

Cassia Gateway Installation Guide

Release date: June 28, 2022

Contents

1. Version Notice	2
2. Network Requirement	2
3. Find Gateway's MAC Address	3
4. Setup using WiFi Hotspot	3
5. Setup using Ethernet Connection	6
6. Configure AC Server Address	6
7. Setup Gateway Name	7
8. Configure Uplink Network	7
9. CAPWAP and MQTT Setting	8
10. Enable Local RESTful API	9
11. Add Gateway to AC	12
11.1. Login AC	12
11.2. Discover the Gateway	12
11.3. Add the Gateway	12
11.4. Add a List of Gateways	13
12. Upgrade the Gateway	14
13. Finish Gateway Configurations and Sign out	15
14. Trouble Shooting Tips	16
14.1. Gateway does not generate a WIFI hotspot	16
14.2. Forget gateway login password	16
14.3. Make a mistake while configuring the WIFI	17
14.4. Wi-Fi or USB cellular uplink is not stable	17
14.5. Gateway can't connect to AC	18
14.6. Check if a Bluetooth device can be scan or connect	19
14.7. Check Bluetooth scan and connect performance in planning and deploy phase	21
14.8. Check the multiple connection performance and the throughput	22
15. Contact Cassia Support	22

1. Version Notice

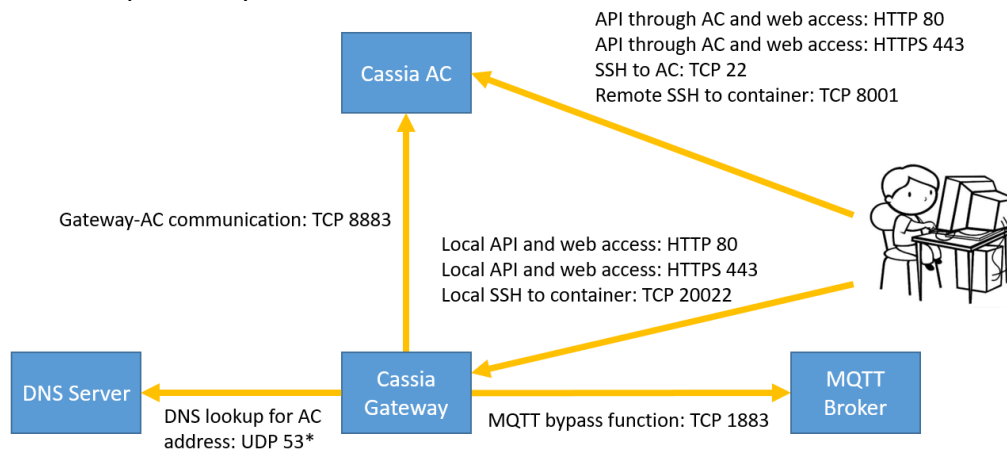
This document describes the steps of installing a Cassia gateway with firmware v1.3 or above. If the user is using firmware 1.2, please follow

https://www.cassianetworks.com/download/docs/Cassia_Quick_Start_Guide-v1.2.pdf

In this guideline, the Cassia gateway is running in AC Managed mode. If the gateway is running in standalone mode (no AC), please skip chapters 6/9/11.

2. Network Requirement

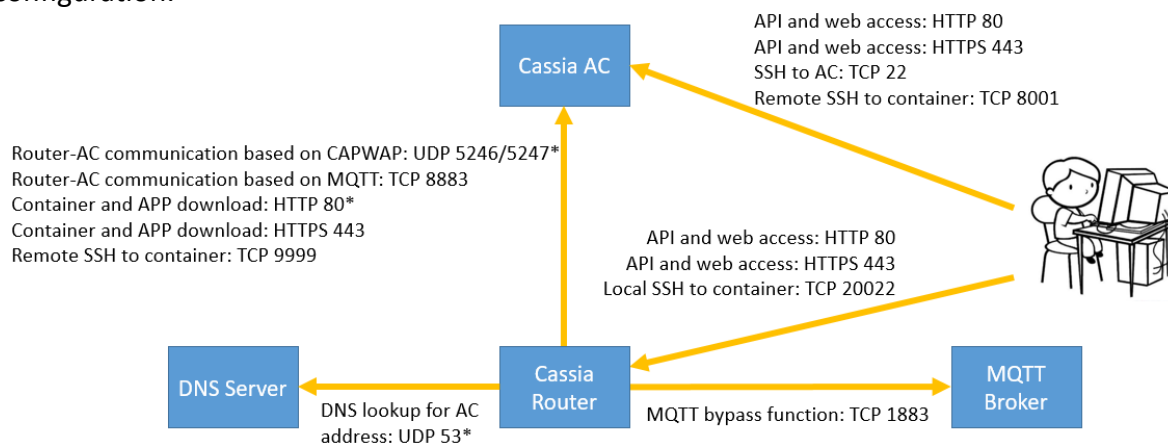
From v2.1.1, for the gateways that uses MQTT to communicate with AC (default setting), the following ports are used and required for firewall configuration. TCP ports 80, 443 and 9999 are not required anymore.



