



Altai A2c Indoor Dual-Band 2x2 802.11ac AP

Quick Setup Guide

Version 1.0

Introduction

Thank you for purchasing the Altai A2c. This guide provides instructions to install the product and set it up as AP with minimal effort.

Package Contents



A2c Main Unit



PoE Injector
(Optional Item)



T-Rail Mounting Kit

15/16in T-Rail Clip	x 2
9/16in T-Rail Clip	x 2
Spacer	x 2
P2.6*10 Screw	x 2
P2.6*25 Screw	x 2



Ceiling Mounting Kit

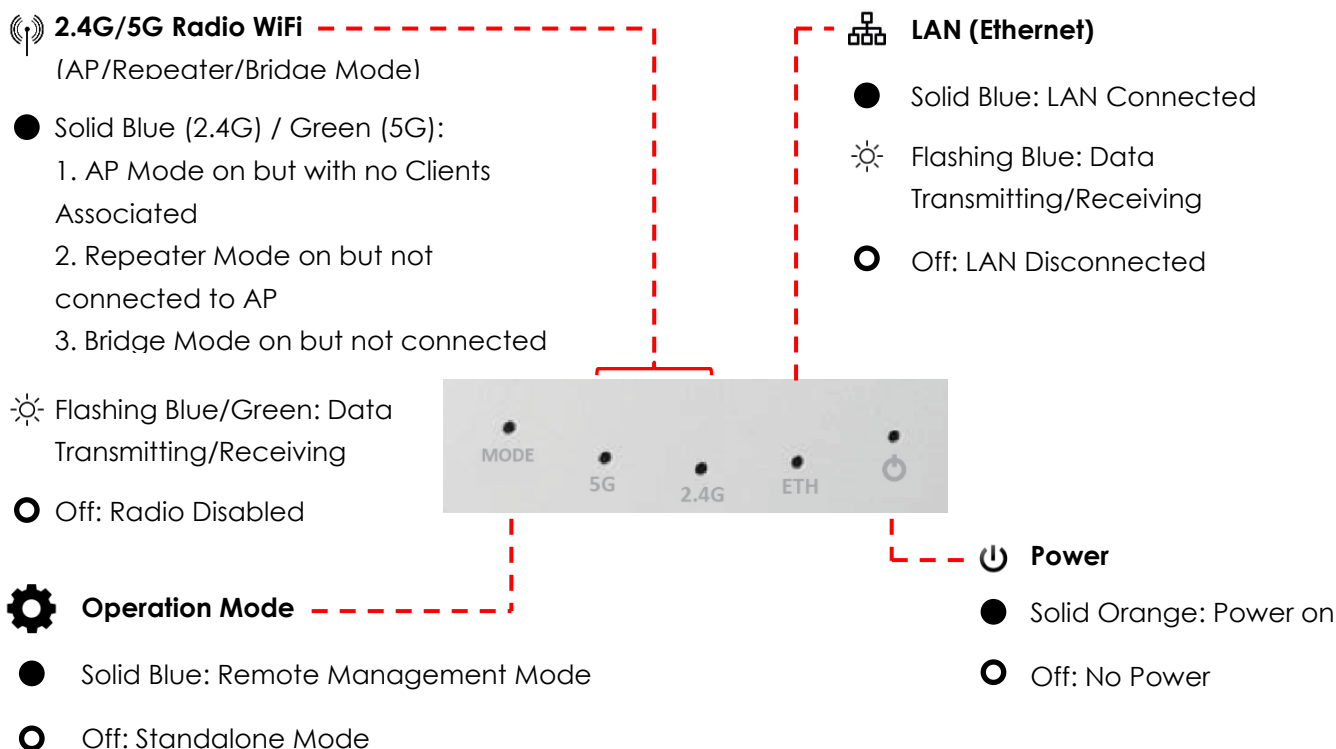
Mounting Bracket	x 1
Mounting Screw	x 2
P3.5*32 Screw	x 2
P2.6*12 Screw	x 2



Quick Setup
Guide

Hardware Overview

LED Panel



Ethernet Ports and Reset Button

ETH/PoE IN:

It is used to connect to power source (see the Power Options in the following section) and provides 10/100/1000 Mbps network interface for LAN connection.

