User Manual

Wi-Fi HaLow™ Gateway Ethernet to USB-C

PN: AP7628-UWH

V 1.1 2023/10/18

P.1

Content

A. Introduction

AP7628-UWH is a small-size 9 (L) x 6 (W) x 1.5 (H) cm, Wi-Fi4 & Wi-Fi HaLow™ IoT Gateway Ethernet to USB Type-C Dongle.

USB drivers: Windows, MAC and Linux supported.

Wi-Fi HaLow™ is the best solution for long distance IoT applications and Video stream transmission. Wi-Fi HaLow™ Throughput reaches 20Mbps. With standard surveillance system, users are allowed to have a long distance linking as well as perfect quality.

Gateway can transfer Video and IoT by HaLow more than 1 KM distance.

Wi-Fi HaLow™ gateway can reach more than 1 KM, which is 10x farther than 2.4 GHz Wi-Fi or Bluetooth along with 100x the coverage of traditional Wi-Fi networks, making it perfect for warehouses, factories, retail stores and other large campus environments.

HaLow™ Gateway

Ethernet to USB Type-C

Sub 1GHz

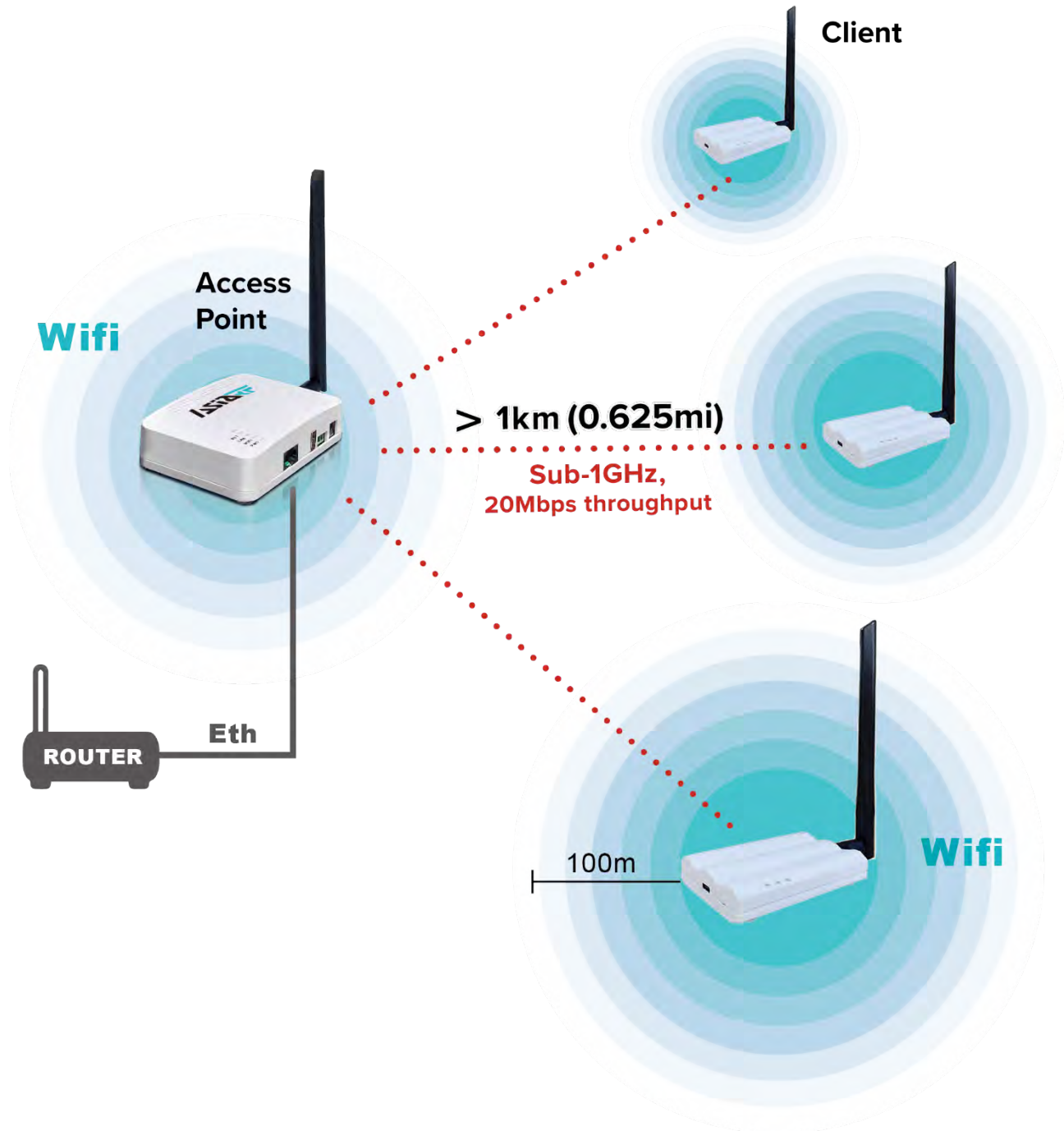**Distance > 1km / 0.625mi**
- Wi-Fi 2.4GHz
- Wi-Fi HaLow™ 900MHz

Modes: AP, Client

USB Drivers:
Windows, Windows CE
MAC
Linux supported

Star Topology Network

Client

Access Point

Wifi

> 1km (0.625mi)

Sub-1GHz, 20Mbps throughput

ROUTER

Eth

100m

Wifi

AP7688-WHM as an Access Point links to AP7628-UHM as the Clients.

