

- **Channel** - This parameter refers to the wireless channel that the client device is using to connect to the Controller.
- **Signal (RSSI)** - RSSI stands for Received Signal Strength Indicator. This parameter represents the strength of the wireless signal received by the client device from the Controller.
- **Connection Quality** - This parameter provides an indication of the overall quality or health of the connection between the client device and the Controller. It takes into account factors like signal strength, interference, and network congestion to give an overall assessment of the connection quality.

These three parameters - channel, signal (RSSI), and connection quality - provide valuable insights into the wireless connectivity of the clients connected to the Controller. They help you understand

the wireless environment, identify potential troubleshooting areas, and ensure optimal performance for the connected devices.

The General Section contains crucial details such as the MAC Address, Uptime, Memory Usage, and Load Average.

- **MAC Address** - The MAC (Media Access Control) address is a unique hardware identifier assigned to the network interface of a device. The MAC address is an important identifier for the device, as it can be used for network management, access control, and troubleshooting.
- **Uptime** - The uptime refers to the total time the device has been continuously powered on and running. It's a measure of the device's reliability and stability, as a higher uptime typically indicates a more stable and reliable system. Monitoring the uptime can help identify any unexpected reboots or power cycles that may indicate an issue with the device.
- **Memory Usage** - This parameter represents the current utilization of the device's available memory resources. It provides an indication of how much of the device's memory is being consumed by running processes and applications.
- **Load Average** - The load average represents the average system load on the device over a specific time period.

Furthermore, the Uplink Section (Wired/Wireless) provides specific statistics on the Uplink, Down Pkts/Bytes, Up Pkts/Bytes, and Activity. Lastly, the Air Stats Section showcases the status of both 2.4GHz and 5GHz, including Channel, Transmit Power, Tx Pkts/Bytes, Rx Pkts/Bytes, Tx Retry/Dropped, Rx Retry/Dropped, Ch. Util. (Busy/Rx/Tx), and Clients. These sections offer a comprehensive overview of all essential aspects of the EAP nodes.

The Overview tab of the end-user nodes provides information about the Client Model and RSSI History. Additionally, the Traffic Statistics tab presents charts that display the total data download/upload usage separately, and lists all services along with their corresponding data usage for both download and upload on the end-user device.

Overview	Traffic Statistics	Setting
General		
Uplink (Wired/Wireless)		
Downlink		
Air Stats		
2.4 GHz		
Channel	1	
Noise Level	-99 dBm	
Transmit Power	20 dBm	
Tx Pkts/Bytes	0/0B	
Rx Pkts/Bytes	0/0B	
Tx Retry/Dropped	0/0	
Clients	0	
5 GHz		
Channel	124	
Noise Level	-93 dBm	
Transmit Power	20 dBm	
Tx Pkts/Bytes	93.32M/0.10TB	
Rx Pkts/Bytes	43.49M/11.37GB	
Tx Retry/Dropped	0/0	
Clients	5	

Figure 16. EAP Node Overview / Air Status

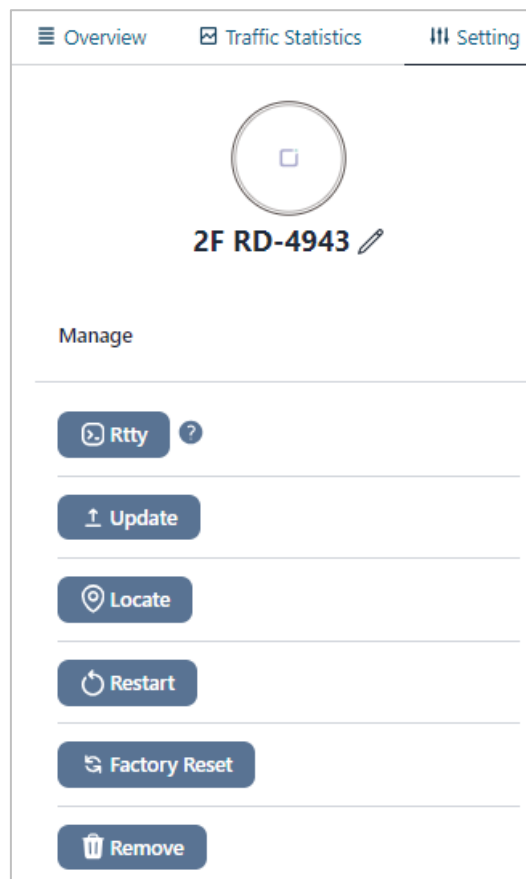
The overview page displays high-level performance metrics, system health monitoring, client counts, and key wireless settings for managed access points.

Air Status - Quick view of current radio frequency bands status (2.4GHz/5GHz enabled).

- **Channel** - The channel each wireless band is currently transmitting on.
- **Noise Level** -Background RF interference levels measured on channels. Higher = more noisy.

- **Transmit Power** - Configured radio transmit power set in dBm. Higher = wider coverage radius.
- **Pkts/Bytes** - Real-time monitoring of Tx/Rx packets and data volume provides wireless usage analytics.
- **Retry/Dropped** - Tx retry and packet drop counters help identify RF interference or coverage issues.
- **Clients** - Number of clients currently connected to each AP radio provides basic capacity monitoring.

Setting section - allows configuring general options and behaviors for the access point system.



- **Rtty (Terminal)** - Provides command line SSH terminal access directly to the AP's linux shell for advanced users. Allows troubleshooting issues through additional utilities and debugging info.
- **Update** - Manually check and install firmware updates for the AP if a new version is available. Keeps system up-to-date.

- **Locate** - Lights up LEDs on the Controller to physically locate the device if needed. Similar to blinking hard drive locate functionality on servers.
- **Restart** - Performs a graceful reboot of the AP system. Ensures proper shutdown and restart of all monitoring systems unlike hard power cycling.
- **Factory Reset** - Reset the system to original default state, removing all custom configuration. Used when Controller is being relocated or all local settings need cleared.
- **Remove** - Factory reset as above, plus forcefully remove all adoption or pairing info for access points. Use when moving AP.

On the Overview tab of the end-user nodes, there are two sections: Client Model Info and RSSI History. The Client Model Info section displays basic information about the end-user device, including its name, uplink, wireless quality, IP address, MAC address, manufacturer, operating system, and uptime. Meanwhile, the RSSI History section shows the quality of RSSI in both 2.4G and 5G bands in the form of a chart that tracks the device's connectivity over time.

On the Traffic Statistics tab of the end-user nodes, displays a status of traffic which is application-aware used by a client.

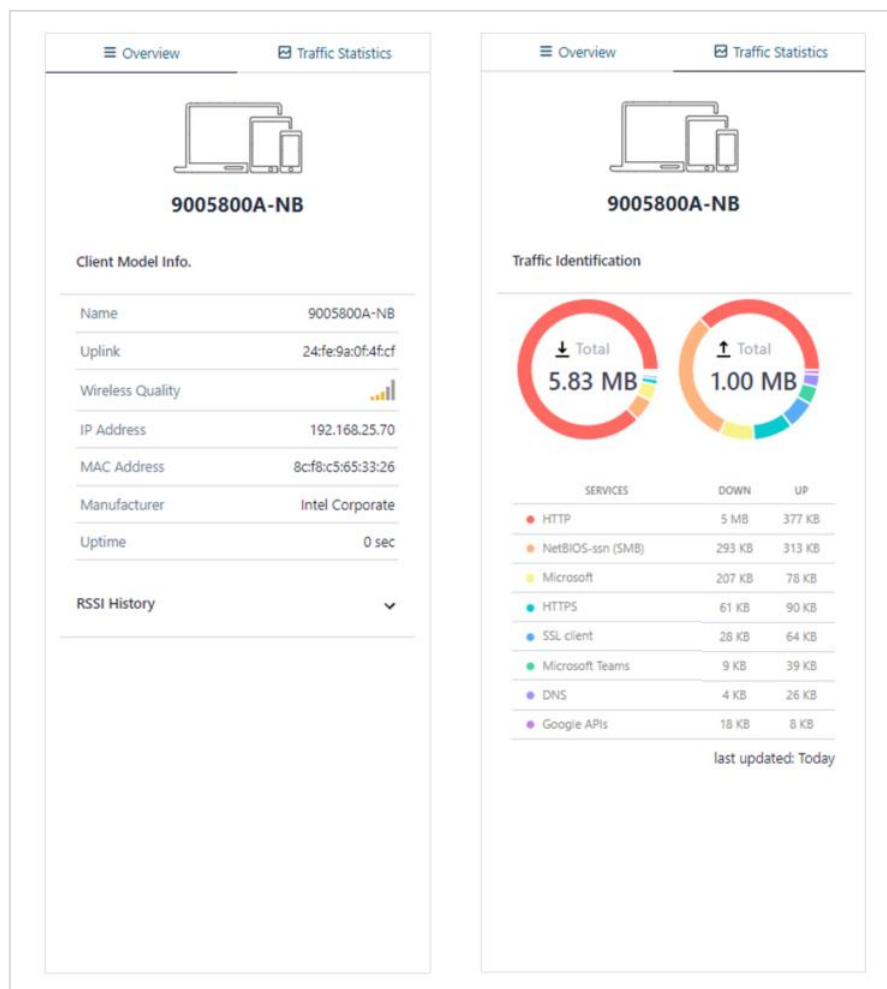


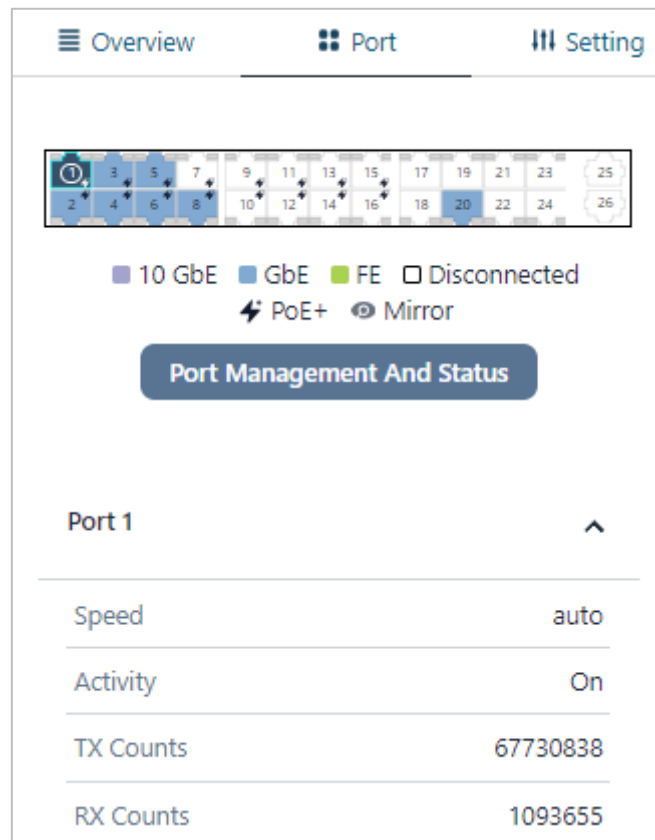
Figure 17. End-user Node Details

The Switch Overview section provides a comprehensive look at the status and configuration details of the network Switch. It allows you to view crucial information about the Switch hardware, connected clients, uplink/downlink interfaces, and traffic statistics. This centralized dashboard gives you full visibility into the Switch's operations for monitoring, troubleshooting and optimizing the network performance. The overview includes the following items:



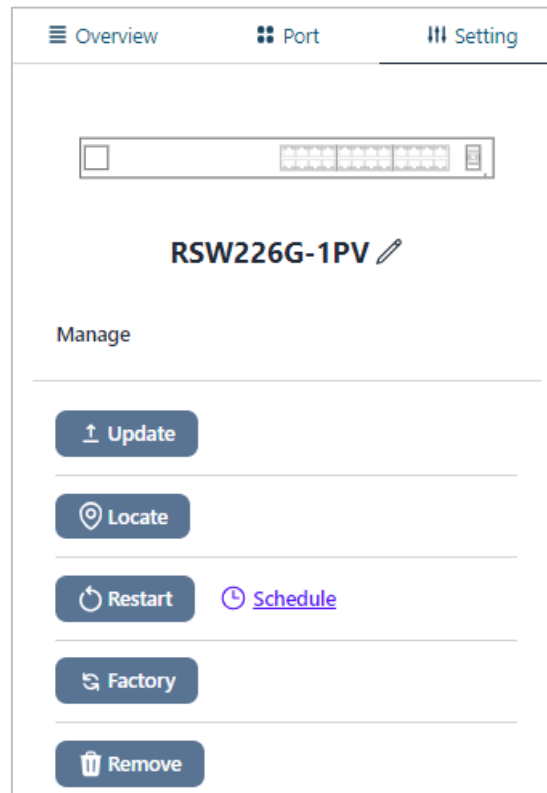
- **Switch Model Info** - Displays detailed information about the Switch model including manufacturer, model number, hardware revision, serial number, and other identifiers.
- **Clients** - Shows a list of all client devices currently connected to the Switch, including their IP and MAC addresses, connection interface, and uptime.
- **Uplink (Wired)** - Provides status of the uplink wired network connections from the Switch to upstream devices like routers or other Switches.
- **Downlink** - Displays downlink port status and statistics for the ports the Switch uses to connect to client devices.

- **Statistics** - Presents interface statistics like data rates, errors, drops for the different Switch ports to analyze throughput and performance.



The Switch Port section displays detailed real-time statistics for the individual Switch ports. Monitoring these metrics allows you to analyze traffic patterns, verify proper operation, and troubleshoot potential issues on each port interface. The statistics provide insight into the port's throughput, errors, broadcasts, and overall activity levels.

- **Speed** - Shows the current negotiated speed of the port's Ethernet link in Mbps or Gbps.
- **Activity** - Indicates if the port is currently active with link and actively passing traffic or not.
- **TX Counts** - Provides packet and byte counters for traffic being transmitted out of this port, including unicast, multicast and broadcast traffic.
- **RX Counts** - Displays packet and byte counters for traffic being received on this port from connected devices.



The Switch Settings section provides access to various system-level utilities and functions for managing and maintaining the network Switch. From this centralized menu, you can perform firmware updates, physically locate the device, reboot the Switch, restore factory defaults, or remove it from your network management. These options give you full control over the operational state of the Switch.

Update - Checks for and installs the latest available firmware update for the Switch to keep it running the newest software version with bug fixes and enhancements.

Locate - Triggers a locator LED to start blinking on the physical Switch, allowing you to easily identify the device when examining multiple installed Switches.