Reset Button:

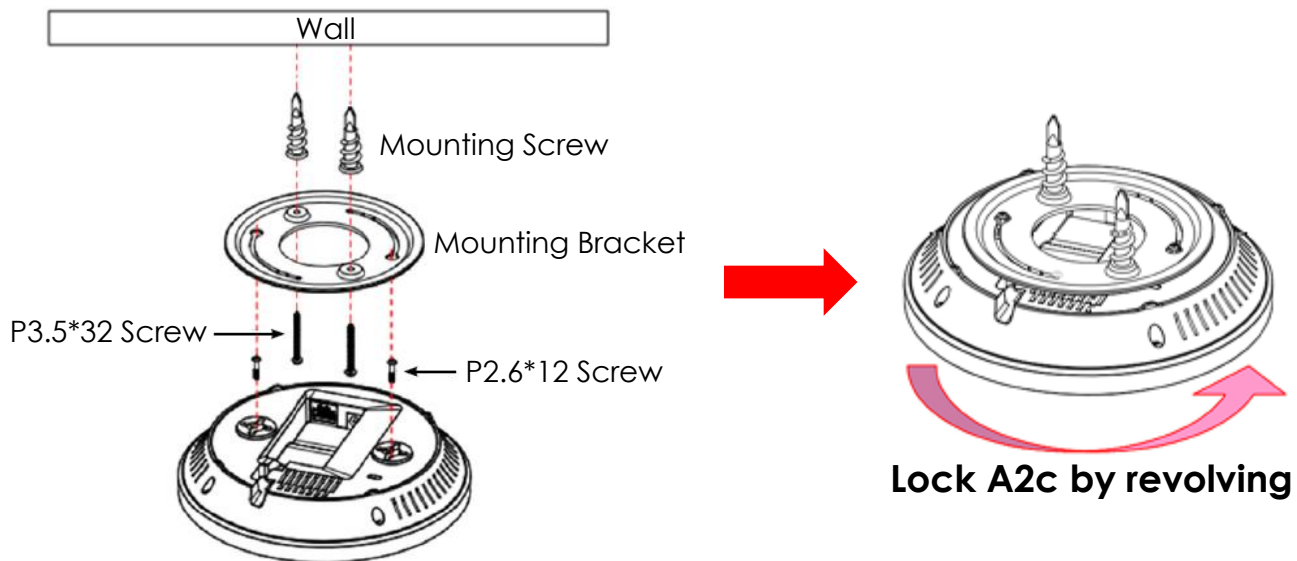
It serves two functions:

- Reboot: Press and hold the Reset Button for **2-3 seconds until the Power LED blink once**.
- Factory Reset: Press and hold the Reset Button for **5-8 seconds until the Power LED blink twice consecutively**.



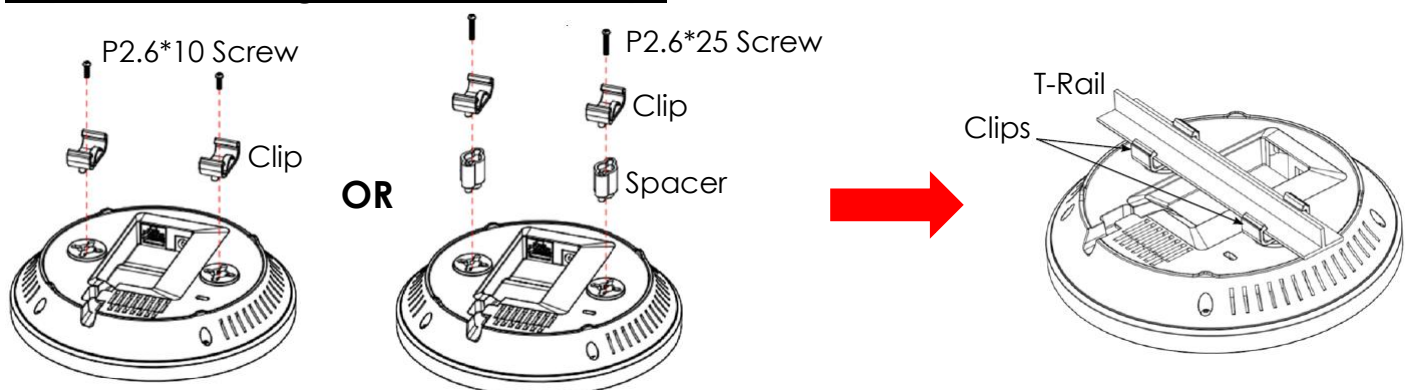
Mounting Options

Option 1: Ceiling Mount – Mounting bracket



1. Attach the mounting bracket to the ceiling using the provided mounting screws and long screws (P3.5*32).
2. Insert the provided short screws (P2.6*12) into the bottom cover of A2c. Make sure that the screws are exposed enough to attach the mounting bracket.
3. Install the A2c on the mounting bracket by rotating the unit clockwise about 90 degrees to secure it in place.

Option 2: Ceiling Mount - T-Rail clips



1. Attach the small T-Rail clips to the bottom cover of A2c using the provided short screws (P2.6*10).
If extra space is required, use the provided spacers and large T-Rail clips with long screws (P2.6*25).
2. Line up the connected T-Rail clips with an appropriately sized rail and press the unit onto the rail until it snaps into place.