P.4

B. Hardware Information

B.1   Contents

1.   Box x 1
2.   Wi-Fi HaLow^{TM} Gateway x 1
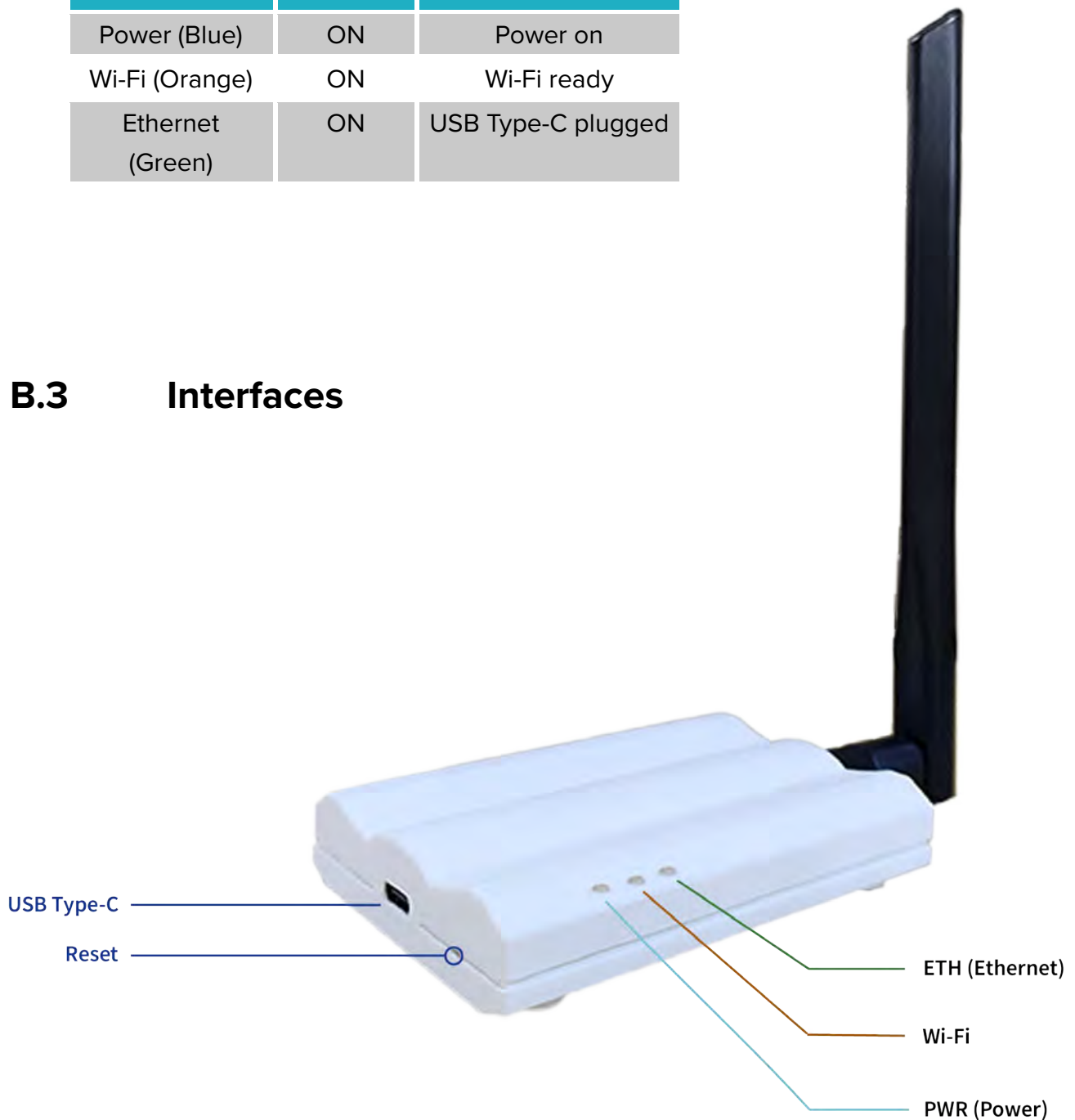3.   Wi-Fi HaLow^{TM} Antenna x 1

1.

2.

3.

B.2   LED Indicators

LED light meaning

NAME	ACTION	DESCRIPTION
Power (Blue)	ON	Power on
Wi-Fi (Orange)	ON	Wi-Fi ready
Ethernet (Green)	ON	USB Type-C plugged

B.3   Interfaces

USB Type-C

Reset

ETH (Ethernet)

Wi-Fi

PWR (Power)

C. How to Use AP7628-UWH

There are two kinds of way to use AP7628-UWH. One is using as a USB dongle on PC. Another is using as a **Wi-Fi gateway**.

Both ways demand a **Wi-Fi HaLow™ AP (Access Point)** to connect.

C.1 For USB dongle

Instruction: Use a USB A to USB Type-C cable to connect AP7628-UWH with PC.
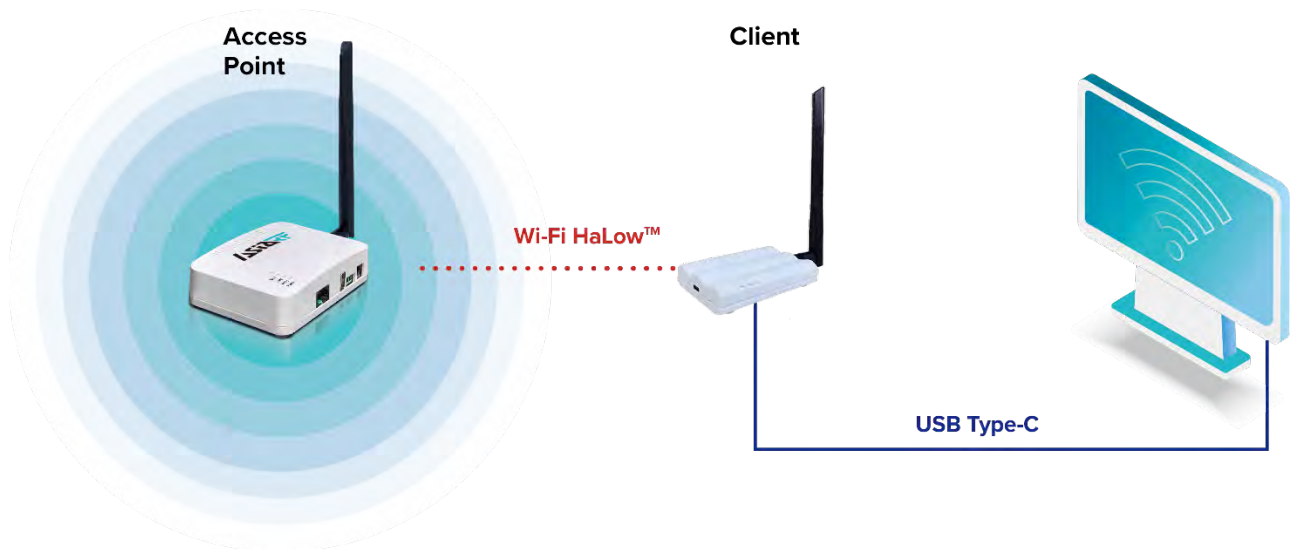
After confirming the new network interface on PC, you can connect to AP7628-UWH with ethernet. AP7628-UWH will be a Wi-Fi AP (Access Point) at the same time. Before connecting with the Wi-Fi HaLow™ AP, you need to finish the related setting, which can be found in D.2.1. Connect to device at page 15.
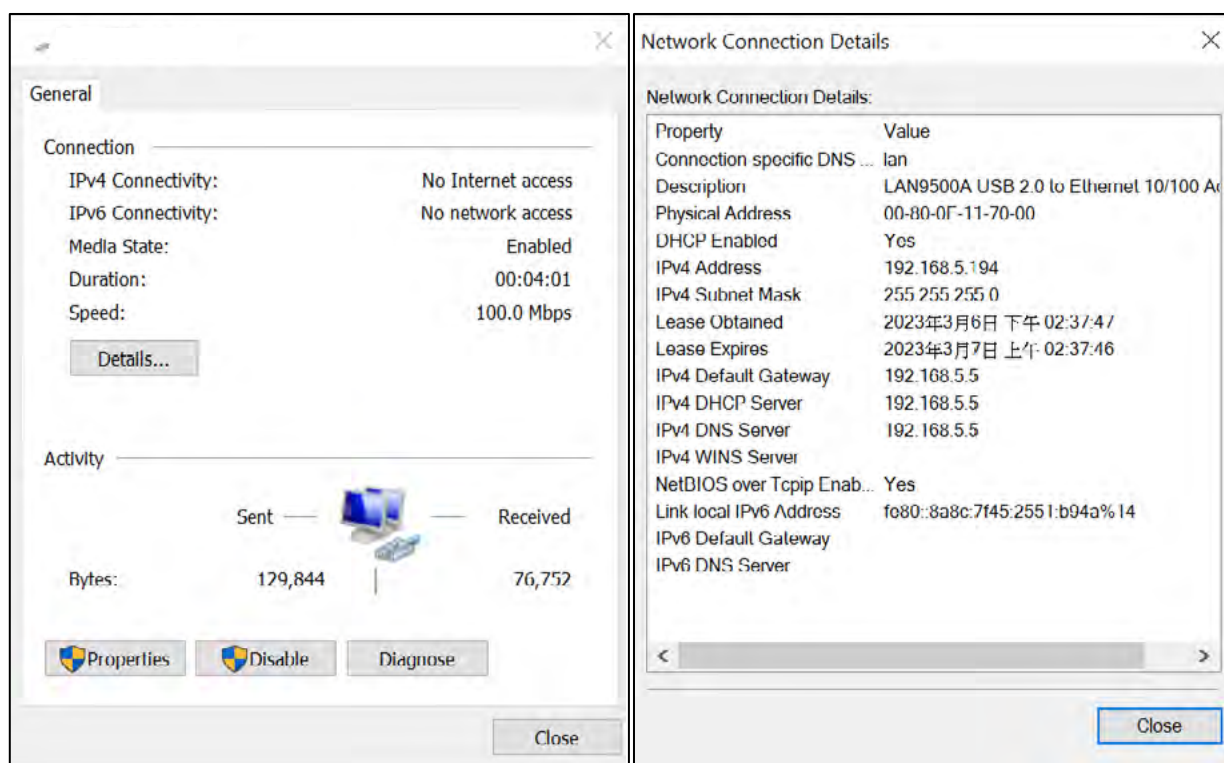
C.2 For Wi-Fi gateway