Please make sure the following ports are opened outbound on the gateway side firewall.

Type	Port	M/O	Description
TCP	8883	Mandatory	Gateway-AC communication
UDP	53	Mandatory*	DNS lookup for AC address. *Optional if internal DNS is specified in gateway network configuration
TCP	1883	Optional	For MQTT bypass function only

For the gateways that use CAPWAP to communicate with AC or the gateways using firmware below v2.1.1, the following ports may be used and required for firewall configuration.



Please make sure the following ports are opened outbound on the gateway side firewall. The user can check if a TCP port is opened by using Netcat in gateway's local console.

Type	Port	M/O	Description
UDP	5246, 5247*	Mandatory	Gateway-AC communication based on CAPWAP. *Port 5246 and 5246 can be disabled after migrating gateway-AC communication to MQTT
TCP	8883		Gateway-AC communication based on MQTT (recommended from firmware v2.0.2)
HTTP	80*	Mandatory	Container and APP download from AC based on HTTP. *HTTP port 80 can be disabled if HTTPS is enabled
HTTPS	443		Container and APP download from AC based on HTTPS
UDP	53	Mandatory*	DNS lookup for AC address. *Optional if internal DNS is specified in gateway network configuration
TCP	9999	Mandatory	Remote SSH to container (laptop->8001->AC<-9999<-container)
TCP	1883	Optional	For MQTT bypass function only

3. Find Gateway's MAC Address

Please find Cassia gateway's MAC address on the bottom of the gateway.



Cassia gateway's MAC address

NOTE: If you are filtering MAC addresses in your security policy, please make sure to input the active MAC addresses. For example, if you are using WIFI for uplink connection, the active MAC will be label MAC + 1. Please see the below table for the details.

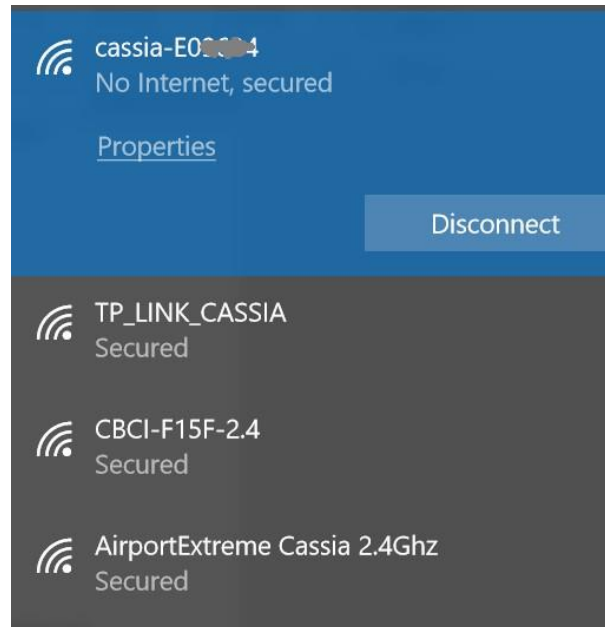
Model	Label MAC	Ethernet MAC	WIFI MAC
X2000/X1000/E1000/S2000	MAC	MAC	MAC+1
S1000/S1100	MAC	MAC	MAC-1

4. Setup using WiFi Hotspot

From firmware 1.2, the Cassia Bluetooth gateway provides a WIFI hotspot (2.4GHz only) for initial setup. Its SSID is cassia-xxxxxx (the xxxxxx corresponds to the last 6 digits of the

gateway's MAC address). The default password of the WIFI hotspot is the same as the SSID.