Setup Requirements and Preparation

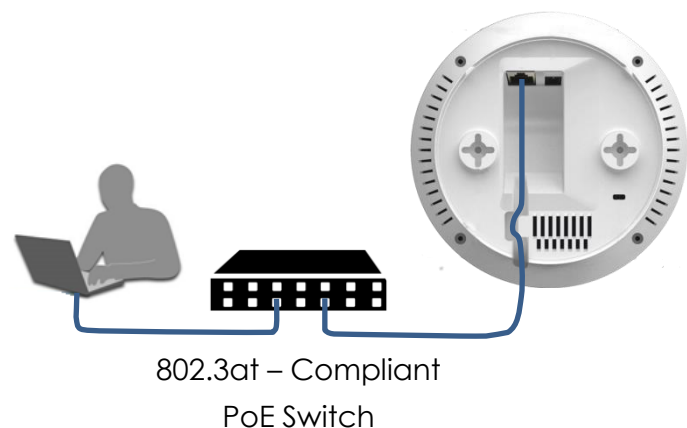
- A computer with Web Browser: Google Chrome, Mozilla Firefox, or Microsoft Internet Explorer 8 (or above)
- Two Cat 5e/6 Ethernet cables
- AltaiCare account (Optional) for cloud management service

Power Options and Cable Connection Instructions

You can follow one of the options below for A2c configuration as described in the following sections.

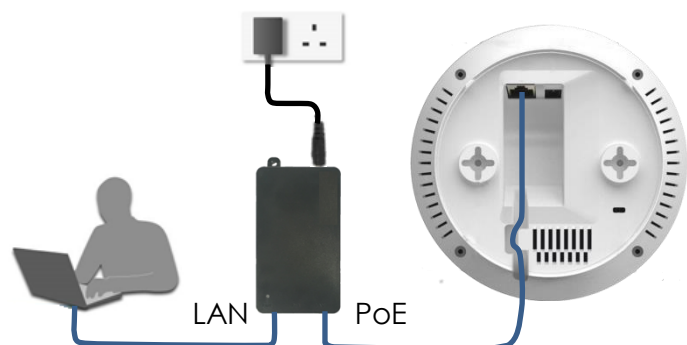
Option 1: 802.3at-compliant PoE switch

1. Connect A2c Ethernet port to an 802.3at PoE Switch with an Ethernet Cable.
2. Connect a computer to the switch.
3. Make sure the Power LED light is orange and the LAN LED light is blue.



Option 2: PoE Injector (Ordered separately)

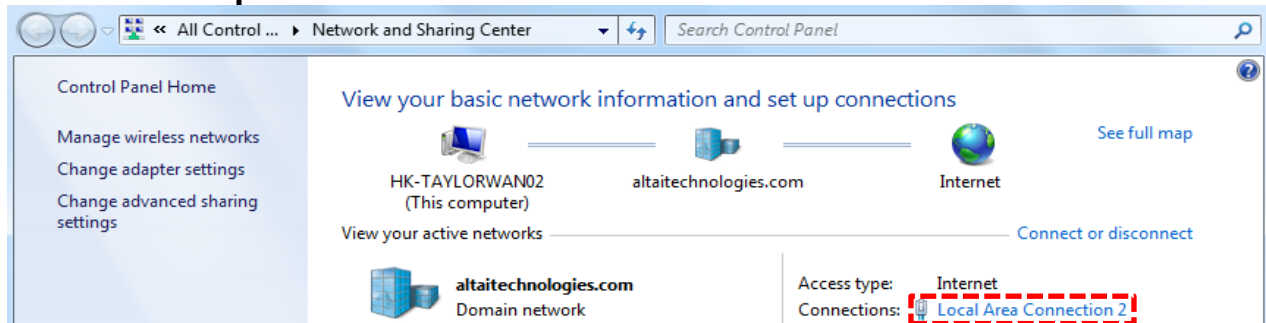
1. Connect A2c Ethernet port to a PoE Injector's "PoE" port with an Ethernet Cable.
2. Connect a computer to the PoE Injector's "LAN" port with another Ethernet Cable.
3. Connect the PoE Injector to AC power socket using a power cord (Not provided in the package).
4. Make sure the Power LED light is orange and the LAN LED light is blue.