Instruction: Use USB cable connecting with power supply to be a Wi-Fi AP.
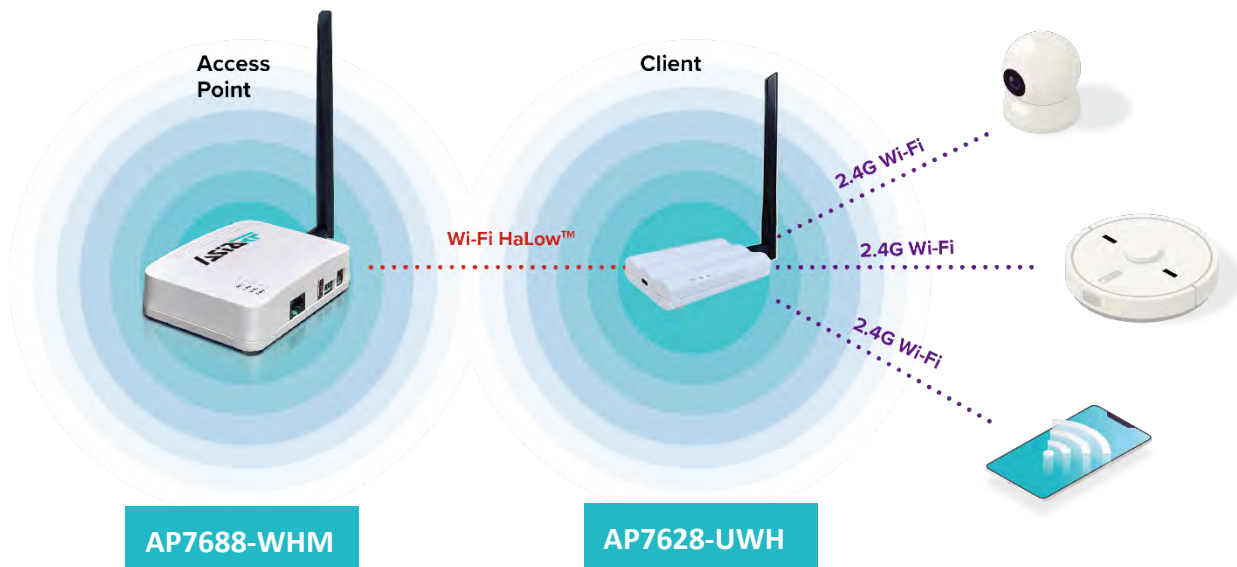
To let AP7628-UWH work as a Wi-Fi AP, you can connect AP7628-UWH with power supply and enjoy the function like hotspot.

Before connecting with the Wi-Fi HaLow™ AP, you need to finish the related setting, which can be found in D.2.1. Connect to device at page 15.

P.9

D. Software Setting

D.1 Firmware Information

Introduce about firmware information on our device, it can improve our communication with you.

D.1.1 Firmware Version

You can know how to get firmware version. When you have any problem on our product, provide us your firmware version for the best after-sale service.