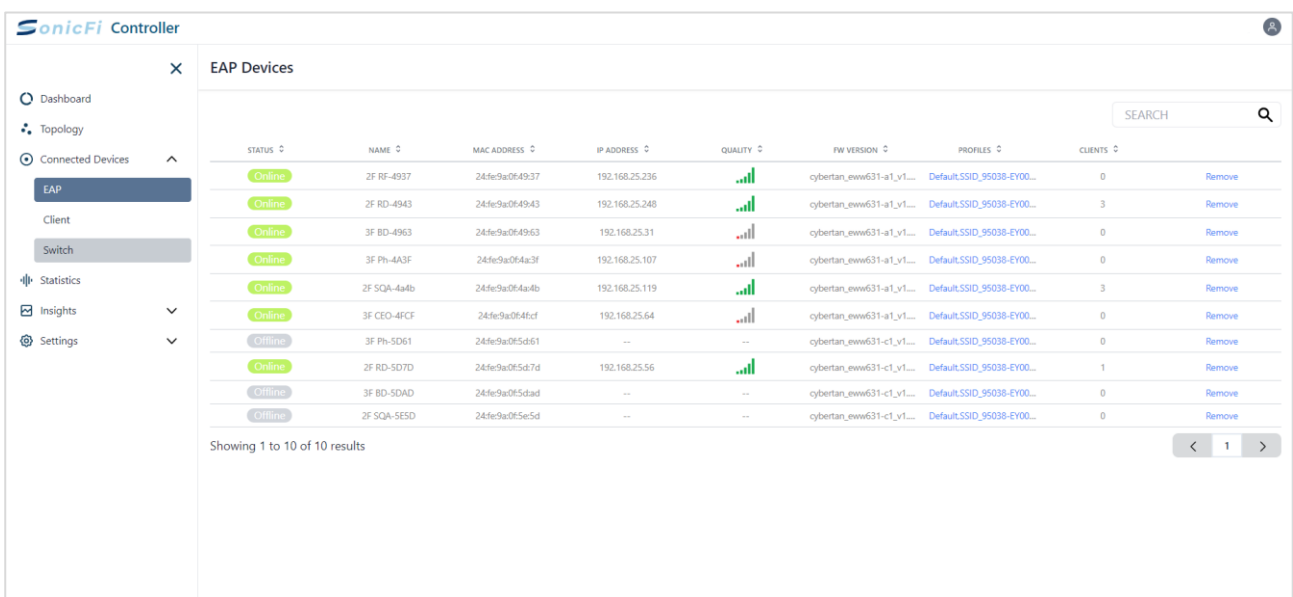
Restart - Initiates a safe reboot of the Switch's operating system while gracefully disconnecting clients to ensure a clean restart.

Factory Reset - Reverts all Switch configuration settings back to their factory defaults, clearing any customizations or changes made.

Remove - Decommissions and removes this Switch from your centralized network management, allowing you to replace or deactivate it.

5.3 Connected Devices Page

To view all connected devices, simply click on “Connected Devices” in the left sidebar. This will expand to display all kind of connected devices, including EAP and Client. By clicking on the specific kind of device of interest, you will be directed to its corresponding Devices page, which lists all relative devices. By selecting the particular type of device you are interested in, you will be directed to its corresponding Devices page, which provides a list of all the related devices. The EAP Devices page lists all the EAP devices and provides detailed information such as connection status, name, MAC address, IP address, connection quality, firmware version, and clients associated with each device. On the other hand, the Client Devices page lists all the end-user devices and provides information such as connection status, name, connection type, IP address, channel connection quality, RSSI signal, RX Rate, TX Rate, and history of each device.



STATUS	NAME	MAC ADDRESS	IP ADDRESS	QUALITY	FW VERSION	PROFILES	CLIENTS	
Online	2F RF-4937	24:fe:9a:0f:49:37	192.168.25.236		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	0	Remove
Online	2F RD-4943	24:fe:9a:0f:49:43	192.168.25.248		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	3	Remove
Online	3F BD-4963	24:fe:9a:0f:49:63	192.168.25.31		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	0	Remove
Online	3F Ph-4A3F	24:fe:9a:0f:4a:3f	192.168.25.107		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	0	Remove
Online	2F SQA-4a4b	24:fe:9a:0f:4a:4b	192.168.25.119		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	3	Remove
Online	3F CEO-4FCF	24:fe:9a:0f:4f:cf	192.168.25.64		cybertan_eww631-a1_y1...	DefaultSSID_95038-EY00...	0	Remove
Offline	3F Ph-5D61	24:fe:9a:0f:5d:61	--	--	cybertan_eww631-c1_y1...	DefaultSSID_95038-EY00...	0	Remove
Online	2F RD-5D7D	24:fe:9a:0f:5d:7d	192.168.25.56		cybertan_eww631-c1_y1...	DefaultSSID_95038-EY00...	1	Remove
Offline	3F BD-5DAD	24:fe:9a:0f:5d:ad	--	--	cybertan_eww631-c1_y1...	DefaultSSID_95038-EY00...	0	Remove
Offline	2F SQA-5E5D	24:fe:9a:0f:5e:5d	--	--	cybertan_eww631-c1_y1...	DefaultSSID_95038-EY00...	0	Remove

Showing 1 to 10 of 10 results

Figure 18. Connected Devices Page (EAP)

i. Connected Devices / EAP

This section displays all wireless access points adopted by the Controller and allows drilling down into their details and clients.

- **Status** - Connectivity status indicates whether APs are currently reachable by Controller.
- **Name** - Configured name/label for each access point.
- **MAC Address** - Unique hardware MAC address ID of each AP.
- **IP Address** - The IP address of adopted APs. Dynamically assigned from Controller subnet.
- **Quality** - Radio signal quality metric from AP to clients. Helps identify bad connections.
- **Firmware** - Version running on APs - upgradeable from Controller.
- **Profiles** - Applied configuration and policy profiles syncing settings to this AP.
- **Clients** - Number of clients actively connected to the AP radios. Drill down further.

When you want to assign a radio profile and/or wireless networks profile to an access point, you can click on a profile field of it. A menu will pop up on the right side for assigning profiles that you create at profile management in settings.

The screenshot displays the SonicFi Controller interface. On the left, a sidebar menu includes Dashboard, Topology, Connected Devices (with EAP selected), Client, Switch, Statistics, Insights, and Settings. The main area is titled 'EAP Devices' and shows a table of 10 access points. The table columns are STATUS, NAME, MAC ADDRESS, IP ADDRESS, QUALITY, and FW VER. All devices are 'Online'. The device '3F Ph-4A3F' is highlighted. On the right, a detailed view for '3F Ph-4A3F' is shown. It includes a 'Radio' section with a dropdown menu currently set to 'Default' (40 MHz, 160 MHz). Below this, it shows 'Showing 1 to 2 of 2 results.' and a link to 'Create New Profiles'. The 'Wireless Network(SSIDs)' section shows a list of SSIDs with columns for STATUS, NAME, SSID, BAND, and SECURITY. The first two SSIDs are 'SSID_95038-EY006-A1' and 'SSID_95038-EY006-A1_2.4G', both with 'Enable' status. Below this, it shows 'Showing 1 to 4 of 4 results.' and another link to 'Create New Profiles'. A 'Refresh' button is at the bottom of the right panel.

STATUS	NAME	MAC ADDRESS	IP ADDRESS	QUALITY	FW VER
Online	2F RF-4937	24:fe:9a:0f:49:37	192.168.25.237		cybertan...
Online	2F RD-4943	24:fe:9a:0f:49:43	192.168.25.248		cybertan...
Online	3F BD-4963	24:fe:9a:0f:49:63	192.168.25.32		cybertan...
Online	3F Ph-4A3F	24:fe:9a:0f:4a:3f	192.168.25.108		cybertan...
Online	2F SQA-4a4b	24:fe:9a:0f:4a:4b	192.168.25.120		cybertan...
Online	3F CEO-4FCF	24:fe:9a:0f:4f:cf	192.168.25.65		cybertan...
Online	3F Ph-5D61	24:fe:9a:0f:5d:61	192.168.25.33		cybertan...
Online	2F RD-5D7D	24:fe:9a:0f:5d:7d	192.168.25.59		cybertan...
Online	3F BD-5DAD	24:fe:9a:0f:5d:ad	192.168.25.104		cybertan...
Online	2F SQA-5E5D	24:fe:9a:0f:5e:5d	192.168.25.136		cybertan...

STATUS	NAME	SSID	BAND	SECURITY
Enable	Default	wifi_25g	2G,5G	psk2+ccmp
Enable	SSID_9503...	95038-EY0...	2G,5G	psk2+ccmp
Enable	SSID_9503...	SSID_9503...	2G	psk2+ccmp
Enable	123456789	123456789	2G	psk2+ccmp

Figure 19. Profile Assignment of Access Point

SonicFi Controller

Client Devices

SEARCH 

STATUS	NAME	CONNECTION	IP ADDRESS	CHANNEL	QUALITY	SIGNAL	RX RATE	TX RATE	HISTORY
Online	9005680A-NB	5G	192.168.25.55	124		-42	1.73 Gbps	1.73 Gbps	
Online	86a07b210c2f	5G	192.168.25.149	124		-54	0.26 Gbps	0.72 Gbps	
Online	M2101K7BNY	5G	192.168.25.68	124		-53	72.20 Mbps	0.23 Gbps	
Online	Galaxy-A53-5G	5G	192.168.25.42	124		-61	0.33 Gbps	0.29 Gbps	
Online	SQA-PC2	2.4G	192.168.25.126	11		-54	86.70 Mbps	12.00 Mbps	
Online	King-PC	2.4G	192.168.25.205	11		-52	86.50 Mbps	6.50 Mbps	
Online	74a6c0b8b6b10	2.4G	192.168.25.171	8		-64	1.00 Mbps	6.00 Mbps	

Showing 1 to 7 of 7 results

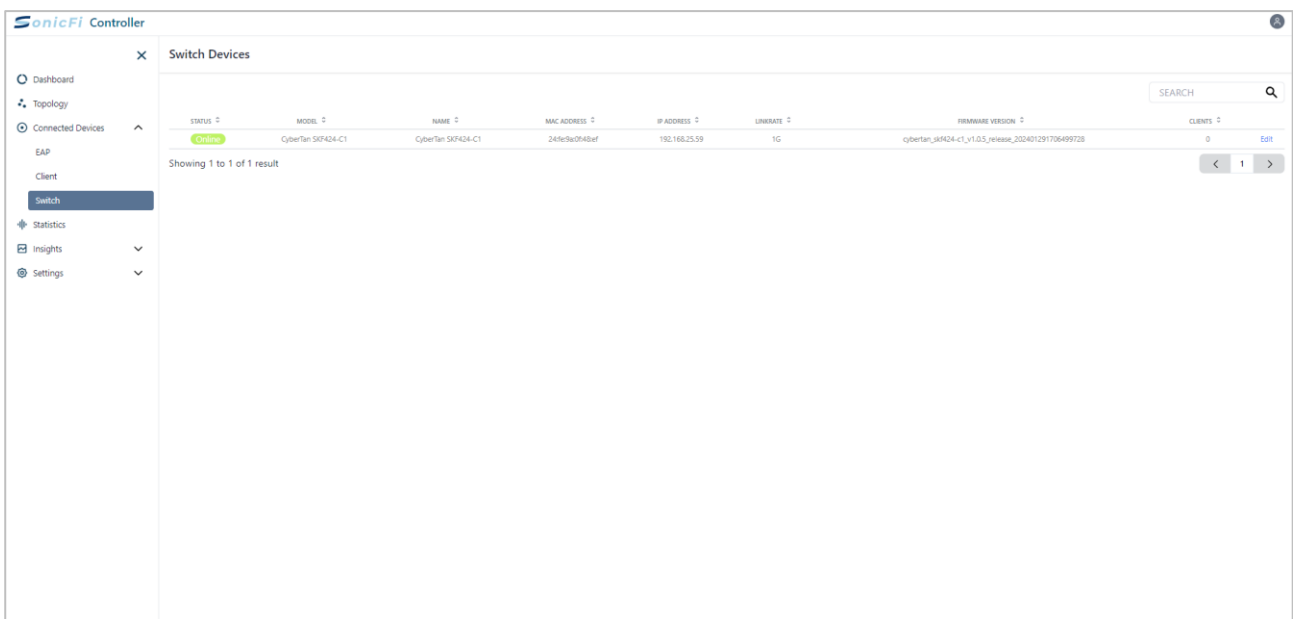
< 1 >

Figure 20. Connected Devices Page (Client)

ii. Connected Devices / Client

This section shows end user client devices connected to managed access points with rich detail.

- **Status** - Connectivity status of clients - disconnected clients greyed out.
- **Name** - Reported device hostnames if available.
- **Connection** - SSID of wireless network connected to.
- **IP Address** - DHCP assigned IP addresses for clients.
- **Channel** - The radio band/channel clients are connected on.
- **Quality** - Quantified signal quality metric from AP to client device.
- **Signal** - Received signal strength indicator (RSSI) dBm measurement.
- **Rx/Tx Rate** - Negotiated transmit and receive data rates (bandwidth speed) per device.
- **History** - Graph of reconnect history and radio metrics over time.



STATUS	MODEL	NAME	MAC ADDRESS	IP ADDRESS	LINK RATE	FIRMWARE VERSION	CLIENTS
Online	CyberTan SKF424-C1	CyberTan SKF424-C1	24fc9c0f48bf	192.168.25.59	1G	cybertan_skf424-c1_v1.0.5_release_202401291706499728	0

Showing 1 to 1 of 1 result

Figure 21. Connected Devices / Switches

iii. Connected Devices / Switch

This section displays any network Switches adopted by or connected to the Controller for centralized visibility.

- **Status** - Connectivity status indicates if Controller can currently reach Switch management.
- **Model** - Model hardware number of each connected Switch.
- **Name** - Configured name for each Switch.
- **MAC Address** - Unique MAC address hardware ID for each Switch.
- **IP Address** - IP address used to reach management interface of Switches.
- **Link Rate** - Uplink port speed connectivity to Switches.
- **Firmware** - Current firmware version running on Switches. Upgrade through Controller.
- **Clients** - Number of Switch ports with active device connections for capacity info.

When you click on edit of Switch of interest, you can manage ports of the Switch and setup settings like STP protocol, 802.1x, and QoS of it as well.