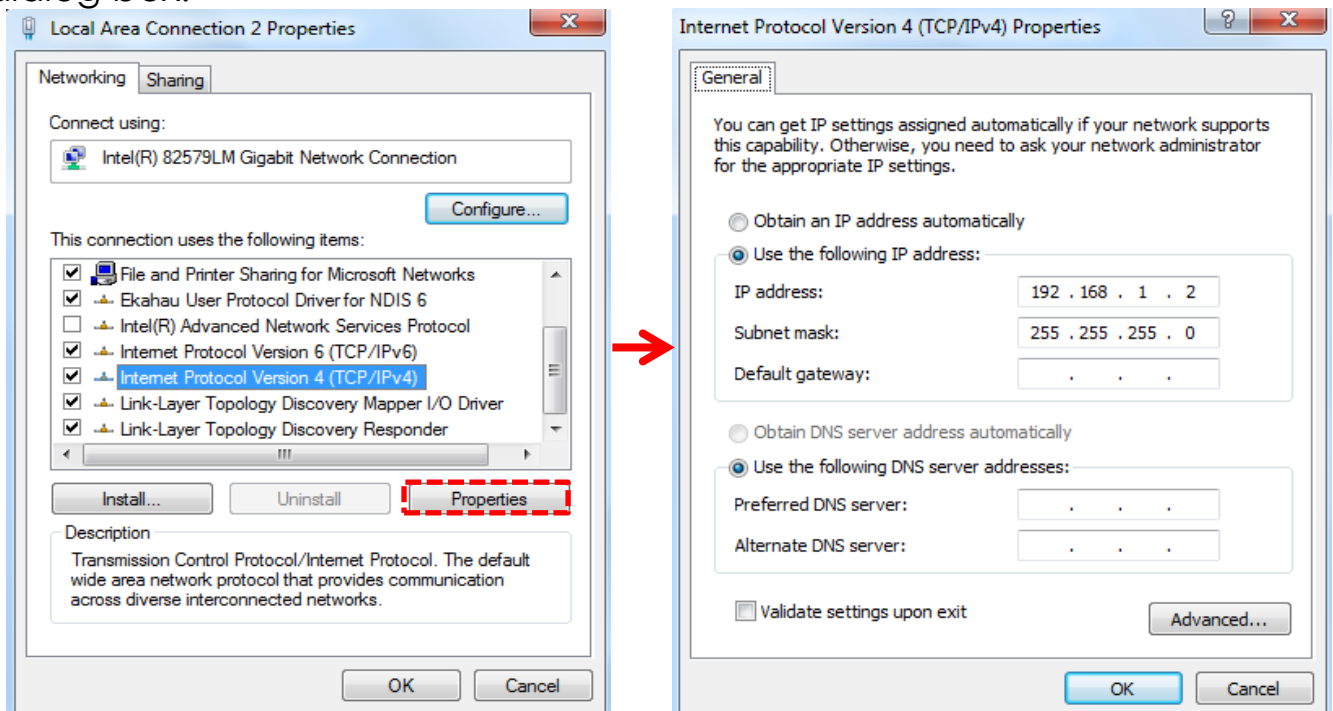
1. Change TCP/IP Setting on your computer

For Windows 7 users,

1. Go to **Control Panel**, click **Network and Sharing Center** and then choose the adapter that you want to connect to A2c unit. In this example, adapter "**Local Area Connection 2**" is in connection with A2c. Click it and then click **Properties**.

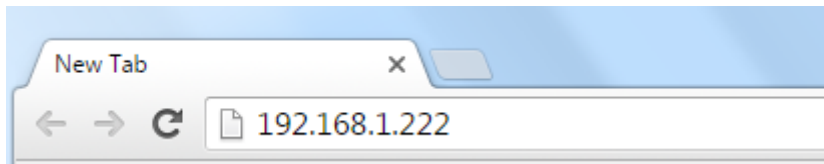


2. Under the **Networking** tab, click **Internet Protocol Version 4 (TCP/IPv4)** in the list box "This connection uses the following items", and then click **Properties**.
3. Type in the following IP address and Subnet mask:
 - IP address: 192.168.1.2
 - Subnet mask: 255.255.255.0
4. Click **OK** to close the **Internet Protocol Version 4 (TCP/IP) Properties** dialog box and click **OK** again to close the **Local Area Connection Properties** dialog box.