Click "Overview" in the "Status" tab.
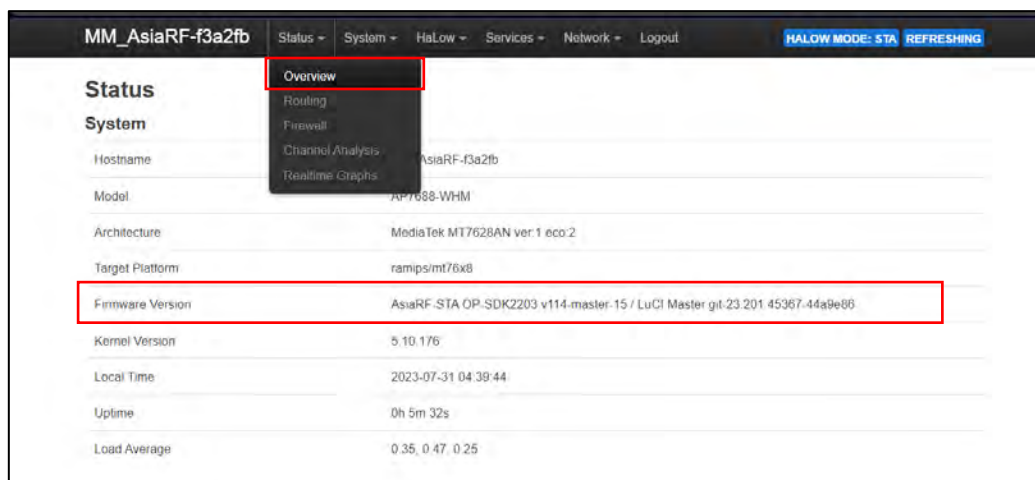
You can get a firmware version. For example, AsiaRF-STA OP-SDK2203 v114-master-15 / LuCI Master git-23.201.45367-44a9e86.

D.1.2 Firmware Upgrade

Weather we have new firmware for customers, follow this chapter to upgrade your device for your best experience.

Click "Overview" in the "Status" tab.
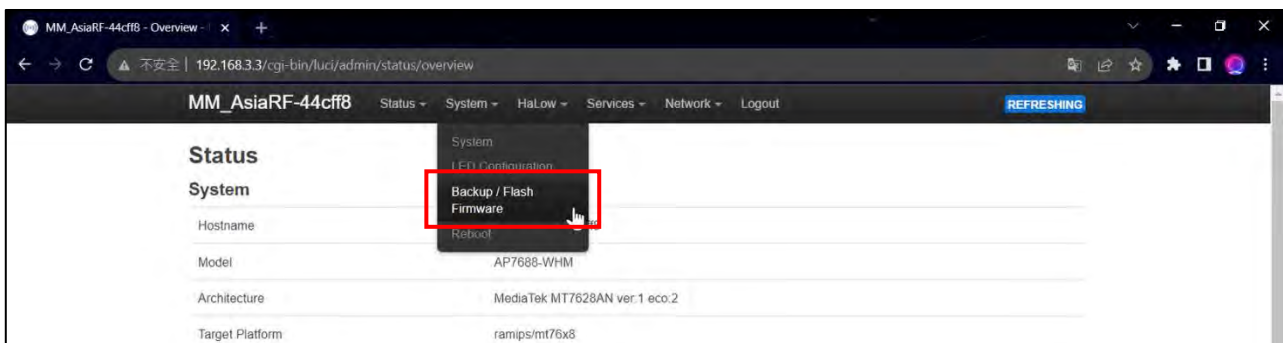
Click "Flash image".
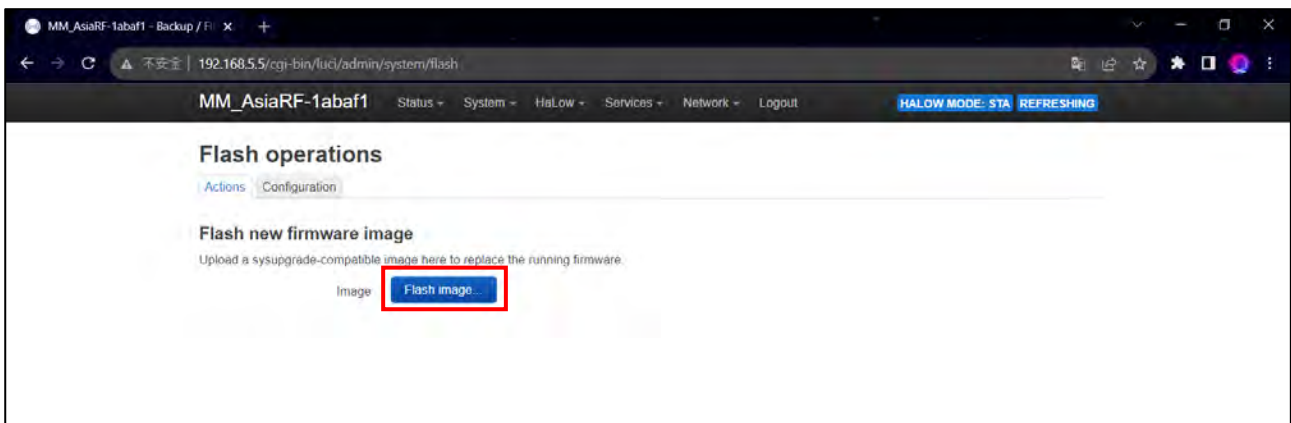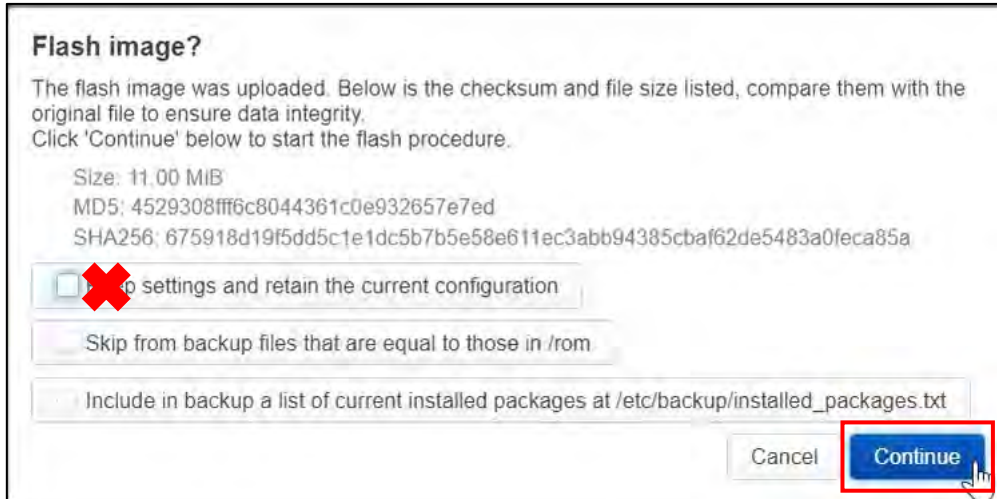
Click to choose your firmware.
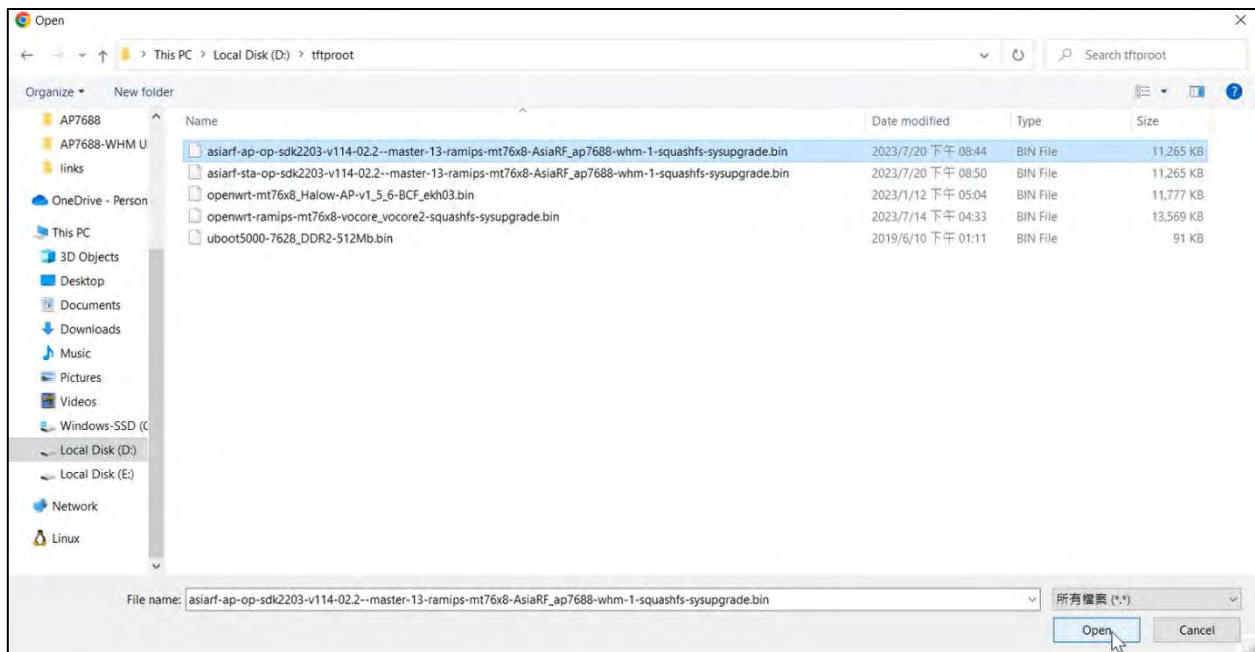
Do not choose any option!!!