Hi, CybertanTW

Dashboard
Topology
Connected Devices
Statistics
Insights
Settings

Port Management

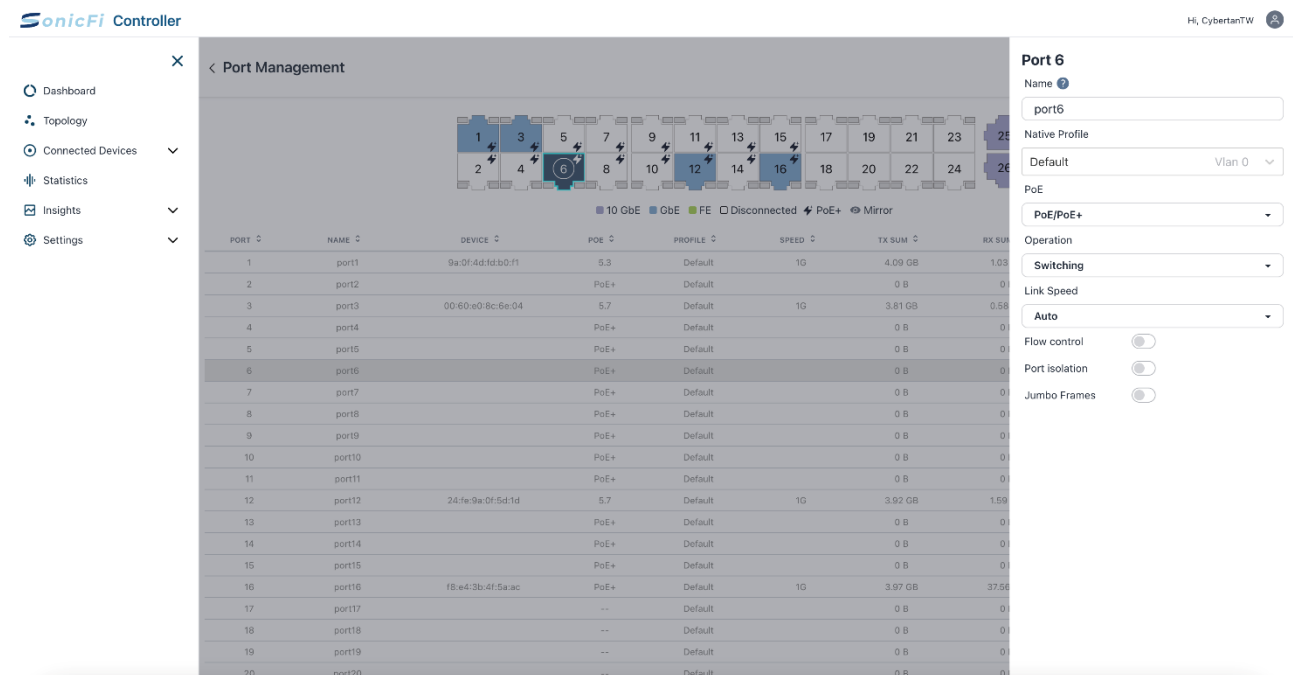


Legend: 10 GbE, GbE, FE, Disconnected, PoE+, Mirror

PORT	NAME	DEVICE	POE	PROFILE	SPEED	TX SUM	RX SUM	TX RATE	RX RATE
1	port1	9a:0f:4d:fd:b0:f1	5.3	Default	1G	4.09 GB	1.03 GB	0.94 Mbps	0.25 Mbps
2	port2		PoE+	Default		0 B	0 B	0 bps	0 bps
3	port3	00:60:e0:8c:9e:04	5.7	Default	1G	3.81 GB	0.58 GB	0.20 Mbps	0.12 Mbps
4	port4		PoE+	Default		0 B	0 B	0 bps	0 bps
5	port5		PoE+	Default		0 B	0 B	0 bps	0 bps
6	port6		PoE+	Default		0 B	0 B	0 bps	0 bps
7	port7		PoE+	Default		0 B	0 B	0 bps	0 bps
8	port8		PoE+	Default		0 B	0 B	0 bps	0 bps
9	port9		PoE+	Default		0 B	0 B	0 bps	0 bps
10	port10		PoE+	Default		0 B	0 B	0 bps	0 bps
11	port11		PoE+	Default		0 B	0 B	0 bps	0 bps
12	port12	24:fe:9a:0f:5d:1d	5.7	Default	1G	3.92 GB	1.59 MB	0.31 Mbps	0.63 Kbps
13	port13		PoE+	Default		0 B	0 B	0 bps	0 bps
14	port14		PoE+	Default		0 B	0 B	0 bps	0 bps
15	port15		PoE+	Default		0 B	0 B	0 bps	0 bps
16	port16	f8:e4:3b:4f:3a:ac	PoE+	Default	1G	3.97 GB	37.56 MB	0.31 Mbps	0.32 Kbps
17	port17		--	Default		0 B	0 B	0 bps	0 bps
18	port18		--	Default		0 B	0 B	0 bps	0 bps
19	port19		--	Default		0 B	0 B	0 bps	0 bps
20	port20		--	Default		0 B	0 B	0 bps	0 bps

Figure 22. Port Management of a Switch

In port management, you can easily get status of all ports of the Switch. And you can click on a specific port to configure it. Configurable functionality includes name, profile, POE, link speed, flow control, port isolation, and jumbo frames.



SonicFi Controller Hi, CyberantTW

Port Management

Legend: 10 GbE (blue), GbE (green), FE (yellow), Disconnected (grey), PoE+ (light blue), Mirror (purple)

PORT	NAME	DEVICE	POE	PROFILE	SPEED	TX SUM	RX SUM
1	port1	9a:0f:4d:fd:b0:f1	5.3	Default	1G	4.09 GB	1.03
2	port2		PoE+	Default		0 B	0
3	port3	00:60:a0:8c:6e:04	5.7	Default	1G	3.81 GB	0.58
4	port4		PoE+	Default		0 B	0
5	port5		PoE+	Default		0 B	0
6	port6		PoE+	Default		0 B	0
7	port7		PoE+	Default		0 B	0
8	port8		PoE+	Default		0 B	0
9	port9		PoE+	Default		0 B	0
10	port10		PoE+	Default		0 B	0
11	port11		PoE+	Default		0 B	0
12	port12	24:7e:9a:0f:5d:1d	5.7	Default	1G	3.92 GB	1.59
13	port13		PoE+	Default		0 B	0
14	port14		PoE+	Default		0 B	0
15	port15		PoE+	Default		0 B	0
16	port16	f8:e4:3b:4f:5a:ac		Default	1G	3.97 GB	37.58
17	port17		--	Default		0 B	0
18	port18		--	Default		0 B	0
19	port19		--	Default		0 B	0
20	port20		--	Default		0 B	0

Port 6 Configuration

Name: port6

Native Profile: Default (Vlan 0)

PoE: PoE/PoE+

Operation: Switching

Link Speed: Auto

Flow control: ☐

Port isolation: ☐

Jumbo Frames: ☐

Figure 23. Port Configuration

iv. Switch / Port Configuration

- **Name** – Configured name.
- **Profile** – VLAN profile created in profile management of settings.
- **POE** – Power on Ethernet.
- **Operation** – Switching mode, and mirroring mode.
- **Link Speed** – Auto, 100Mbps, 1Gbps.
- **Flow Control** – match a speed of end user devices.
- **Port isolation** – physically isolate a port to prevent unexpected actions by other devices.
- **Jumbo frames** - an Ethernet frame, or data packet, with a payload greater than the standard size of 1,500 bytes. The maximum jumbo frame size can be configured to be up to 9,000 bytes

5.4 Statistics Page

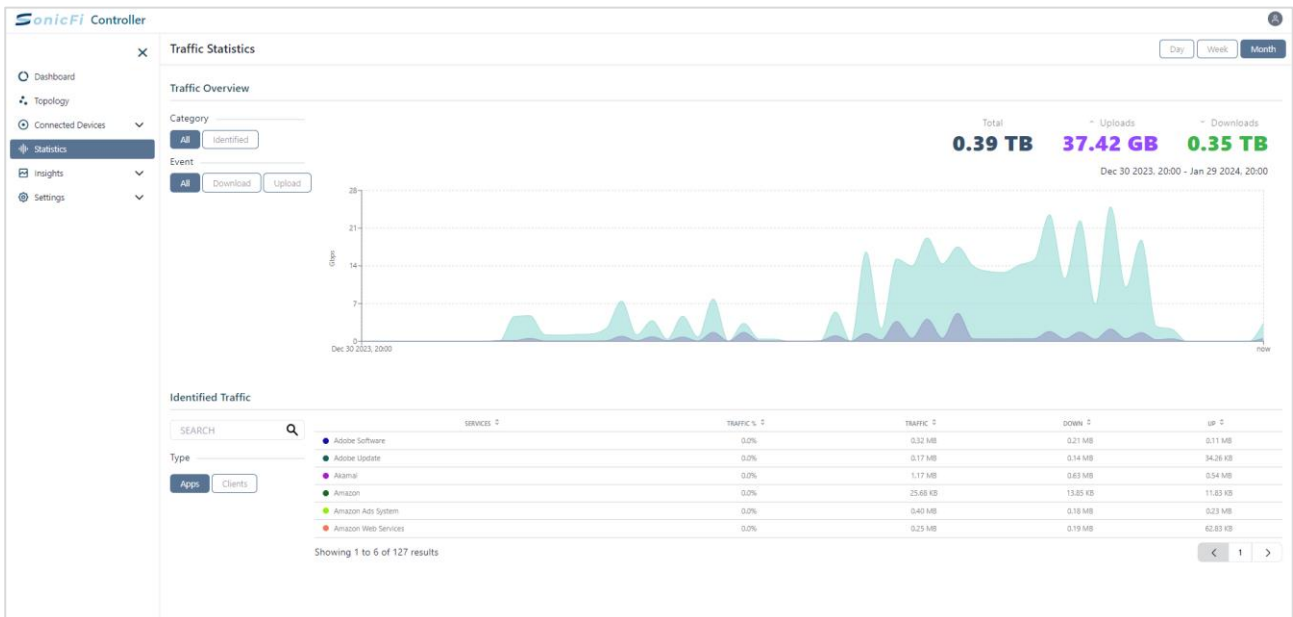


Figure 24. Statistics Page

This page consists of two sections of information - the “Traffic Overview” section and the “Identified Traffic” section.

The “Traffic Overview” section offers details on the amount of data uploaded, downloaded, and used in total. You have the option to filter the information by selecting the category type (All or Identified) and the event type (All, Download, or Upload).

The “Identified Traffic” section has two types: Apps and Clients. The Apps type displays a list of services and provides information on each service's name, traffic, download, and upload. The Clients type displays all the information offered in the Apps type, except that it shows the client's name instead of the service's name.

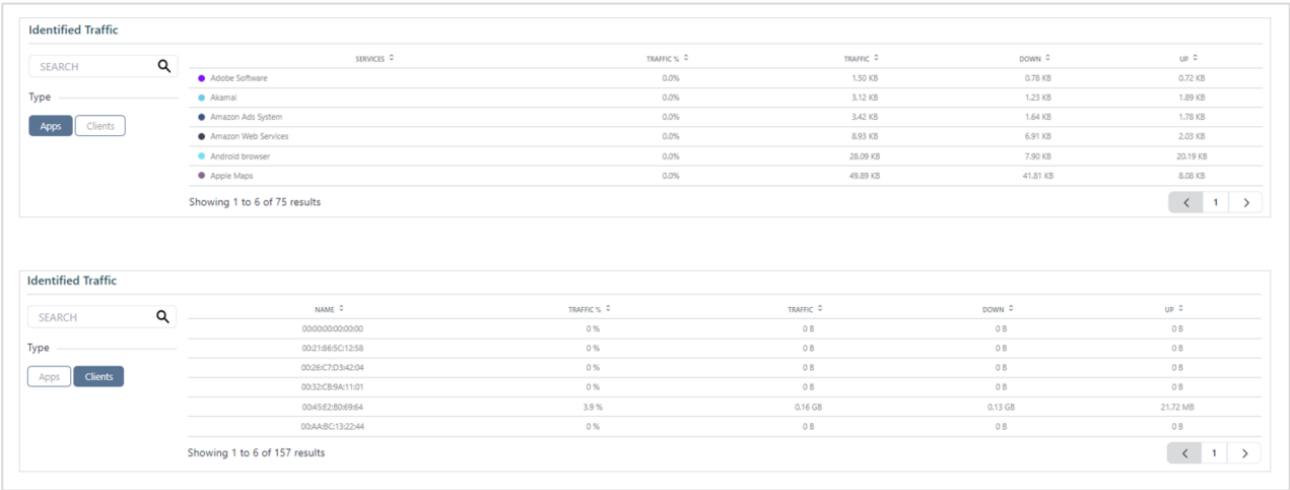


Figure 25. Identified Traffic

5.5 Wi-Fi Insights Page

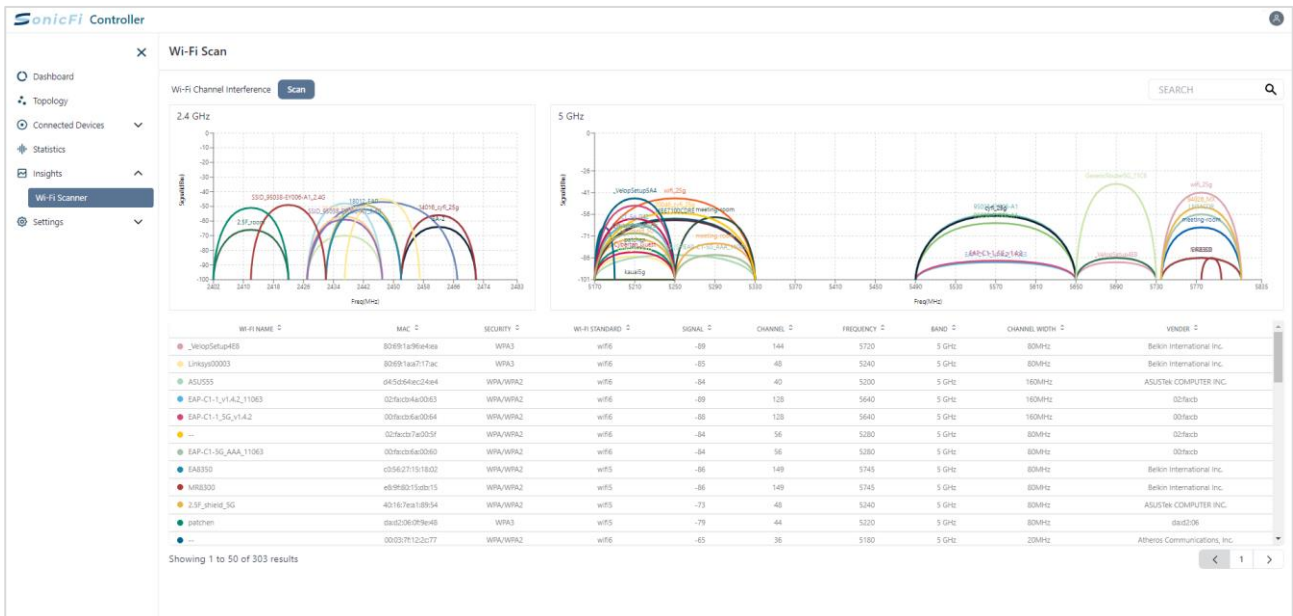


Figure 26. Wi-Fi Insights Page

The Wi-Fi scanning dashboard allows viewing details on both your own SSIDs as well as third party networks detected in the area surrounding your access points. The page may be empty with no information displayed, but by clicking on the “Scan” button, the Controller will initiate a scan of all potential APs. Please note that the scanning process may take anywhere between 3 to 5 minutes.

- **Wi-Fi Name** - The network SSID name being broadcast.
- **MAC** - The MAC address of the AP broadcasting the SSID.
- **Security** - The security protocol in use, such as WPA, WPA2, or open/none.
- **Wi-Fi Standard** - The wireless standard supported, such as 802.11ac Wave 2 (WiFi 5) or AX (WiFi 6).
- **Signal** - Received Signal Strength Indicator (RSSI) which indicates the signal strength quality being received by connected clients.

- **Channel** - The wireless channel the SSID is configured to broadcast on.
- **Frequency** - The frequency of the wireless channel.
- **Band** - The wireless band the SSID is broadcasting on - typically either 2.4Ghz or 5Ghz. Any networks detected in your environment, additional visibility is provided into:
- **Channel Width** - The channel width being broadcast, such as 20Mhz or 40Mhz. Wider channels provide faster speeds.
- **Vendor** - The manufacturer name reporting the network such as Cisco, CyberTan, etc. Useful for tracking potential interference sources.

Combining this RF scanning view with Wi-Fi airtime usage graphs helps identify sources of interference or network congestion in the covered area impacting users. Proactively optimize your own SSIDs based on the environment insights.

5.6 Settings Page

When you click on “Settings” in the left sidebar, a list of all possible settings to manage the Controller and the EAPs will expand. These settings include Wi-Fi, Network, Internet, Static Route, Firewall, Port Forwarding, and System.