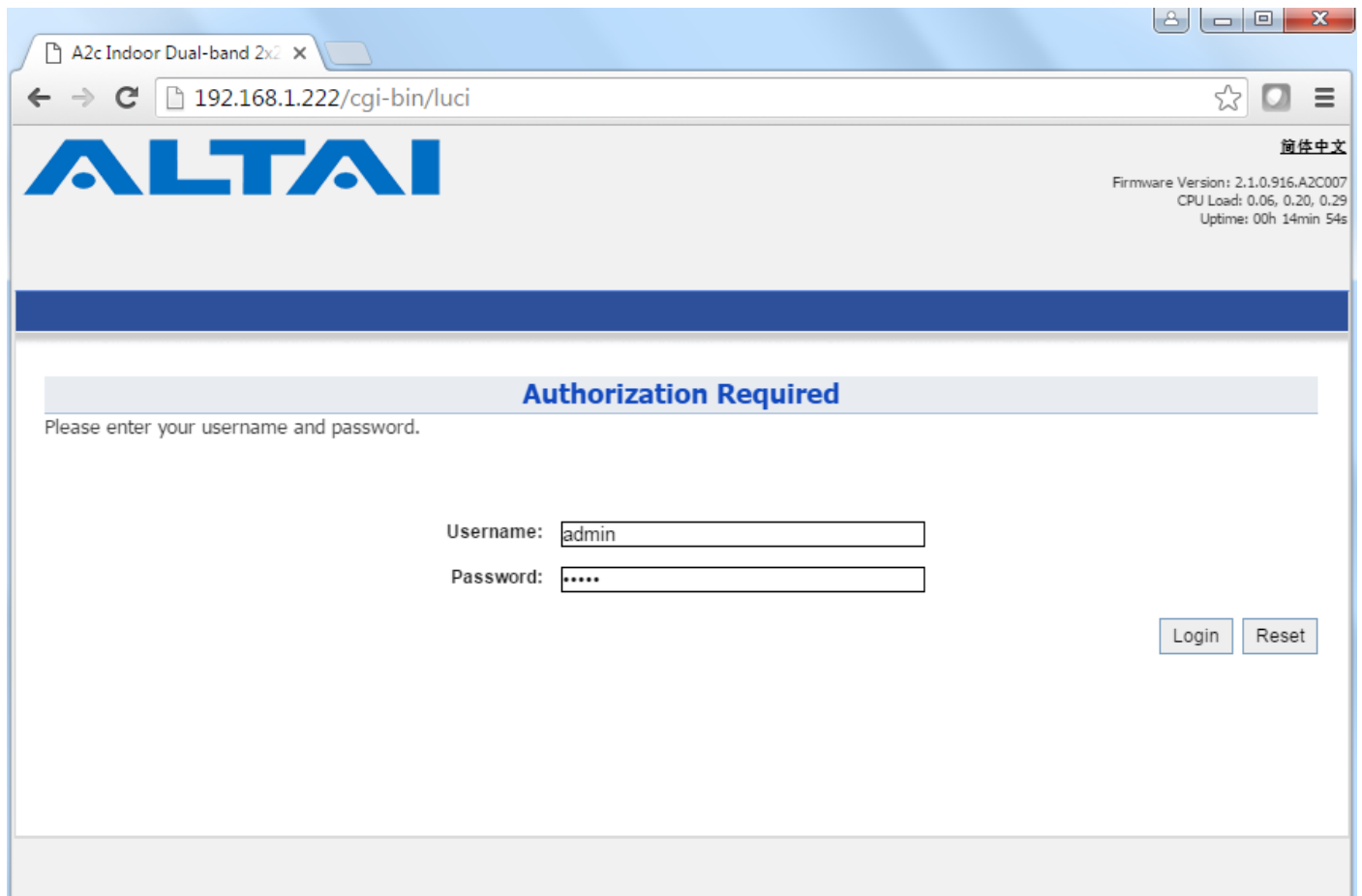


2. Access to Web Interface

1. Open a web browser. Type **192.168.1.222** in the address bar and then hit **Enter**.

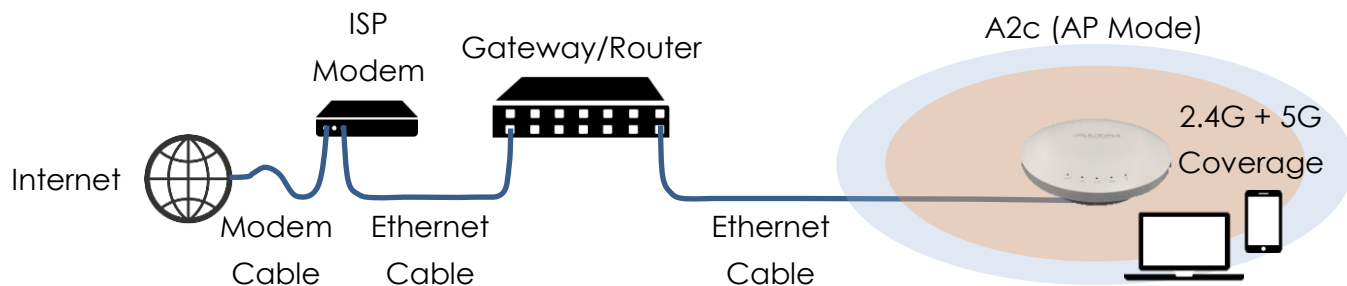


2. Login page will come up and you are required to enter username and password. By default, the credentials are:
 - **Username:** admin
 - **Password:** admin
3. Click Login.