And click "Continue" start to upgrade.

It will reboot as soon as after flash the image. This will take about four minutes to finish booting.

Don't forget our default IP address is 192.168.3.3 (AP) and 192.168.5.5 (Client), default Wi-Fi SSID is "AsiaRF_HaLow-AP/STA" and password is "12345678".
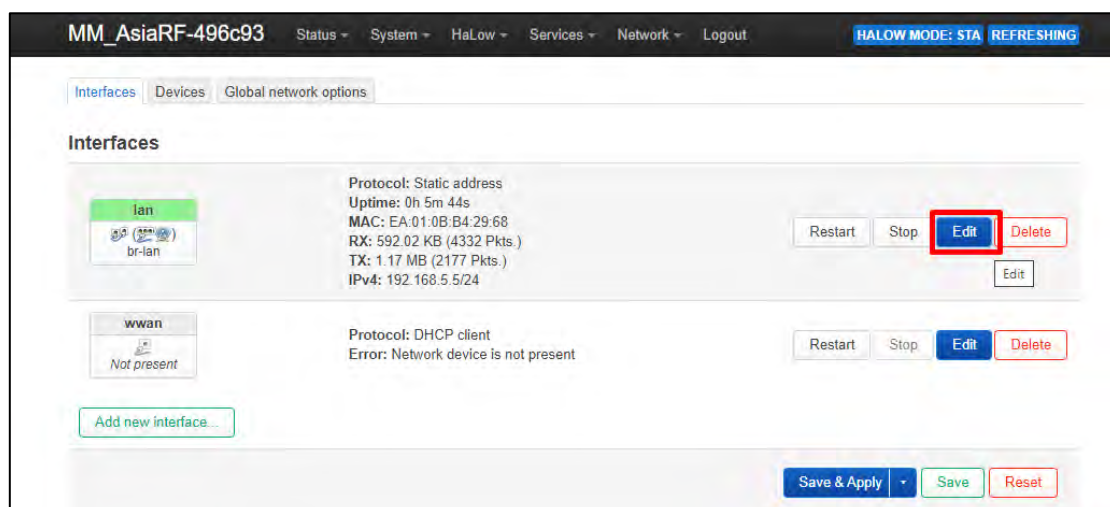
D.2 HaLow Setting

D.2.1 Internet Network (LAN)

Our product is a pair of AP7688-WHM. It has default setting with Wi-Fi HaLow^{TM}. If you don't need to set HaLow in special configuration, you can skip this chapter.