- The Wi-Fi settings page allows you to customize Channel Width, Transmit Power, and Channels in both the 2.4G and 5G bands, along with Steering and Sensitivity options. Additionally, you can create new Wi-Fi settings or edit existing ones with fields such as Name, Password, Wi-Fi Band, Fast Roaming, Security Protocol, Group Rekey Interval, Hide Wi-Fi Name, and MAC Address Filtering.
- The Network Settings page enables you to configure your LAN by setting up the IP address and Netmask, as well as the DHCP server with a range of IPs and lease time.
- The Internet Settings page displays the current Internet status, including active status, name, IP address, and uptime. From this page, you can also edit WAN settings and the IPv4 connection type. WAN settings include name, VLAN ID, MAC address clone, and DNS server.
- The Profile Management page can help you manage Internet setting easily. By decoupling profiles from access point configurations, teams can define profiles once then efficiently assign to multiple APs. This prevents duplicate work.
- The Static Route & Firewall Settings page displays a comprehensive list of the current settings for Static Routes, Firewalls, and Port Forwarding. You have the ability to modify or create new Static Routes with fields such as Enable, Name, Target Network IP, Netmask, Gateway IP, and Interface. Similarly, you can create or modify Firewalls with fields such as Enable, Name, Action, Input Interface, Output Interface, IP Type, Source IP, Source Port, Destination IP, and Destination Port. Additionally, you can set up Port Forwarding by creating or editing entries with fields such as Enable, Name, Private IP, Interface Private Port, Type, and Source Port. The Firewall and Port Forwarding functions can be easily Switched on or off as needed.
- On the System Settings page, you can configure your language settings, check for firmware updates, restore from a backup, download backup configurations, enable or disable system logging and set up an NTP server IP.

5.6.1 Wi-Fi Section

This section allows you to configure advanced WiFi optimization features to improve the wireless performance and client experience on your network. Fine-tune settings like band steering and sensitivity to better control how clients connect and roam between access points.

- **Steering (toggle on/off)** - The steering feature, when enabled, encourages dual-band capable client devices to preferentially connect or steer to the 5GHz WiFi band instead of the more crowded 2.4GHz band. This can reduce interference and maximize available bandwidth.
- **Sensitivity: Low/Medium/High** - This setting adjusts the sensitivity level that determines when and how aggressively the steering function will attempt to move dual-band clients off the 2.4GHz band and over to 5GHz. A higher sensitivity means more clients will get steered, while lower sensitivity limits this to only clients with very strong 5GHz signal.

The proper Sensitivity level depends on your environment - higher levels work best when you have strong, redundant 5GHz coverage, while lower may be preferable if you have lower 5GHz signal propagation.

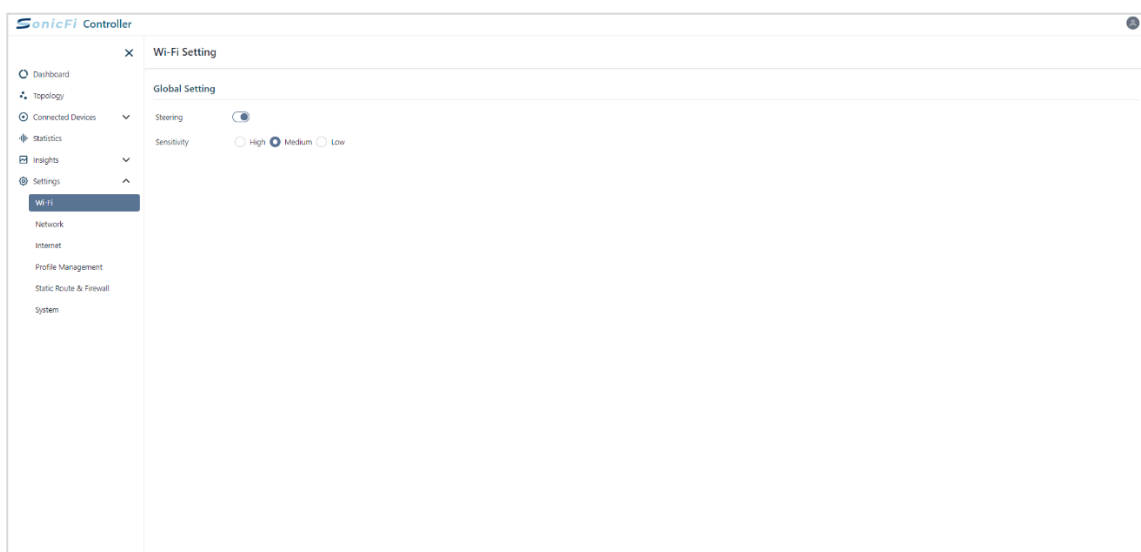


Figure 27. Wi-Fi Setting

5.6.2 Network Section

It lists LAN profiles. You can add new LAN profile or edit exist one with the Network Name, VLAN, IP Address, Netmask, and the starting and ending points of the DHCP server. Finally, you can decide whether to enable the IPv6 option.

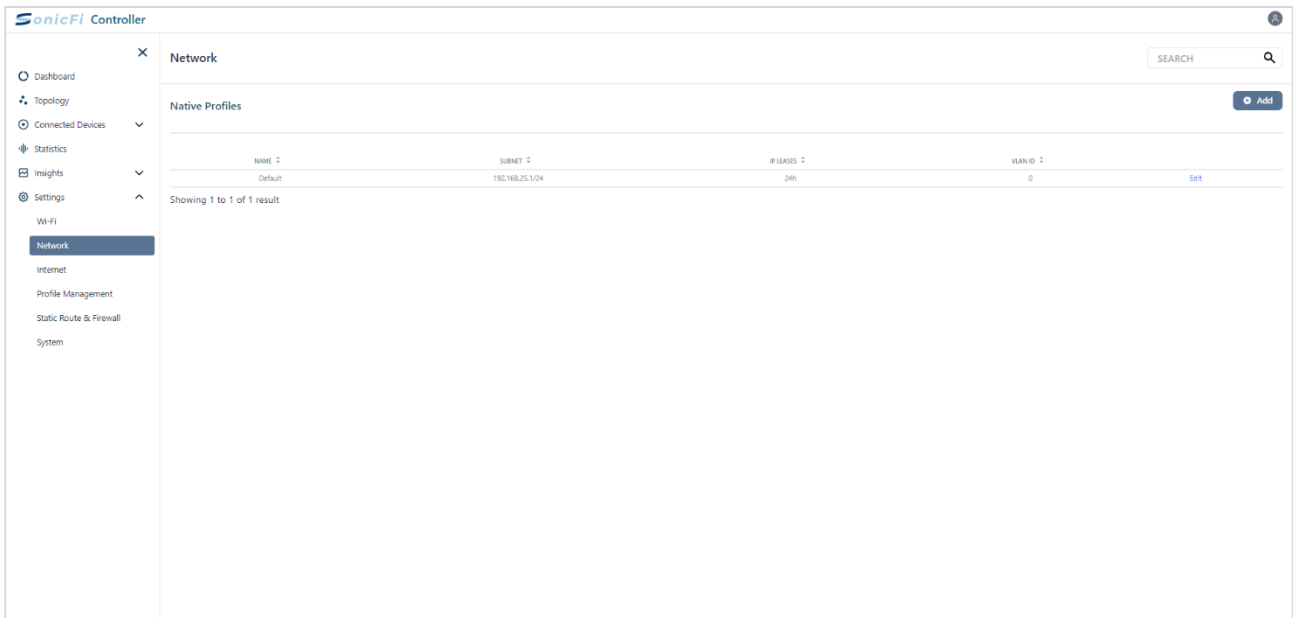


Figure 28. Network Settings (1/2)

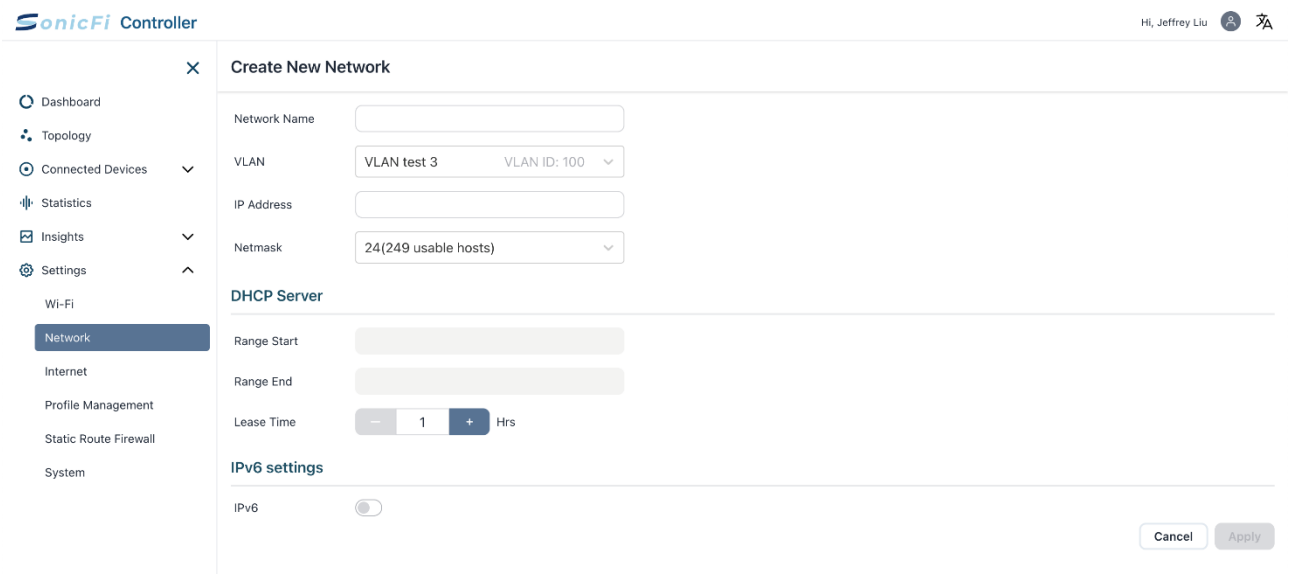


Figure 29. Network Settings (2/2)

- **Network Name** - This is the name assigned to your LAN network. It identifies your network and is often used to differentiate it from other networks.

- **VLAN (Virtual Local Area Network)** - The VLAN configuration created at Profile Management allows you to segment your LAN into multiple virtual networks, each operating independently of the others. The default VLAN is VLAN0, which is commonly used for the primary LAN.
- **IP Address** - Specifies the IP address assigned to the LAN interface. This address is used to identify your network on the local network segment.
- **Netmask** - The netmask defines the size of the network segment associated with the LAN IP address. It determines the range of IP addresses that are considered part of the LAN.
- **DHCP Server** - Enables or disables the DHCP (Dynamic Host Configuration Protocol) server functionality for the LAN network. DHCP simplifies network configuration by automatically assigning IP addresses to devices on the LAN.
 - **Range Start:** The starting IP address of the DHCP address pool.
 - **Range End:** The ending IP address of the DHCP address pool.
 - **Lease Time:** The duration for which DHCP-assigned IP addresses are valid before they expire and may be reassigned.
- **IPv6 Toggle On/Off** - Allows you to enable or disable IPv6 support for the LAN network. IPv6 is the latest version of the Internet Protocol and provides a larger address space compared to IPv4.

By configuring these Network settings, you can effectively manage your local network, assign IP addresses dynamically, and control IPv6 connectivity according to your network requirements. Remember to save your changes after configuring the settings for them to take effect.

5.6.3 Internet Section

Upon entering the Internet Settings, you can edit any of the configurations in the Internet Status section. You can modify the Internet Name, number of VLANs, Mac Address Clone, and choose whether to check the Automatic mode option for the DNS Server. Finally, there are IPv4 Connection options: DHCP, Static IP, and PPPoE.