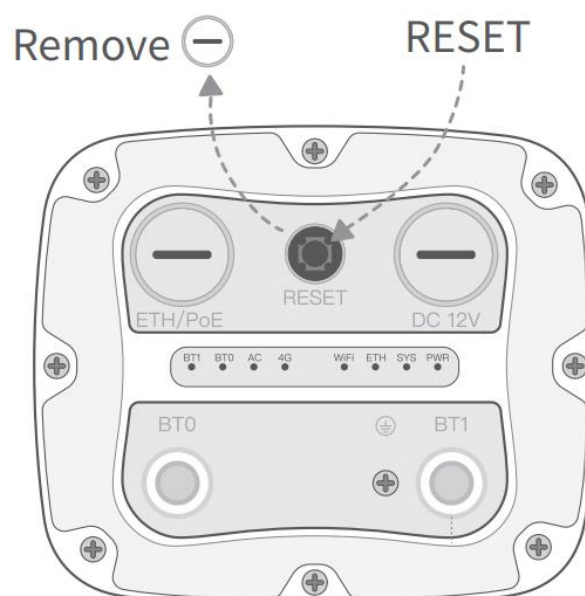
For example, if the gateway's MAC address is "CC:1B:E0:**E0:96:DC**", the WIFI hotspot SSID and its default password will be "cassia-**E096DC**".



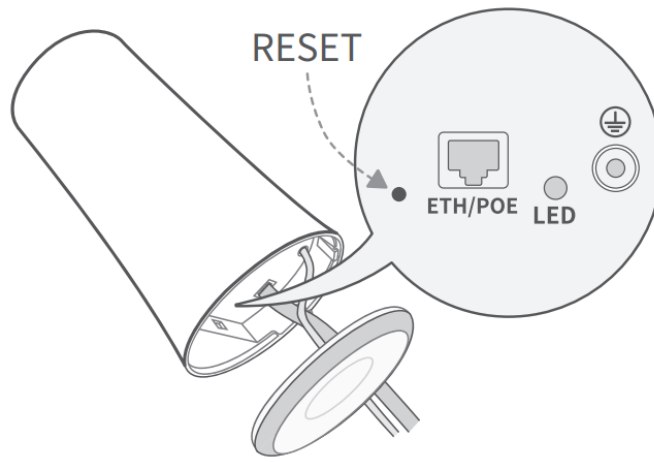
Gateway's WIFI hotspot (2.4GHz only)

Then, power up your Cassia gateway, search its WIFI hotspot from your laptop, and connect your laptop to the WIFI hotspot.

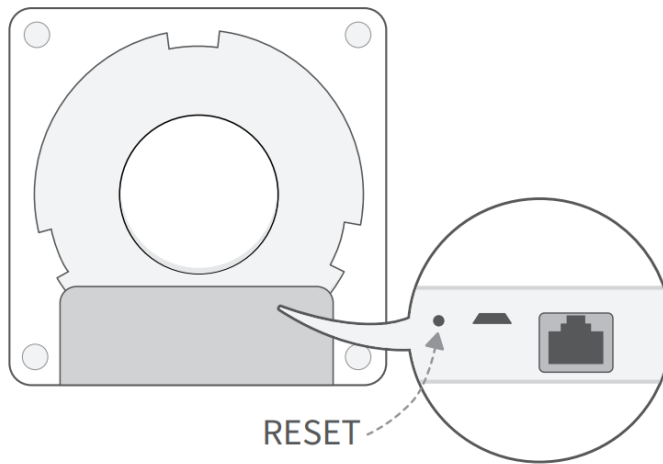
If you can't find the WIFI hotspot, and you are sure that your firmware is 1.2 or above, please press and hold the reset button at the bottom of Cassia gateway for 10 to 15 seconds while the gateway is powered on.