D.2.1.1 BR-LAN settings (def: 192.168.5.5)
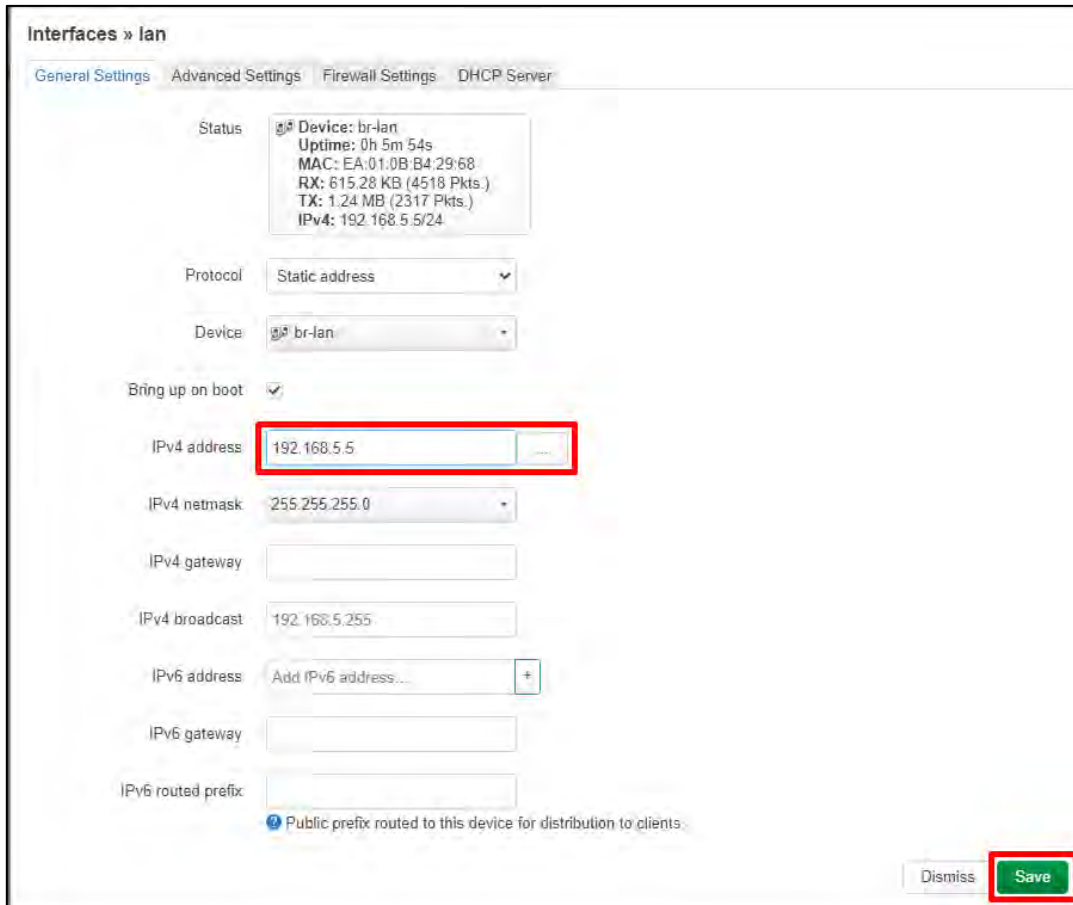
Click the "Interfaces" in the "Network" tab.
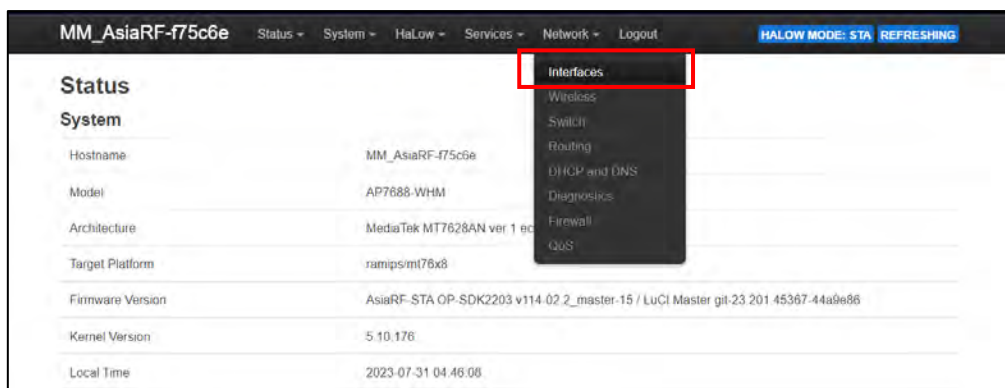
Click the "Edit" in the br-lan interface.

Change your own IPv4 address and click "Save".

Click the "Save & Apply" button to save the configuration.

P.15

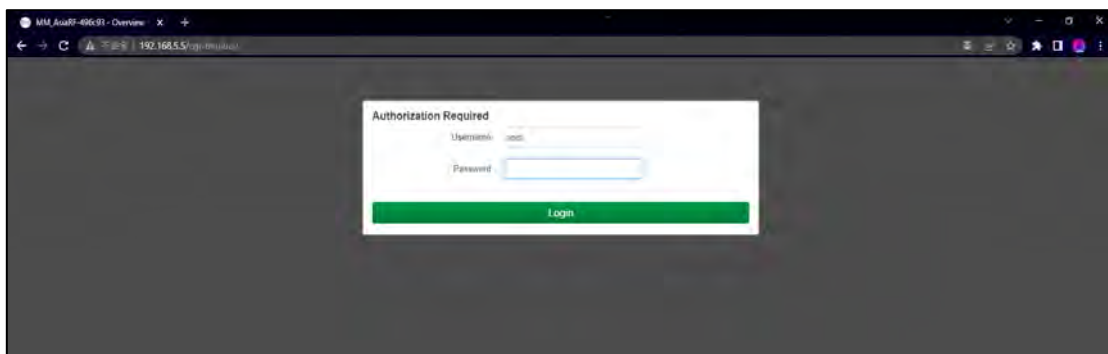## D.2.1.2 Wi-Fi 4 AP settings (def: AsiaRF_Halow-STA_xxxx)

Use PC or mobile phone and connect to the Wi-Fi.
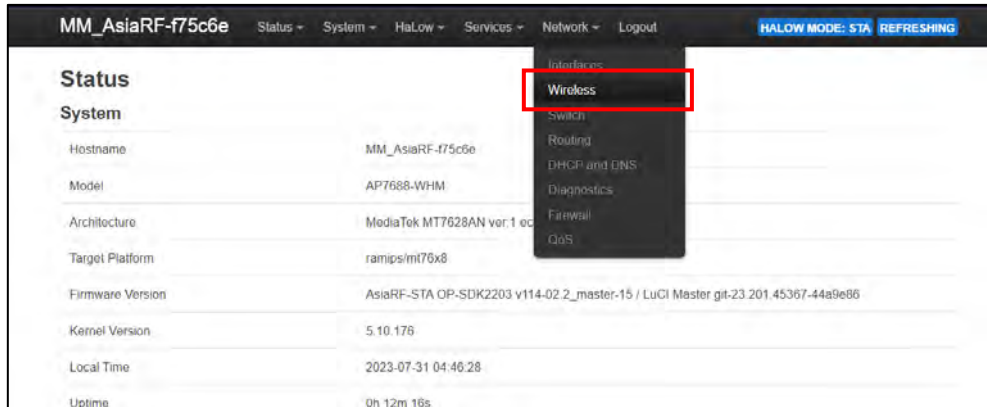(SSID: AsiaRF_Halow-STA_xxxx, Password: 12345678)
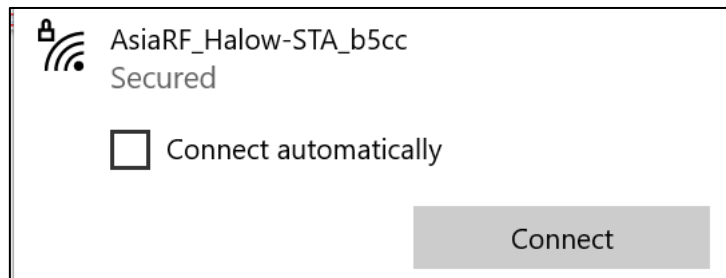
Open the browser and type "192.168.5.5".
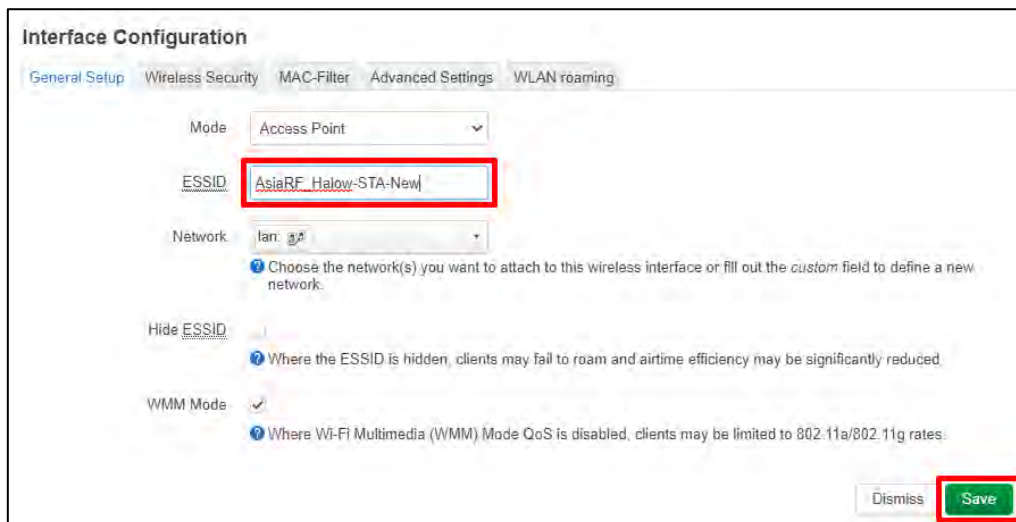Click "Login" (No password in default).