3. Configure AP Mode (2.4G/5G)

Network Scenario



1. Go to **Configuration > Wireless > Radio0(2.4G)/Radio1(5G) > General**. Below screenshots show an example for 2.4G radio configuration only. Same procedures can be applied to 5G radio configuration.
2. Make sure the box of **Enable Radio** is checked. Select **AP mode** for the field of **Radio Mode**. Then click **Submit**.

Configuration Administration Tools About

System Network **Wireless** Remote Mgmt

[Radio0\(2.4G\)](#) - [Radio1\(5G\)](#)

Radio0(2.4G) Setting

General **WLAN** Advanced QoS

Enable Radio: ☒

Radio Mode: AP

Wireless Mode: 2.4GHz 144Mbps(802.11ng HT20)

Legacy 11b Data Rate Support: 5.5/11M (Good compatibility/Good performance)

Channel: 2412MHz(Channel 1)

Transmit Power: 23

Maximum Clients: 256 (1-256)

User Isolation in different WLAN (SSID): ☐

Band Steering Mode: Disabled

[Submit](#)

3. Click **WLAN** and click **More...** in **Detail** of WLAN 0 to go to another page for SSID and security configuration.

Radio0(2.4G) Setting

General **WLAN** Advanced QoS [Submit](#)

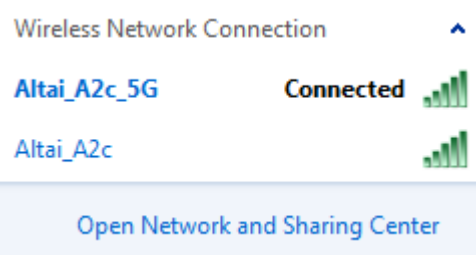
WLAN Configuration

Enable WLAN	SSID	Max Clients	Isolation	Auth Mode	Access Traffic Right	WLAN Uplink/Downlink Control		Station Uplink/Downlink Control		Detail
☒ 0	Superwifi Network ☐ Hide SSID	256	☒	open	Full Access	0	0	0	0	More...

- Make sure **WLAN** is enabled by checking the box. Type in **SSID** to name the wireless network you want to broadcast and then click **Submit**.

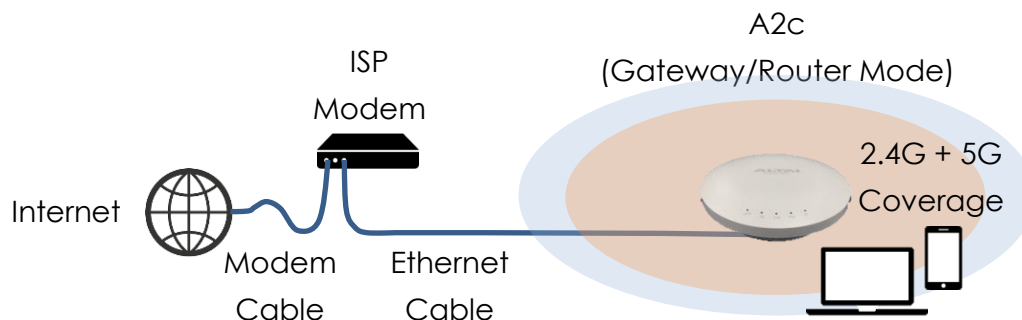
- Click the tab **WLAN Security**. Select **WPA2-PSK** from the drop down menu of **Authentication Mode** and select **AES** for **Cipher Mode**. Type in a password within 8~64 characters or numbers in **Pass Phrase** and click **Submit**.

- Click **Save & Apply** at the top right corner to have all changes take effect.
- Hook up the A2c as shown in Network Scenario. The SSID should now be broadcast from A2c and can be seen in the computer for wireless connection.



4. Configure Gateway Mode (Router Mode)

Network Scenario



1. Follow the steps 1 – 6 in Section 3 for the wireless settings.
2. Go to **Configuration > Network > General**.
3. Select **Gateway Mode** for **Network Setting**.

The screenshot shows the 'General Network Setting' page. The 'Network Setting' dropdown is set to 'Gateway Mode'. The 'WAN/LAN Interface Assignment' table shows the following configuration:

	Interface(s)	Detail
WAN	eth0	
LAN	AP0_0(Altai_A2c) AP1_0(Altai_A2c_5G)	

The 'Enable NAT Mode' checkbox is checked.

4. Select one of the following ways for **Internet Connection Type**. If you are not sure about the connection options, consult your ISP for correct settings.

(a) Static

Enter **IP Address**, **Subnet Mask**, **Default Gateway** and **DNS Server IP Address** as provided by ISP.