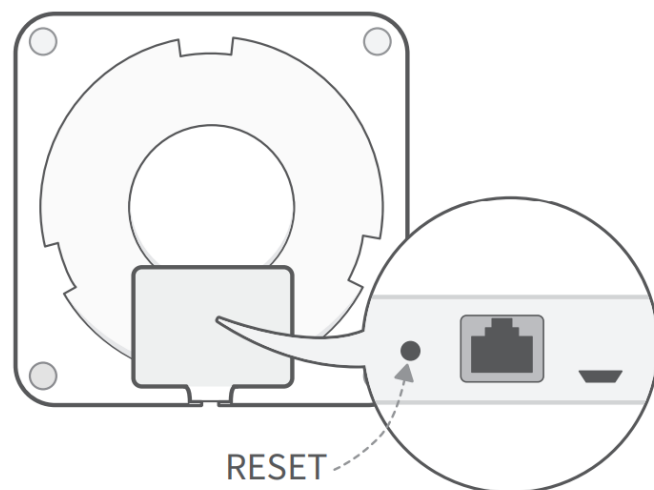
X2000 Reset Button



X1000 Reset Button



E1000 Reset Button



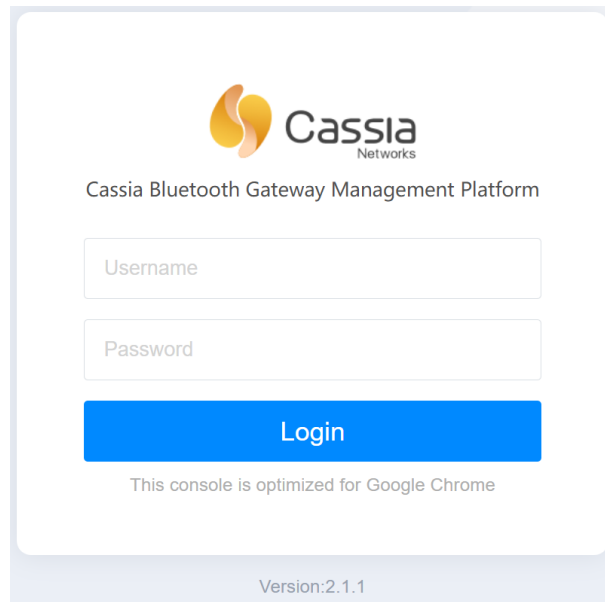
S2000 Reset Button

Please open Google Chrome on your laptop and enter the gateway's default IP address 192.168.40.1.

The first time you log in, you need to set the gateway's login password. The password

should include numbers, letters, and special characters. The password length should be between 8-20. Please note down your password for future use.

Now, please log in to the gateway's web page.

The image shows the login page of the Cassia Bluetooth Gateway Management Platform. At the top is the Cassia Networks logo. Below it, the text "Cassia Bluetooth Gateway Management Platform" is displayed. There are two input fields: "Username" and "Password". Below these fields is a blue "Login" button. Under the button, a note states "This console is optimized for Google Chrome". At the bottom of the page, the version "Version:2.1.1" is indicated.

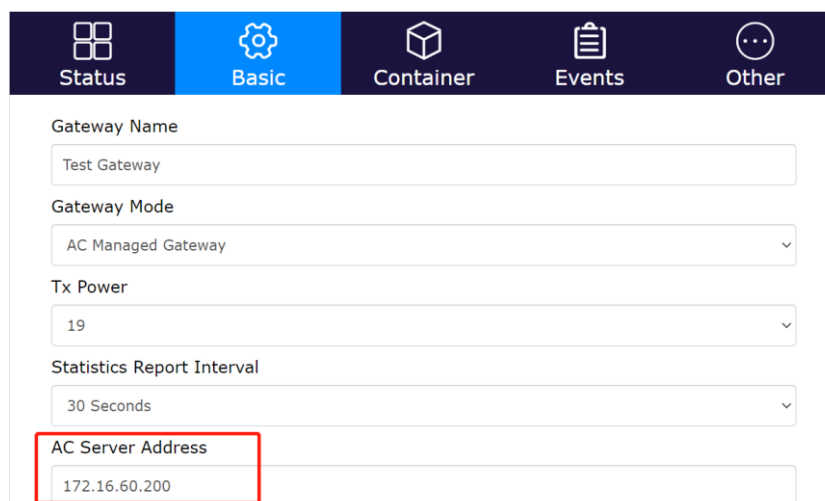
Cassia gateway's web login page

5. Setup using Ethernet Connection

If you don't have a laptop that supports WiFi, please connect the Cassia Bluetooth gateway to a managed Ethernet switch and access the DHCP table or scan using a port scanning tool to locate the IP address assigned to the gateway's MAC ID.

After that, please open Google Chrome on a computer that is connected to the same network and enter the IP address discovered above.

6. Configure AC Server Address

The image shows the configuration page of the Cassia gateway's web interface. The "Basic" tab is selected in the top navigation bar. The page contains several configuration fields: "Gateway Name" (Test Gateway), "Gateway Mode" (AC Managed Gateway), "Tx Power" (19), "Statistics Report Interval" (30 Seconds), and "AC Server Address" (172.16.60.200). The "AC Server Address" field is highlighted with a red rectangle.