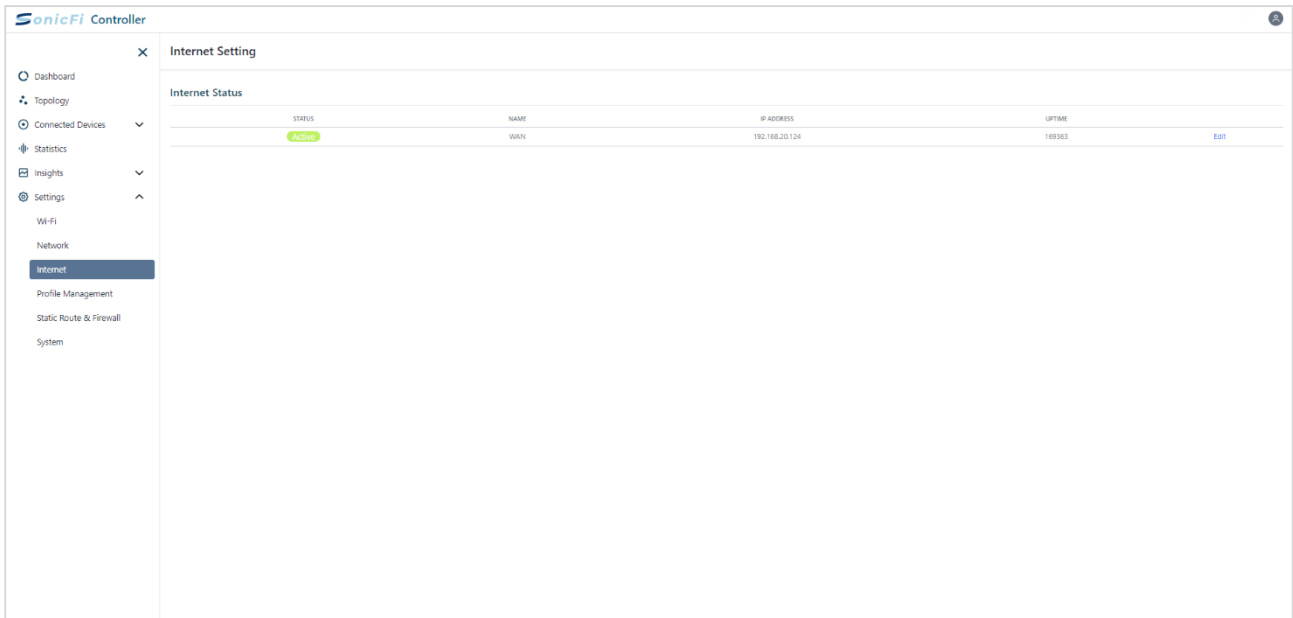


Figure 30. Internet Settings

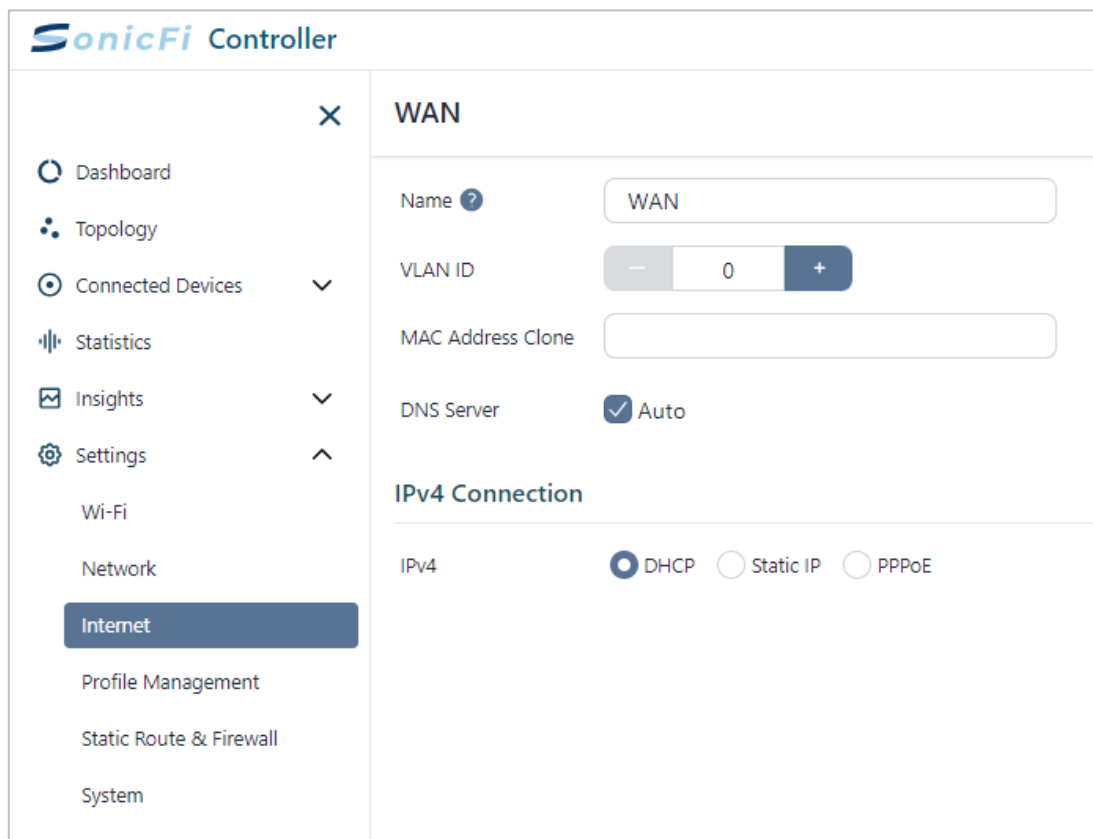


Figure 31. Settings / Internet / WAN

- **Name** - This field allows you to assign a name to your WAN connection for identification purposes.
- **VLAN ID** - If your WAN connection requires VLAN tagging, you can specify the VLAN ID here.
- **MAC Address Clone** - This feature allows you to clone the MAC address of another device connected to the WAN interface. Cloning the MAC address can sometimes help with compatibility or troubleshooting with your ISP.
- **DNS Server Auto (Toggle On/Off)** - Enabling this option allows your router to automatically obtain DNS server information from your ISP. Disabling it lets you manually specify DNS server settings.
- **IPv4 Connection Type** - You can select the appropriate connection type for your IPv4 WAN connection. The available options are:
 - **DHCP** (Dynamic Host Configuration Protocol): Obtain IP address, subnet mask, default gateway, and DNS server information automatically from the ISP.
 - **Static IP**: Manually configure the IP address, subnet mask, default gateway, and DNS server information provided by your ISP.
 - **PPPoE** (Point-to-Point Protocol over Ethernet): Establish a PPPoE connection with your ISP using a username and password. This is common for DSL internet connections.

By configuring these WAN settings, you can establish a connection between your local network and the internet, ensuring that your devices can access online resources and services. Remember to save your changes after configuring the settings for them to take effect.

5.6.4 Profile Management Section

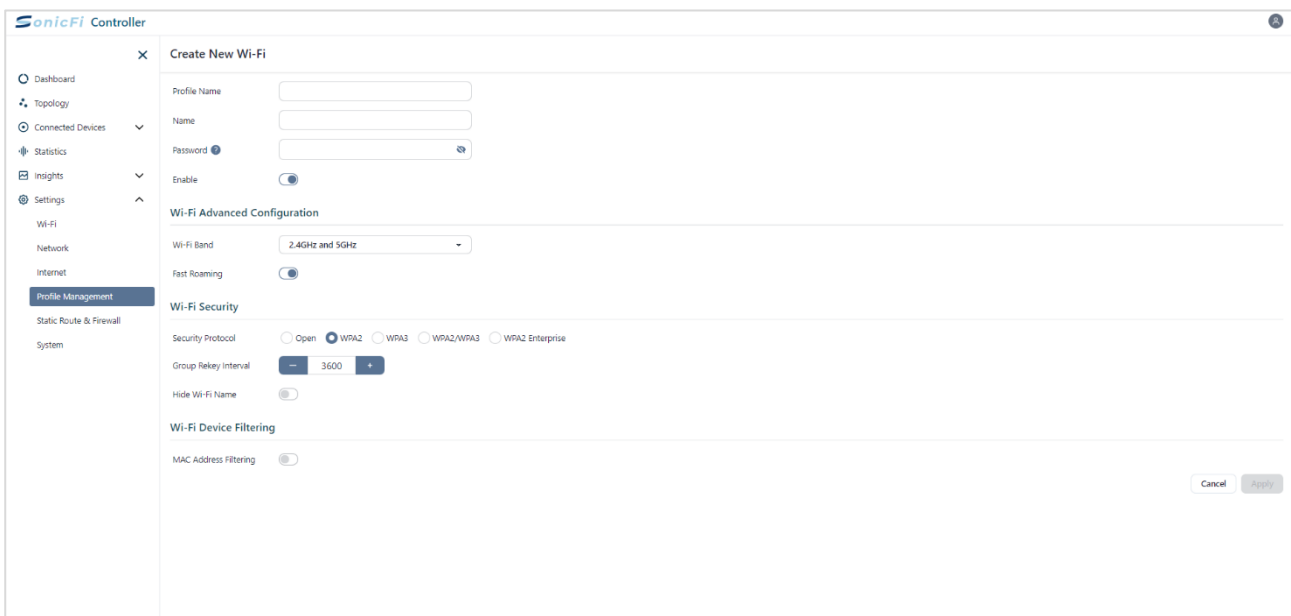


status	name	ssid	band	security	
Enabled	Default	wifi_25g	2G, 5G	psk2+comp	
Enabled	wifi_25g	wifi_25g	2G, 5G	psk2+comp	Edit Remove
Enabled	SSID_95038-EY008-A1	95038-EY008-A1	2G, 5G	psk2+comp	Edit Remove
Enabled	SSID_95038-EY008-A1_24G	SSID_95038-EY008-A1_24G	2G	psk2+comp	Edit Remove

Showing 1 to 4 of 4 results

Figure 32. Profile Management (1/2)

On the Profile Management page, you can view the status of the Wireless Networks (SSIDs), Radios, Virtual Networks, and Radius (2.4G/5G). By clicking edit, you can edit the configurations for each network. Afterwards, you can easily and quickly manage each network through the assignment method.



Create New Wi-Fi

Profile Name:

Name:

Password:

Enable: ☒

Wi-Fi Advanced Configuration

Wi-Fi Band:

Fast Roaming: ☒

Wi-Fi Security

Security Protocol: ☐ Open ☒ WPA2 ☐ WPA3 ☐ WPA2/WPA3 ☐ WPA2 Enterprise

Group Rekey Interval:

Hide Wi-Fi Name: ☐

Wi-Fi Device Filtering

MAC Address Filtering: ☐

Cancel Apply

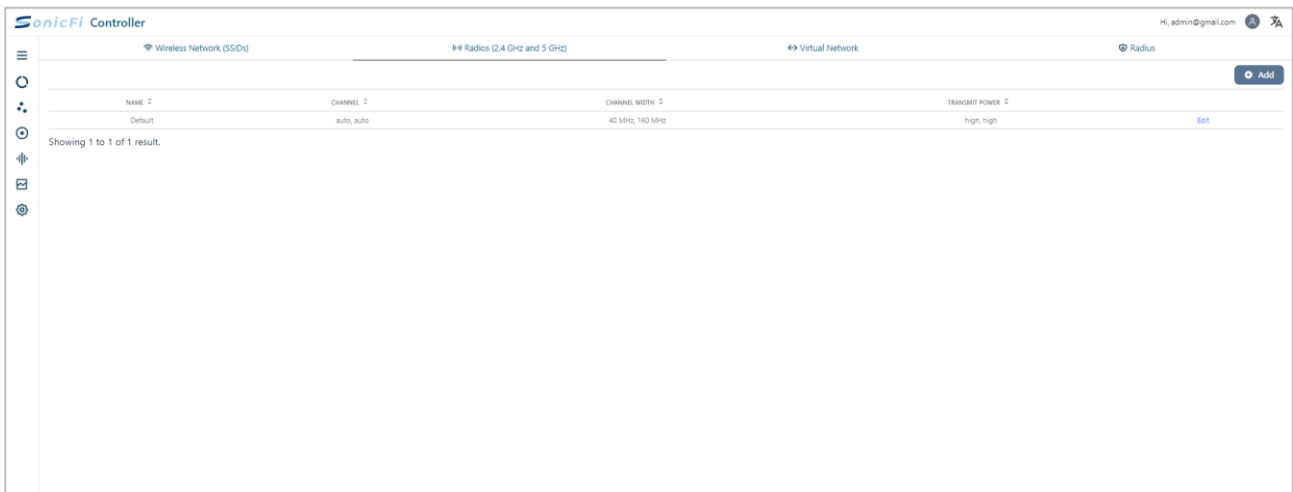
Figure 33. Profile Management (2/2)

- **Profile Name** - This field allows you to assign a name to the Wi-Fi profile for identification purposes.

- **Name** - Enter the name of your Wi-Fi network (SSID) here.
- **Password** - Set the password for your Wi-Fi network. This password will be required for devices to connect to the network.
- **Enabled** - Toggle this option on to enable the Wi-Fi profile.
- **Wi-Fi Band** - Select the frequency bands supported by your Wi-Fi network. Options typically include 2.4GHz, 5GHz, or both.
- **Fast Roaming (Toggle On/Off)** - Enabling fast roaming allows devices to Switch seamlessly between access points without experiencing interruption in connectivity.
- **Security Protocol** - Choose the security protocol for your Wi-Fi network. Options may include Open (no security), WPA2 (Wi-Fi Protected Access 2), WPA3, WPA2 & WPA3, or WPA2 Enterprise.
- **Group Rekey Interval** - Set the interval (in seconds) for refreshing encryption keys used in WPA security protocols.
- **Hide Wi-Fi Name (Toggle On/Off)** - Enabling this option hides the Wi-Fi network name (SSID) from being broadcasted publicly.
- **MAC Address Filtering** - This feature allows you to specify MAC addresses of devices that are permitted or denied access to the Wi-Fi network based on a filtering list.

By configuring these settings, you can customize and secure your Wi-Fi network according to your preferences and requirements, ensuring optimal performance and protection for your wireless connections. Remember to save your changes after configuring the settings for them to take effect.

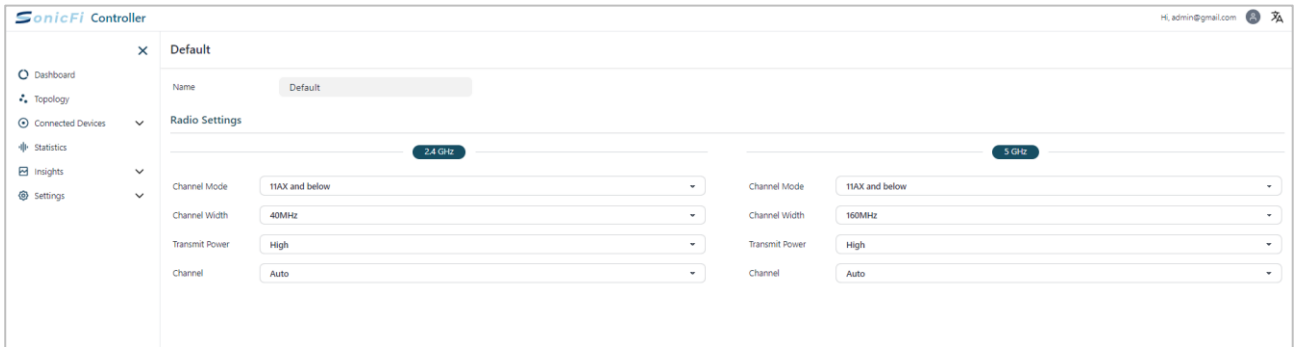
The Wi-Fi settings page allows you to customize Channel Width, Transmit Power, and Channels in both the 2.4G and 5G bands. Additionally, you can create new Wi-Fi settings or edit existing ones with fields such as Name, Password, Wi-Fi Band, Fast Roaming, Security Protocol, Group Rekey Interval, Hide Wi-Fi Name, and MAC Address Filtering.



This section allows you to configure separate WiFi radio profiles for the 2.4GHz and 5GHz frequency bands. Customize settings like the radio name, operating channel, channel width, and transmit power levels to optimize performance for your environment. These profiles can then be applied to individual access points or groups of APs.

- **Name** - Assign a descriptive name to each radio profile for easy identification.
- **Channel** - Select which WiFi channel the radio will operate on for the respective 2.4GHz or 5GHz band.
- **Channel Width** - Set the channel width in MHz, allowing wider 40/80MHz channels for higher throughput or narrower 20MHz for increased range.
- **Transmit Power** - Adjust the transmit power level as a percentage of the maximum. Lower levels reduce interference but decrease range.

Creating separate optimized profiles allows you to tune the 2.4GHz and 5GHz radios differently based on their signal propagation characteristics in your environment. Apply the profiles to access points to provision the configured settings.



This edit page allows you to customize advanced settings for the 2.4GHz and 5GHz radio bands to optimize wireless performance and meet the needs of your environment. You can adjust the operating channel, channel width, transmit power, and more.