WAN Setting(IPv4)

The screenshot shows the 'WAN Setting(IPv4)' page. The 'Internet Connection Type' is set to 'Static'. The configuration fields are as follows:

IPv4 Address:	10	6	122	200
IPv4 Subnet Mask:	255	255	255	0
IPv4 Default Gateway:	10	6	122	1
IPv4 DNS Server IP Address:	10.6.127.1			

(b) DHCP/PPPoE

With these modes selected, IP Address, Subnet Mask and Default Gateway will be dynamically assigned and updated for each time of connection.

Two options for **DNS Auto Update**:

- Choose "**Enable**" to update DNS info along with other IP configuration via DHCP; or
- Choose "**Disable**" for manual input of valid DNS info provided by ISP.

DHCP Configuration:

WAN Setting(IPv4)

Internet Connection Type:

DNS Auto Update: ☒ Enable ☐ Disable  DNS Auto Update: ☐ Enable ☒ Disable

Enable DHCP Option 60: ☐

IPv4 DNS Server IP Address:

For DNS manual input, select "Disable"

For PPPoE connection type, enter **PPPoE Username** and **Password** provided by ISP for user authentication.

PPPoE Configuration (Minimal):

WAN Setting(IPv4)

Internet Connection Type:

DNS Auto Update: ☒ Enable ☐ Disable  DNS Auto Update: ☐ Enable ☒ Disable

PPPoE Server Name:

AC Name:

PPPoE UserName:

PPPoE Password: ☐ Show

Maximum idle time interval: (60-10000s)

Redial Interval: (0-1000s)

Allow: ☒ mschapv2 ☒ mschapv1
☒ chap ☒ pap

MTU: (0-1492)

MRU: (0-1492)

IPv4 DNS Server IP Address:

For DNS manual input, select "Disable"

- Click **Submit** at the page bottom and then click **Save & Apply** at the top right corner to have all changes take effect.
- Hook up the A2c as shown in Network Scenario and connect a laptop to the broadcast SSID. The laptop will get an IP address 192.168.98.x with x between 2 and 254 and should be ready for Internet access.
- To verify the A2c connection status, you can access the A2c Web Interface by entering **192.168.98.1** in the browser address bar. Log in to it and Status Overview page (**Status > Overview**) is shown up.
- WAN Interface (Ethernet Port, denoted by eth0) should show established status with valid IP address, Subnet Mask, Default Gateway and DNS Server IP address.

Static Connection:

Network(Gateway Mode)

WAN - eth0

IPv4 DHCP Client:	Disabled
IPv4 Address:	10.6.122.200
IPv4 Subnet Mask:	255.255.255.0
IPv4 Default Gateway:	10.6.122.1
IPv4 DNS Server:	10.6.127.4 10.6.127.1

DHCP Connection:

Network(Gateway Mode)

WAN - eth0

IPv4 DHCP Client:	Success
IPv4 Address:	10.6.122.102
IPv4 Subnet Mask:	255.255.255.0
IPv4 Default Gateway:	10.6.122.1
IPv4 DNS Server:	10.6.127.4 10.6.127.1

PPPoE Connection:

Network(Gateway Mode)

WAN - eth0

IPv4 PPPoE Client:	Connected
	Disconnect
IPv4 Address:	192.168.100.2
IPv4 Subnet Mask:	255.255.255.255
IPv4 Default Gateway:	192.168.100.1
IPv4 DNS Server:	192.168.100.1 10.6.127.4

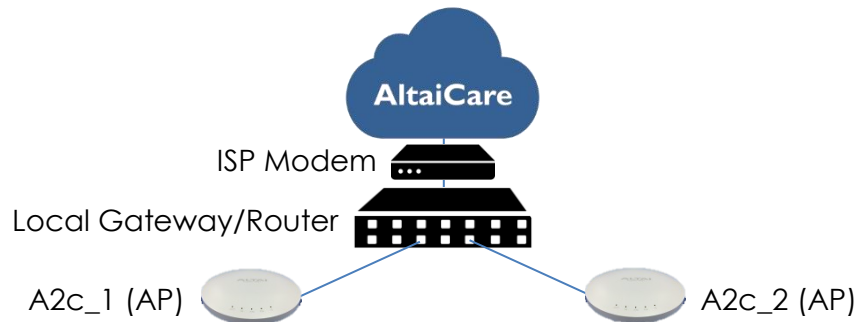
- LAN Interface (2.4G and 5G radios, denoted by radio0_x and radio1_y respectively where x and y are the WLAN ID) should show correct IP address (192.168.98.1) with DHCP server and NAT enabled.

LAN - radio0_0, radio1_0

IP Address:	192.168.98.1	NAT:	Enabled
Subnet Mask:	255.255.255.0	DHCP Server:	Server Mode

5. Connect with Cloud-based controller – AltaiCare

Network Scenario:



Note: For AltaiCare support, A2c should operate in Switch Mode (Section 3).