Click the "Wireless" in the "Network" tab.

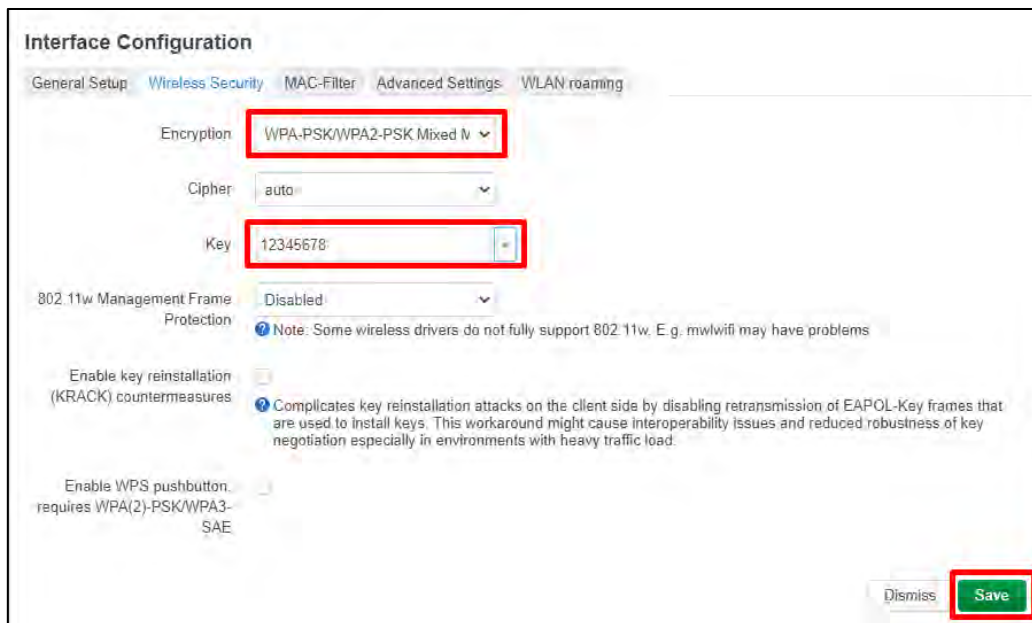Click the "Edit" button.

Change ESSID to your new name.

*** If you don't need to set the Wi-Fi password. ***
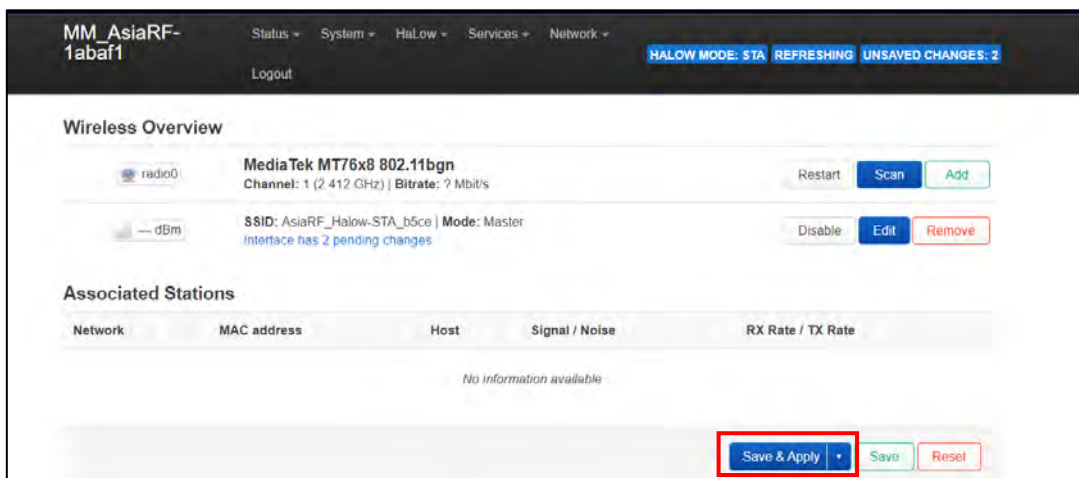***** You can press the "Save" button to skip the next step. *****

Click "Wireless Security" and choose one of the encryption types.
Ex. "WPA-PSK/WPA2-PSK Mixed Mode (medium security)"
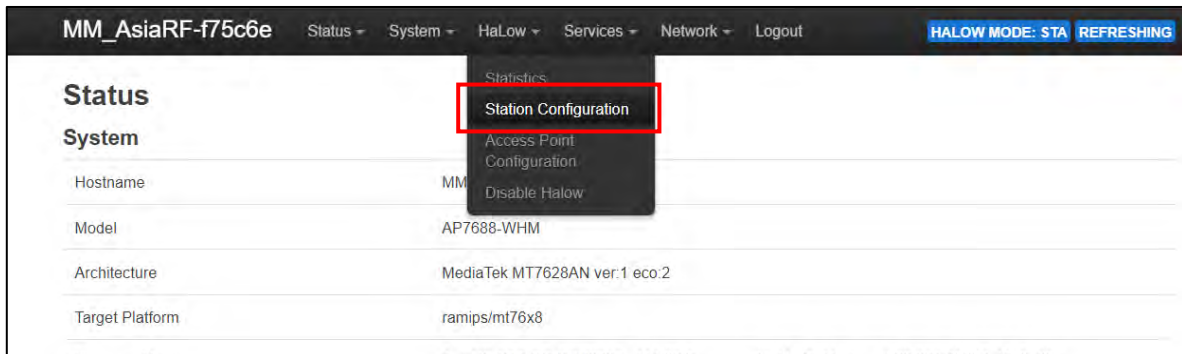Input your Wi-Fi password in "Key" field and don't forget it.