2.4GHz Settings:

- **Transmission Mode:**

- 11ax and below: Enables 802.11ax (Wi-Fi 6) and backward compatible modes
- 11n and below: Limits to 802.11n (Wi-Fi 4) and older modes

- **Channel Width:**

- 20MHz: Operates on a single 20MHz channel
- 40MHz: Bonds two 20MHz channels for higher 40MHz throughput

- **Transmit Power:**

- Low/Medium/High: Adjusts the 2.4GHz radio's transmit output power

- **Channel:**

- Auto: Automatically selects an operating channel
- Manual: Specify a fixed channel from 1 to 11

5GHz Settings:

- **Transmission Mode:**

- 11ax and below: Enables 802.11ax (Wi-Fi 6) and backward compatible
- 11ac and below: Limits to 802.11ac (Wi-Fi 5) and older
- 11n and below: Only 802.11n and older

- **Channel Width:**

- 20MHz/40MHz/80MHz/160MHz: Select different channel widths

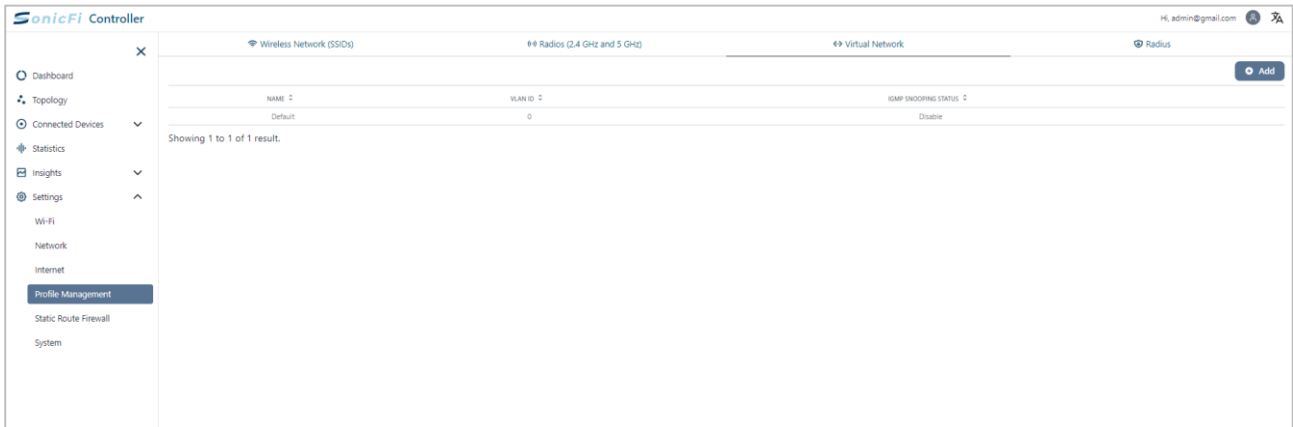
- **Transmit Power:**

- Low/Medium/High

- **Channel:**

- Auto: Automatically selects
- Manual: Specify a fixed channel from 36 to 165

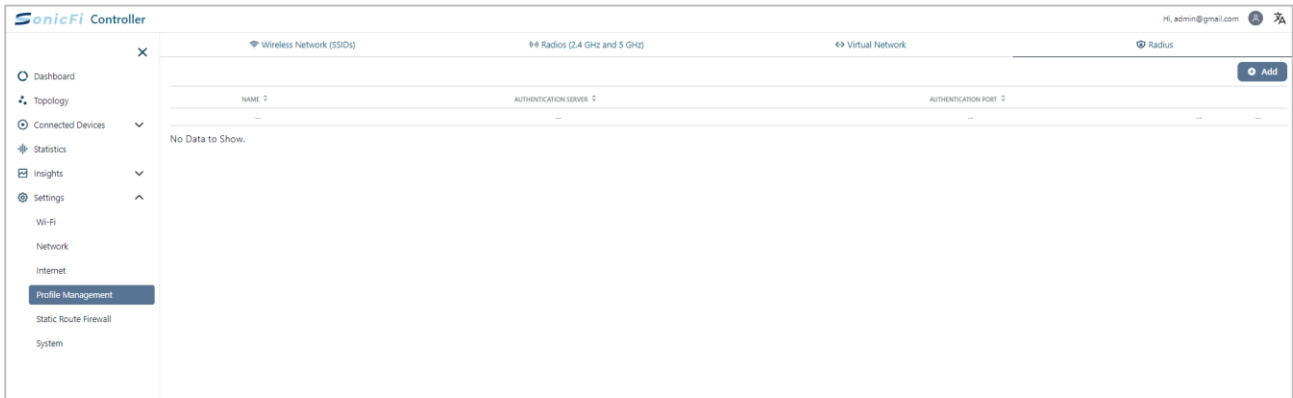
The 5GHz band offers more available channels and wider channel width options to enable higher throughput, but has shorter range compared to 2.4GHz. Properly configuring these settings can maximize the wireless network's performance.



This section allows you to configure virtual network profiles that segment your wireless network into multiple separate broadcast domains or VLANs. Creating different VLAN profiles enables features like network isolation, bandwidth management, and access control. These profiles can then be mapped to specific SSIDs.

- **Name** - Assign a descriptive name to each virtual network profile for identification.
- **VLAN ID** - Specify the numeric VLAN ID that this virtual network will map to. This enables routing traffic for the SSID to the configured VLAN.
- **IGMP Snooping Status** - Toggle IGMP snooping on or off for this VLAN. When enabled, it limits multicast traffic to only the ports associated with receivers requesting it.

By configuring multiple VLAN profiles with different IDs and settings, you can segment wireless clients and control their network access and traffic routing based on individual profiles applied to different WiFi networks (SSIDs). Common uses include guest network isolation, employee/corporate separation, and Quality of Service prioritization.



RADIUS (Remote Authentication Dial-In User Service) server profiles define external authentication servers used to validate wireless client credentials and control network access. Configuring RADIUS enables centralized authentication and policy management instead of using local credentials stored on each device.

- **Name** - Specify a name to identify this RADIUS server profile.
- **Authentication Server** - Enter the IP address or hostname of the RADIUS authentication server.
- **Authentication Port** - Set the UDP port number the RADIUS server is listening on for authentication requests, typically 1812.

Additional settings like shared secrets, timeouts, and specific RADIUS protocols like EAP types can also be configured per profile. Once created, RADIUS server profiles can be mapped to individual wireless networks (SSIDs) or device groups to enforce authentication before granting network access. This allows using the same RADIUS server centrally across your wireless infrastructure for consistent access policies.

5.6.5 Static Route & Firewall Section

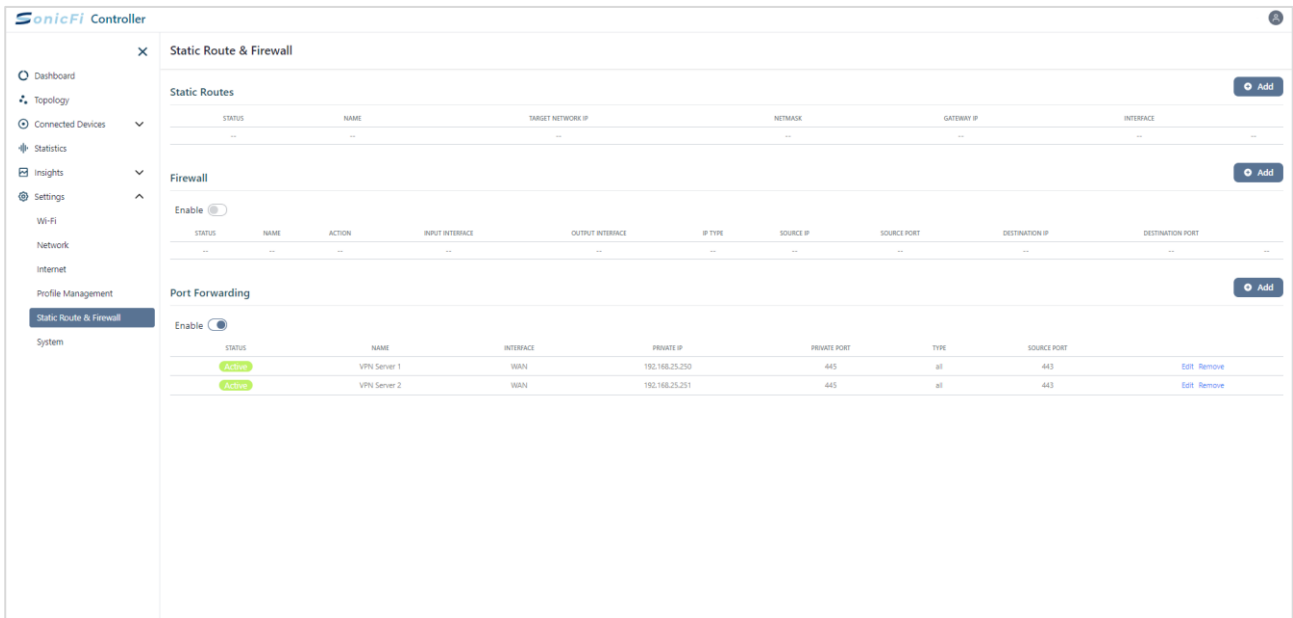


Figure34. Static Route & Firewall

Static Route

- **Status** - This column indicates whether the static route is currently enabled or disabled.
- **Name** - Assign a name to the static route for easy identification.
- **Target Network IP** - Enter the IP address of the target network for which the static route is being configured.
- **Netmask** - Specify the netmask for the target network.
- **Gateway IP** - Provide the IP address of the gateway through which traffic to the target network should be routed.
- **Interface** - Indicate the interface through which the traffic will be sent to reach the target network.

Firewall

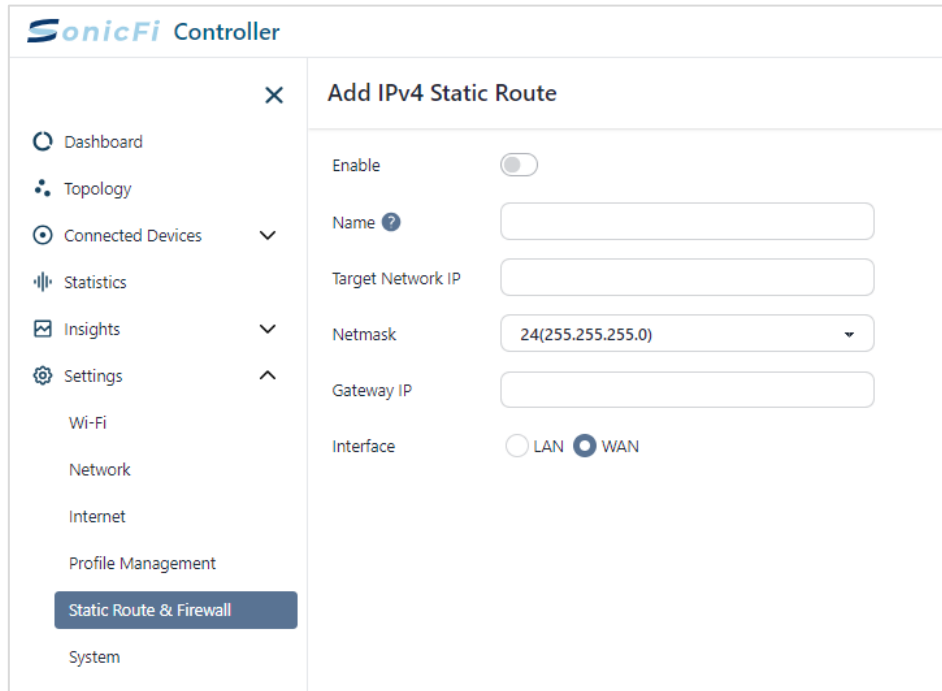
- **Enable (Toggle On/Off)** - Use this toggle button to enable or disable the firewall.
- **Status** - Shows whether the firewall rule is currently active.

- **Name** - Assign a name to the firewall rule for easy identification.
- **Action** - Specify the action to be taken for traffic matching this rule (e.g., allow, deny).
- **Input Interface** - Indicate the input interface for incoming traffic affected by this rule.
- **Output Interface** - Specify the output interface for outgoing traffic affected by this rule.
- **IP Type** - Specify the IP protocol type (e.g., TCP, UDP) for traffic affected by this rule.
- **Source IP** - Specify the source IP address or range for traffic affected by this rule.
- **Source Port** - Specify the source port or port range for traffic affected by this rule.
- **Destination IP** - Specify the destination IP address or range for traffic affected by this rule.
- **Destination Port** - Specify the destination port or port range for traffic affected by this rule.

Port Forwarding

- **Enable (Toggle On/Off)** - Use this toggle button to enable or disable port forwarding.
- **Status** - Indicates whether the port forwarding rule is currently active.
- **Name** - Assign a name to the port forwarding rule for easy identification.
- **Interface** - Indicate the network interface through which the port forwarding rule will be applied.
- **Private IP** - Specify the private IP address of the device to which traffic will be forwarded.
- **Private Port** - Specify the private port on the device to which traffic will be forwarded.
- **Type** - Specify the type of traffic (e.g., TCP, UDP) to be forwarded.
- **Source Port** - Specify the source port or port range for incoming traffic to be forwarded.

Through Add IPv4 Static Route, you can configure the Name, Target Network IP, Netmask, Gateway IP, and whether the Interface goes through LAN or WAN.



SonicFi Controller

Add IPv4 Static Route

Enable ☐

Name

Target Network IP

Netmask

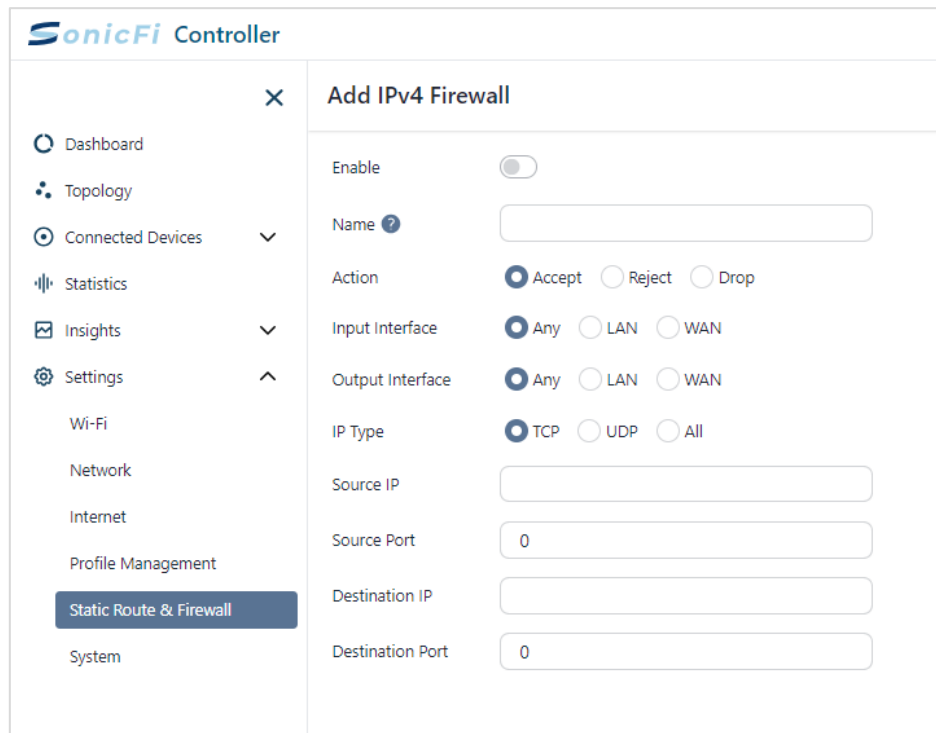
Gateway IP

Interface ☐ LAN ☒ WAN

Left sidebar menu: Dashboard, Topology, Connected Devices, Statistics, Insights, Settings, Wi-Fi, Network, Internet, Profile Management, **Static Route & Firewall**, System.

Figure 35. Add IPv4 Static Route

Through Add IPv4 Firewall, you can configure the Name, Action, Input Interface, Output Interface, IP Type, Source IP, Source Port, Destination IP, and Destination Port.



SonicFi Controller

Add IPv4 Firewall

Enable ☐

Name

Action ☒ Accept ☐ Reject ☐ Drop

Input Interface ☒ Any ☐ LAN ☐ WAN

Output Interface ☒ Any ☐ LAN ☐ WAN

IP Type ☒ TCP ☐ UDP ☐ All

Source IP

Source Port

Destination IP

Destination Port

Left sidebar menu: Dashboard, Topology, Connected Devices, Statistics, Insights, Settings, Wi-Fi, Network, Internet, Profile Management, **Static Route & Firewall**, System.

Figure 36. Add IPv4 Firewall

- **Enable (Toggle On/Off)** - Use this toggle button to enable or disable the IPv4 firewall rule.