1. Users can manage their A2c and set up their hotspot service for subscribers with AltaiCare, which is a cloud-based system.
2. Go to **Configuration > Network > General**. Make sure A2c can reach Internet and communicate with AltaiCare by inputting **valid** IP settings either via DHCP or with Static IP configuration. Google Public DNS Server can be considered, e.g. 8.8.8.8 or 8.8.4.4 if you are not sure about the ISP DNS's Server IP.

The screenshot displays the 'General Network Setting' page in the AltaiCare web interface. The 'WAN Setting (IPv4)' section is highlighted with a red dashed box. The settings are as follows:

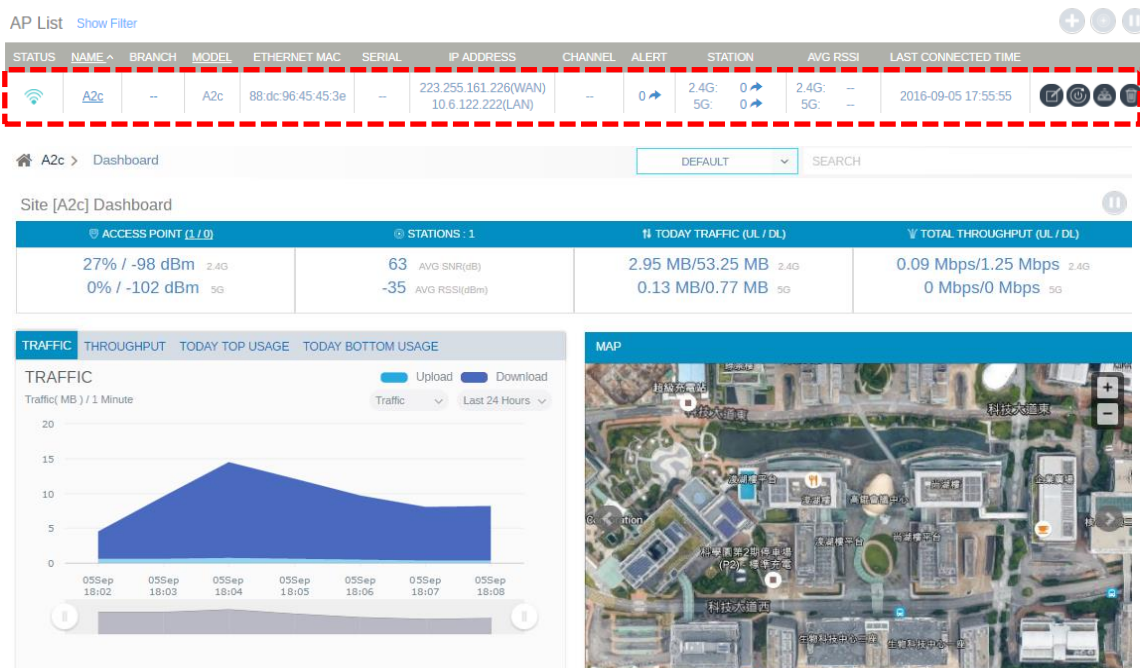
Field	Value
Internet Connection Type	Static
IPv4 Address	10.6.122.222
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	10.6.122.1
IPv4 DNS Server IP	10.6.127.4
Address	8.8.8.8

Other visible settings include:

- Network Setting:** Switch Mode
- Enable IPv6:** ☐
- WAN/LAN Interface Assignment:** Enable NAT Mode: NA
- LAN Setting (IPv4):** LAN IP Address: NA, LAN IP Address Mask: NA
- Ethernet Setting:** Mode: Auto Detect, Speed: 100Mbps/Full
- STP Setting:** Enable STP Mode: ☒

- Click **Remote Mgmt** and check the box of **Enable Remote Management**. Select AltaiCare as **Management Type** and Cloud as **Connection Type**.

- Select **Full Management** if the device is running in **AP Mode**. For **Station Mode**, **Bridge Mode** and **Repeater Mode**, select **Monitor Mode** instead.
- Click **Submit** and then **Save & Apply** at the top right corner to make all the changes take effect.
- Follow AltaiCare Quick Start Guide and register the A2c in the system for access management of AP and user service and admission control.
- A2c will appear as online in AltaiCare AP list if the connection is successful.



Federal Communication Commission Interference Statement (FCC) – USA

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.

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 25cm between the radiator & your body.

European Conformity (CE) – EU

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



Warning

A2c may require professional installation depending on the deployment scenario.

Only use the power adaptor supplied with A2c. Using a different power adaptor might damage A2c.

Disclaimer

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