Click the "Save & Apply" button to save the configuration.

P.18

D.2.2 HaLow Network

D.3.2.1   HaLow Client settings (def: MM_AsiaRF)
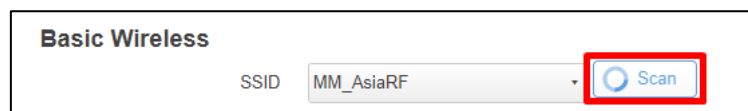
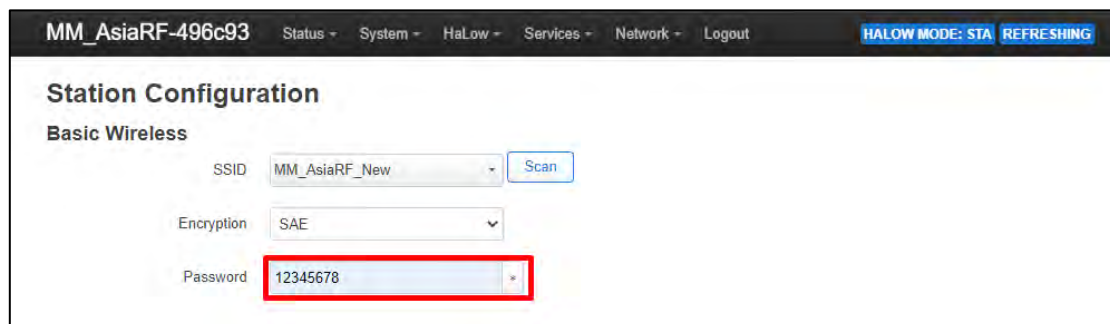Click "Station Configuration" in the "Morse" tab.

The Wi-Fi HaLow default connect SSID is "MM_AsiaRF".

You can click "Scan" button to scan the Wi-Fi HaLow™ AP around it.

It will choose the Wi-Fi HaLow™ AP around you, or you can choose one in the list. Don't forget to input the password. Ex. SSID: MM_AsiaRF_2

Click "Save" button to save the configuration.

Advanced Wireless

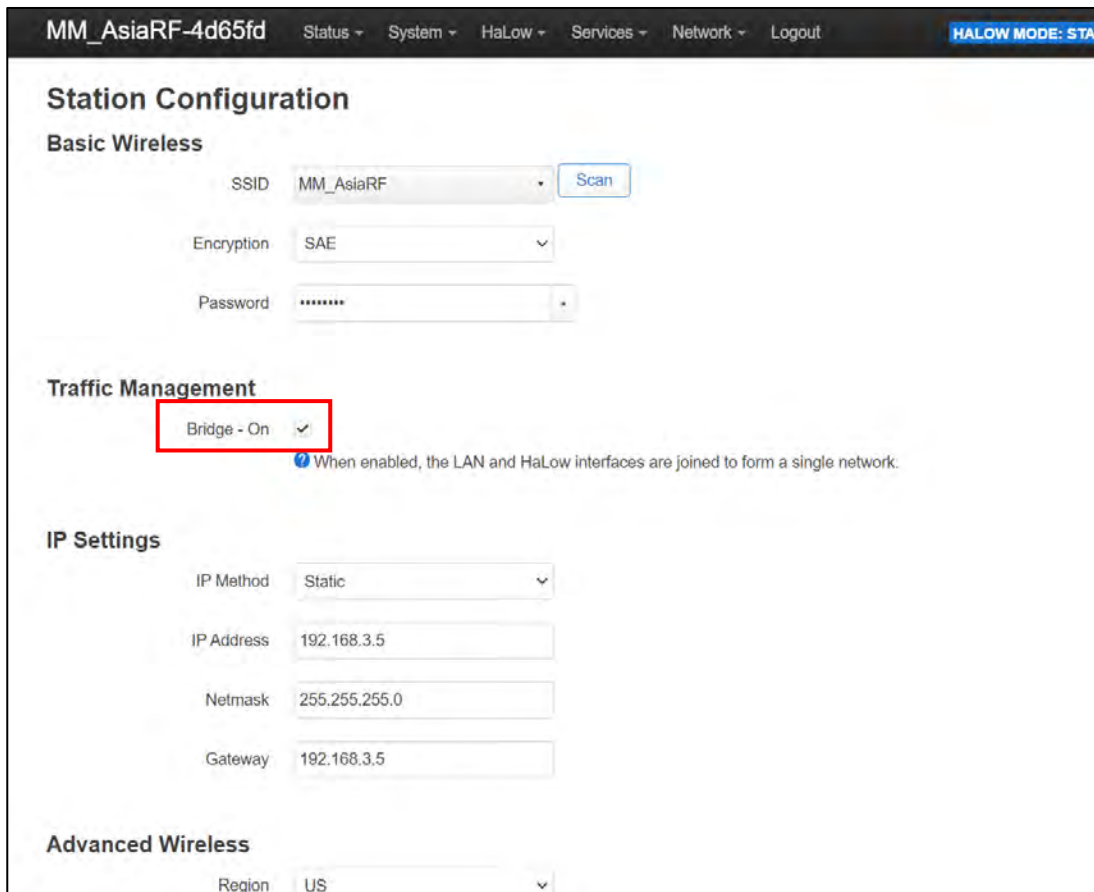Region   US

Protected Management Frames ☐

Save

Saving

◯ Applying configuration changes. Forcing a page reload in 60s

D.3.2.2   Bridge active

In Traffic Management, which is in Wi-Fi HaLow setting, there is an option "Bridge – On/Off" to active Bridge mode for Client device. When you click the checkbox to enable it, it will show as "Bridge - On".