- **Name** - Assign a name to the firewall rule for easy identification.
- **Action** - Specify the action to be taken for traffic matching this rule. Options include accept, reject, or drop.
- **Input Interface** - Indicate the input interface for incoming traffic affected by this rule. Options may include any, LAN, or WAN.
- **Output Interface** - Specify the output interface for outgoing traffic affected by this rule. Options may include any, LAN, or WAN.
- **IP Type** - Specify the IP protocol type for traffic affected by this rule. Options may include TCP, UDP, or All.
- **Source IP** - Specify the source IP address or range for traffic affected by this rule.
- **Source Port** - Specify the source port or port range for traffic affected by this rule.
- **Destination IP** - Specify the destination IP address or range for traffic affected by this rule.
- **Destination Port** - Specify the destination port or port range for traffic affected by this rule.

The Port Forwarding feature allows you to know what the current Source Port is coming from. By Editing Port Forwarding, you can change its name, Private IP, Private Port, Source Port, and specify its form as TCP, UDP, or both.

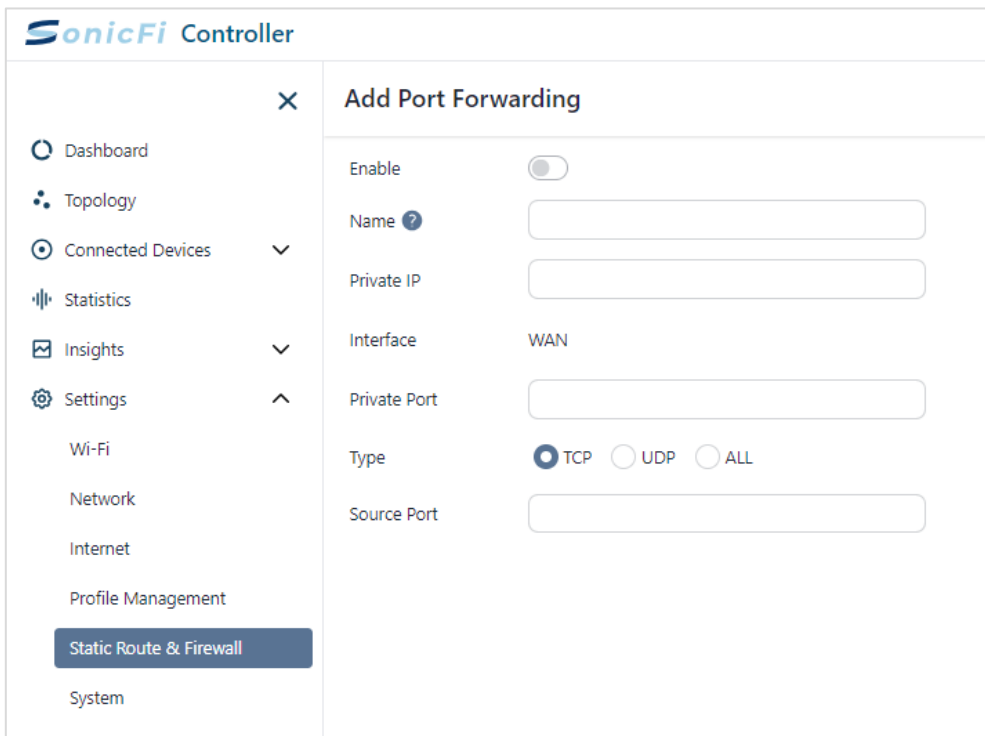


Figure 37. Add Port Forwarding

- **Enable (Toggle On/Off)** - Use this toggle button to enable or disable the port forwarding rule.
- **Name** - Assign a name to the port forwarding rule for easy identification.
- **Private IP** - Specify the private IP address of the device on your LAN that you want to forward incoming traffic to.
- **Interface** - Select the interface through which the incoming traffic will be received. Options may include WAN or other available interfaces.
- **Private Port** - Specify the port on the private IP address to which the incoming traffic will be forwarded.
- **Type** - Specify the type of protocol for the forwarded traffic. Options may include TCP, UDP, or All.
- **Source Port** - Specify the source port or port range for the incoming traffic that will be forwarded.

5.6.7 System Section

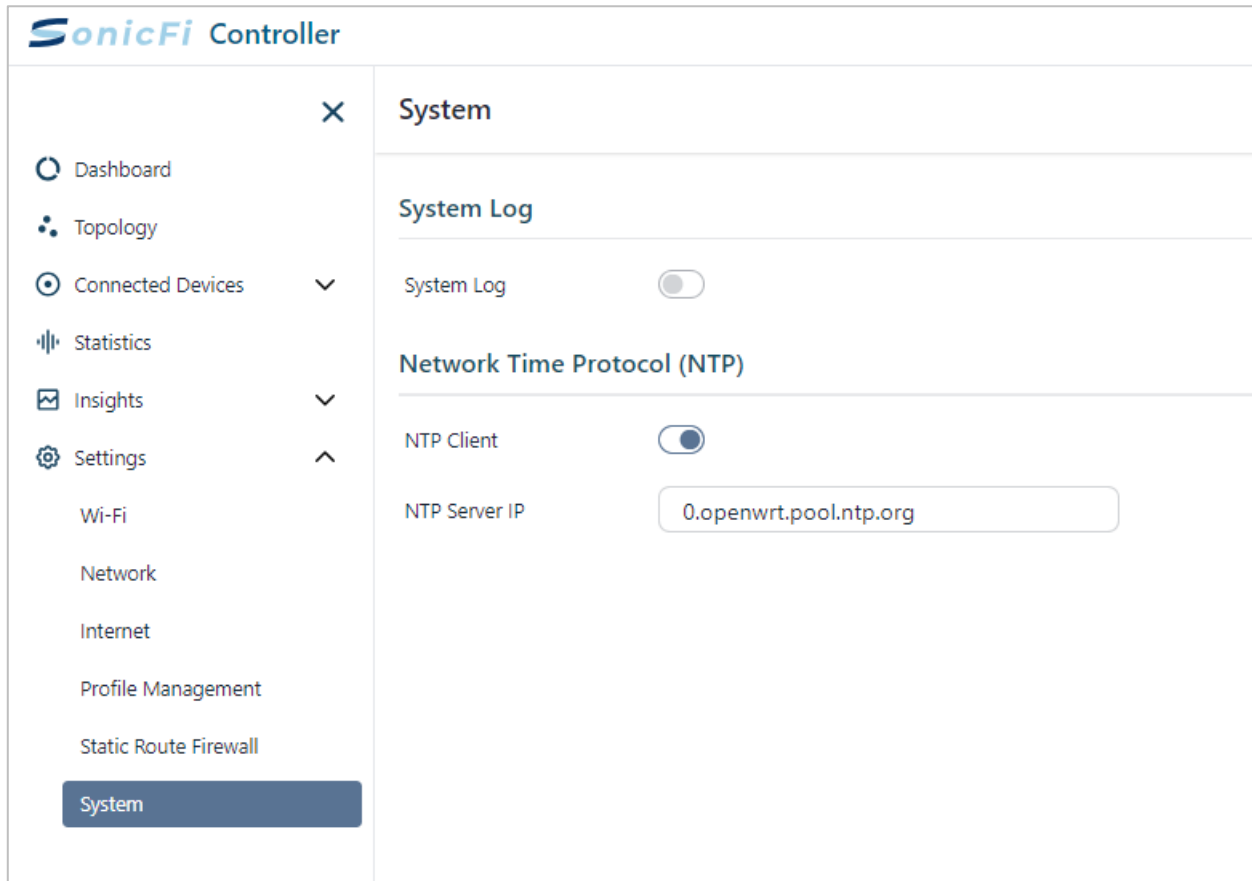


Figure 38. System Configuration

- **System Log (Toggle On/Off)** - Enable or disable logging of system events for troubleshooting and monitoring purposes.
- **NTP Client (Toggle On/Off)** - Enable or disable the Network Time Protocol (NTP) client to synchronize the device's time with an NTP server.
- **NTP Server IP** - Specify the NTP server address to use for time synchronization.

On the System page, you can select the language to be set and perform Maintenance on the Device. If you need to update the hardware device or rebuild the network environment in the future, you can easily restore the original settings back through Restore Backup and Download Backup Configuration. Turning on System Log can also allow you to view previous system records. Finally, there is the Network Time Protocol (NTP) function where you can configure whether the NTP Client needs to be enabled as well as set the NTP Server IP.

5.7 Account Profile

On the top right corner of the main page, you will find your personal icon. Clicking on it will take you to the Configuration Manager page. Here, you can change your password, create cloud credentials, and log out.

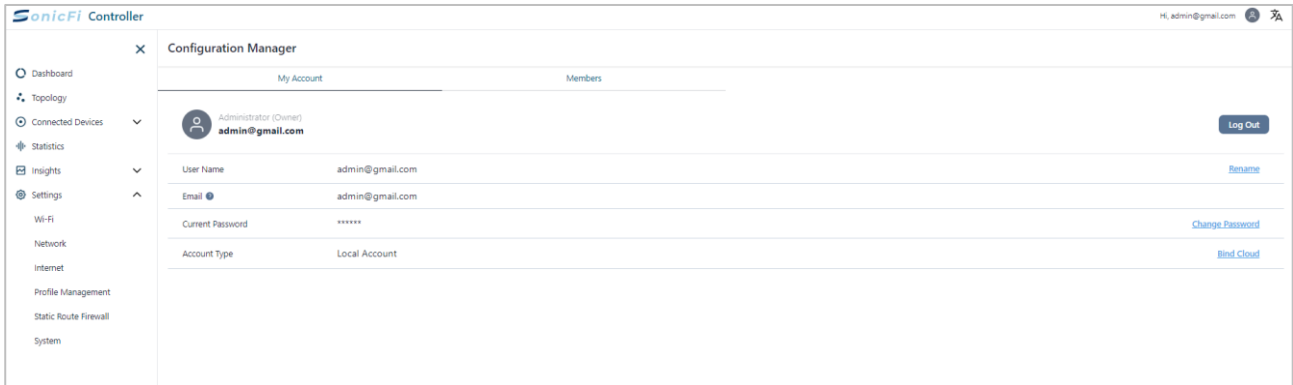
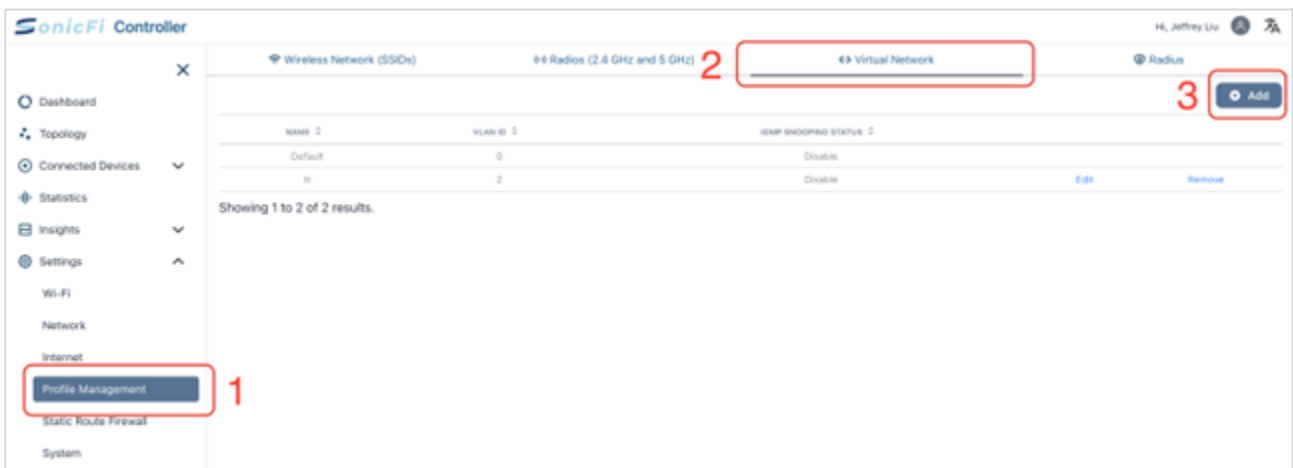


Figure 39. Account Profile

5.8 Virtual Network Settings

A. Create a Profile of Virtual Network



Create New Virtual Network

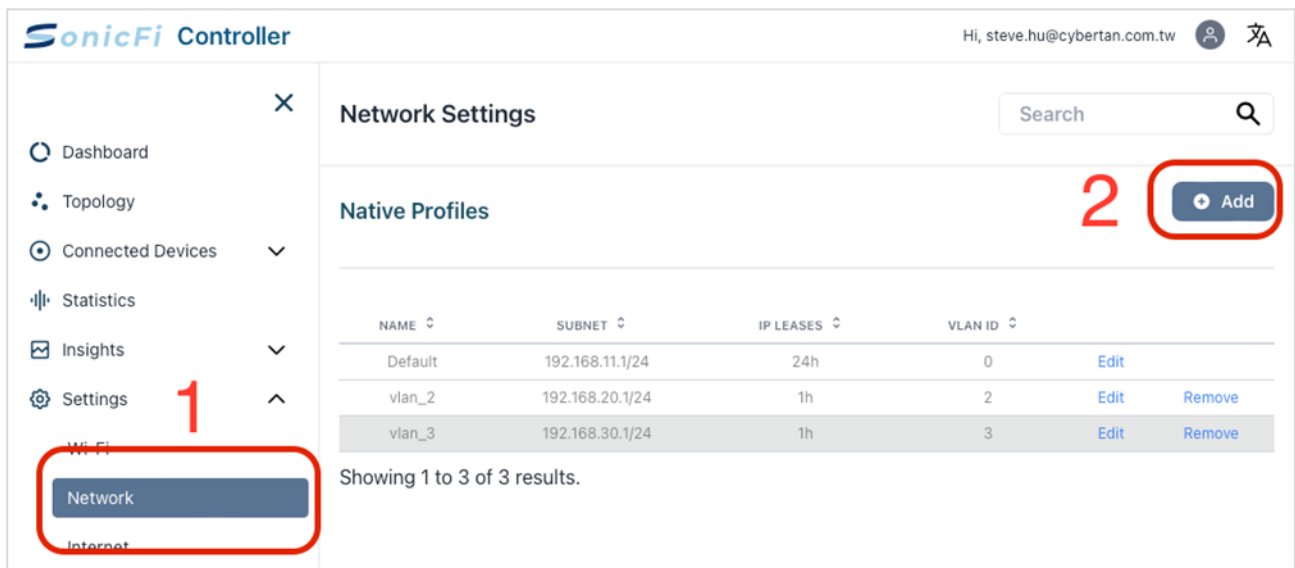
Name

Vlan ID

IGMP Snooping ☐

Create Profile of Virtual Network. my_virtual_network is created for example.

B. Assign the Profile of Virtual Network to Network



SonicFi Controller Hi, steve.hu@cybertan.com.tw

Network Settings

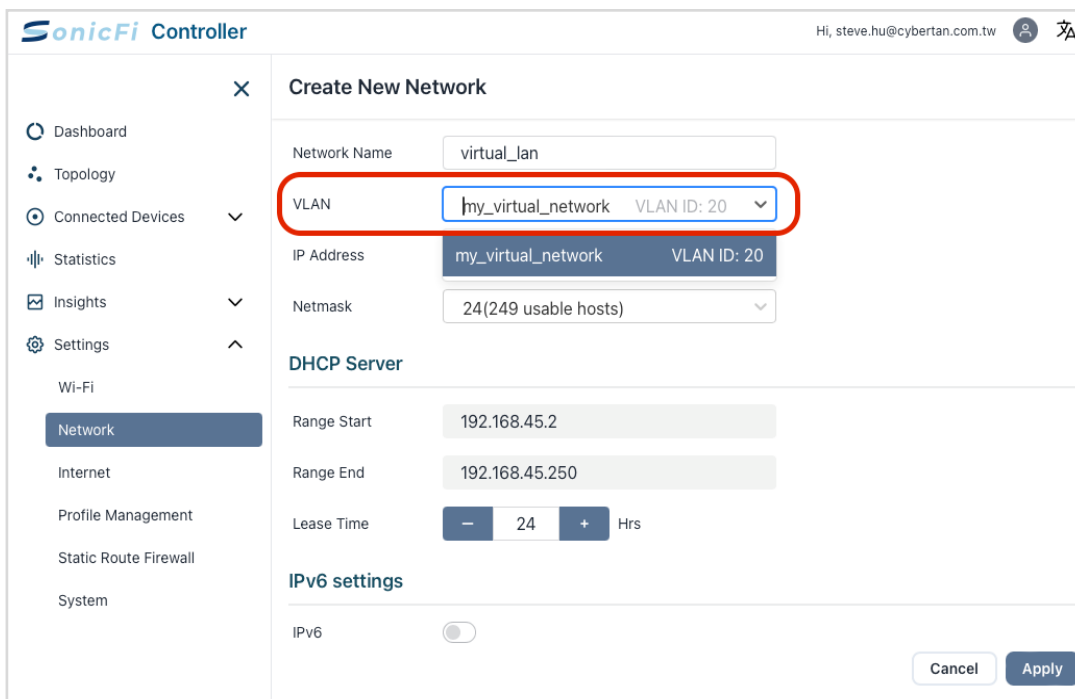
Search

Native Profiles

NAME	SUBNET	IP LEASES	VLAN ID	
Default	192.168.11.1/24	24h	0	Edit
vlan_2	192.168.20.1/24	1h	2	Edit Remove
vlan_3	192.168.30.1/24	1h	3	Edit Remove

Showing 1 to 3 of 3 results.

1. Go to Settings -> Network -> Add new Network with the profile



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Create New Network

Network Name: virtual_lan

VLAN: my_virtual_network VLAN ID: 20

IP Address: my_virtual_network VLAN ID: 20

Netmask: 24(249 usable hosts)

DHCP Server

Range Start: 192.168.45.2

Range End: 192.168.45.250

Lease Time: 24 Hrs

IPv6 settings

IPv6: ☐

Cancel Apply

2. Create New Network with the profile in VLAN field.

C. Assign the Profile of Virtual Network to Switch

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Switch Devices

Search

STATUS	MODEL	NAME	MAC ADDRESS	IP ADDRESS	LINK RATE	FIRMWARE VERSION	Clients
Online	CyberTan SKF424-C1	CyberTan SKF424-C1	24:fe:9a:0f:48:ef	192.168.25.59		cybertan_skf424-c1_v1.0.6_beta_202403201710896953	2 Edit

Showing 1 to 1 of 1 results.

Switch

1. Go to Switch -> Edit of Switch in interest.
2. Go to Port Management and then choose desired port and menu will pop up on the right side.
3. Select my_virtual_network in Native Profile field.

D. Assign the profile of Virtual Network to profile of EAP (SSID)

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Wireless Network (SSIDs) 2 Radios (2.4 GHz and 5 GHz) Virtual Network Radius

Add

STATUS	NAME	SSID	BAND	SECURITY	
Enable	Default	wifi_25g	2.4G, 5G	psk2+ccmp	Edit
Enable	SSID_95038-EY006-A1	95038-EY006-A1	2.4G, 5G	psk2+ccmp	Edit Remove
Enable	SSID_95038-EY006-A1_2.4G	SSID_95038-EY006-A1_2.4G	2.4G	psk2+ccmp	Edit Remove
Enable	O	O	2.4G, 5G	psk2+ccmp	3 Edit Remove

Showing 1 to 4 of 4 results.

Profile Management

1. Go to Profile Management -> Wireless Network (SSIDs) -> Edit of desired SSIDs

Wi-Fi Advanced Configuration

Wi-Fi Band: 2.4GHz and 5GHz

Fast Roaming: ☐

Native Profile: my_virtual_network VLAN ID: 200

Default	VLAN ID: 0
tt	VLAN ID: 2
my_virtual_network	VLAN ID: 200

2. In Wi-Fi Advanced Configuration, select my_virtual_network in Native Profile field and apply it.

SonicFi Controller

EAP Devices

1

STATUS	NAME	MAC ADDRESS	IP ADDRESS	QUALITY	FW VERSION	2 PROFILES
Offline	CyberTan EWW631-A1	00:11:22:cb:17:14	--	--	cybertan_eww631-a1_...	Default,Default,23013_...
Online	EW631-A1	00:ea:cb:aa:06:01	10.100.1.204	...	cybertan_eww631-a1_...	my test,Default

Showing 1 to 2 of 2 result.

3. Go to EAP > Click {rofile field of desired EAP

4. Choose Profile of SSID you edit with Virtual Network and apply it.

E. Enable a trunk mode with a Profile of Virtual Network in EAP

EWW631-A1

Radio ▼

Wireless Network(SSIDs) ^

Default x
x ▼

23013_test_25g

23013_test_25g

test

test

Enable
test
test
2G,5G
psk2+ccmp

Showing 1 to 3 of 3 results. [Create New Profiles](#)

SonicFi Controller

Hi, Jeffrey Liu

Topology

Connected Devices

EAP

Client

Switch

Insights

Settings

EAP Devices

Status

Name

MAC Address

IP Address

Quality

Firmware Version

Profiles

Clients

Offline

RAP630W-311G

24:fe:9a:0f:64:55

--

--

cybertan_eww631-bt_v1.3.0_release_202401241706075171

transRadio,cht-test

0

Port-Settings

Remove

Offline

RAP630W-311G

24:fe:9a:0f:64:59

--

--

cybertan_eww631-bt_v1.3.0_release_202401241706075171

transRadio,cht-test

0

Port-Settings

Remove

Offline

RAP630W-Sybil

24:fe:9a:0f:64:61

--

--

cybertan_eww631-bt_v1.3.0_release_202401241706075171

transRadio,cht-test,sybil-test

0

Port-Settings

Remove

Offline

RAP630W-311G

24:fe:9a:0f:64:a1

--

--

cybertan_eww631-bt_v1.3.0_release_202401241706075171

transRadio,cht-test

0

Port-Settings

Remove

Online

Uno

24:fe:9a:0f:64:c5

10.168.1.152

cybertan_eww631-bt_v1.3.0_release_202401241706075171

Uno-Home,Uno-Home,Uno-Home-Guest

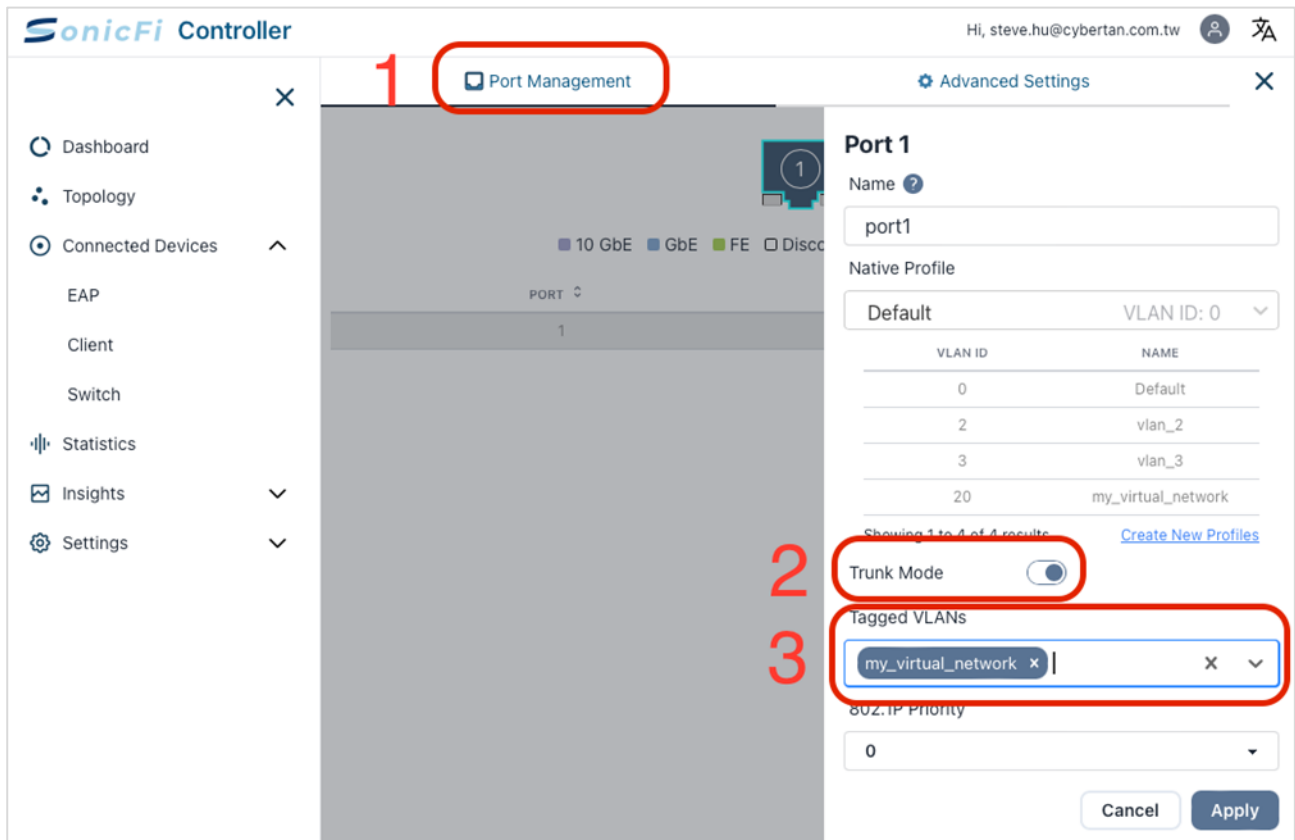
3

Port-Settings

Remove

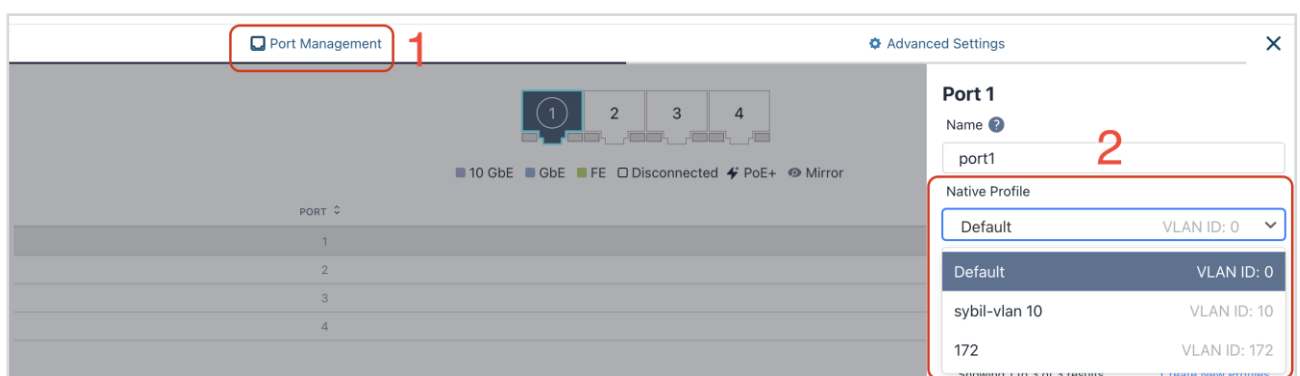
1. Go to EAP -> Click Port Settings field of desired EAP

2. Go to Port Management -> click uplink port (ceiling-mount is port 1 and wall-mount is port



3. Enable Trunk Mode -> Select a desired virtual network in Tagged VLANs field -> Apply it.

F. Assign the Profile of Virtual Network to EAP (ports)



1. Go to EAP -> Click Port Settings field of desired EAP as step E.1

2. Go to Port Management -> click desired port -> select profile of Virtual Network in Native Profile field -> apply it.

Appendix 1: RoHS Marking for Presence of Restricted Substances

- RAP630C-311G

Equipment Name: AX3000 Ceiling-Mounted Wi-Fi 6 Wireless Access Point Model (Type) : RAP630C-311G						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybromina ted biphenyls (PBB)	Polybromina ted diphenyl ethers (PBDE)
Printed Circuit Board Assembly and Components	-	○	○	○	○	○
Enclosure	○	○	○	○	○	○
Other Electronic Components (not including Printed Circuit Boards)	○	○	○	○	○	○
Accessories	○	○	○	○	○	○
Note 1. "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the percentage limit. Note 2. "○" indicates that the percentage content of the restricted substance does not exceed the percentage limit. Note 3. "-" indicates that the restricted substance is an excluded item.						

● RAP630W-311G

Equipment Name: AX3000 Ceiling-Mounted Wi-Fi 6 Wireless Access Point Model (Type) : RAP630C-311G						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybromina ted biphenyls (PBB)	Polybromina ted diphenyl ethers (PBDE)
Printed Circuit Board Assembly and Components	-	○	○	○	○	○
Enclosure	○	○	○	○	○	○
Other Electronic Components (not including Printed Circuit Boards)	○	○	○	○	○	○
Accessories	○	○	○	○	○	○
Note 1. "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the percentage limit. Note 2. "○" indicates that the percentage content of the restricted substance does not exceed the percentage limit. Note 3. "-" indicates that the restricted substance is an excluded item.						

- RCN205G-1PV

Equipment Name:						
Enterprise Network Controller Model (Type) : RCN205G-1PV						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybromina ted biphenyls (PBB)	Polybromina ted diphenyl ethers (PBDE)
Printed Circuit Board Assembly and Components	-	○	○	○	○	○
Enclosure	○	○	○	○	○	○
Other Electronic Components (not including Printed Circuit Boards)	-	○	○	○	○	○
Accessories	○	○	○	○	○	○
Note 1. "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the percentage limit. Note 2. "○" indicates that the percentage content of the restricted substance does not exceed the percentage limit. Note 3. "-" indicates that the restricted substance is an excluded item.						

● RSW226G-1PV/RSW226-1P/SKF224-C1/SKF224-C2

Equipment Name:						
PoE Ethernet Switch Model (Type) : RSW226G-1PV/RSW226-1P/SKF224-C1/SKF224-C2						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybromina ted biphenyls (PBB)	Polybromina ted diphenyl ethers (PBDE)
Printed Circuit Board Assembly and Components	-	○	○	○	○	○
Enclosure	○	○	○	○	○	○
Other Electronic Components (not including Printed Circuit Boards)	○	○	○	○	○	○
Accessories	○	○	○	○	○	○
Note 1. "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the percentage limit. Note 2. "○" indicates that the percentage content of the restricted substance does not exceed the percentage limit. Note 3. "-" indicates that the restricted substance is an excluded item.						