Configure AC address in Cassia gateway's web

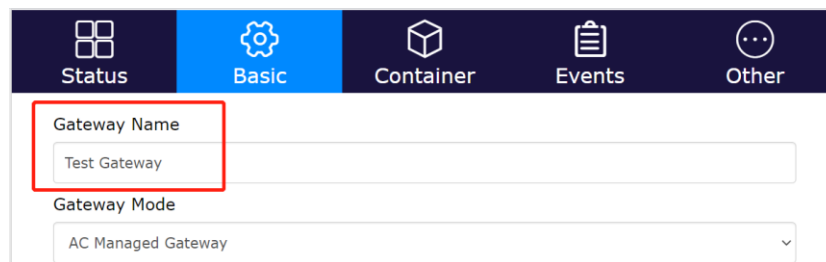
The user can skip this step in the below scenarios.

- If the gateway and the AC are in the same network and DHCP is configured in the network, AC can discover the gateways automatically.
- If the user needs to configure more Cassia gateways at the same time, it is better to use DHCP server option 43 to help the gateways to find the AC. IP gateway will serve as a DHCP relay.
- If the gateway is configured as standalone mode, there will be no AC.

7. Setup Gateway Name

From firmware v2.1.1, the user can setup gateway name from the gateway's local webpage. The user can still setup gateway's name from AC as before.

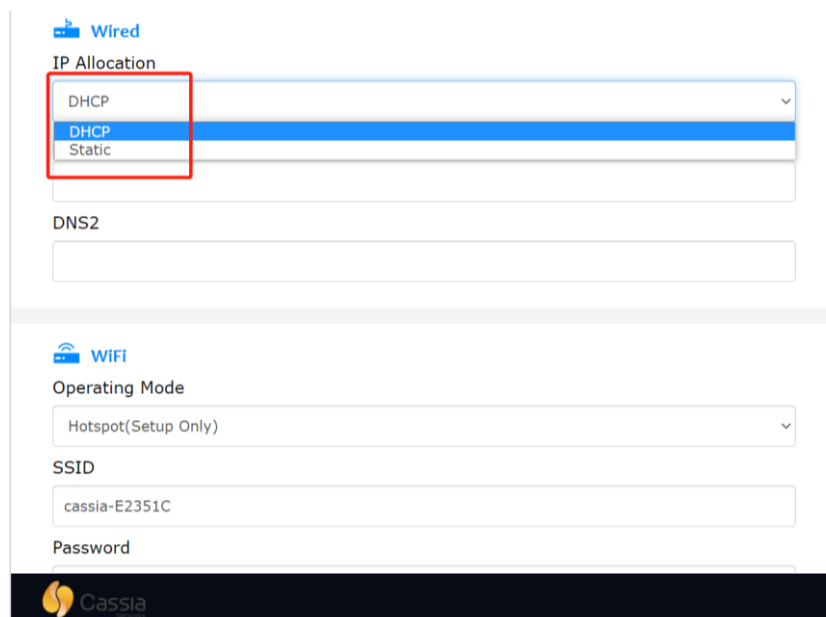
This is very useful for the user who doesn't share AC account to the engineers that install the Bluetooth gateway. When a new Bluetooth gateway is installed, the user will identify this gateway on AC by the gateway name easily, for example "Gateway 1 in factory A".



The screenshot shows the 'Basic' configuration tab for a gateway. The 'Gateway Name' field is highlighted with a red box and contains the text 'Test Gateway'. Below it, the 'Gateway Mode' dropdown is set to 'AC Managed Gateway'.

8. Configure Uplink Network

The Cassia Bluetooth Gateway supports Ethernet (Wired), WIFI, and USB cellular modems as networking uplinks. Please check Cassia User Manual for more information. In this guideline, we use Ethernet as an example. Below is the configuration with wired and DHCP.



The screenshot shows the network configuration page. The 'Wired' tab is selected, and the 'IP Allocation' dropdown is highlighted with a red box and set to 'DHCP'. Below it, the 'DNS2' field is empty. The 'WIFI' tab is also visible, showing 'Operating Mode' set to 'Hotspot(Setup Only)', 'SSID' set to 'cassia-E2351C', and a 'Password' field.

Setup network configuration for your gateway

9. CAPWAP and MQTT Setting

Before firmware 2.0.2, Cassia Bluetooth gateway communicates with AC using CAPWAP protocol. CAPWAP is based on UDP port 5246 and 5247 and uses DTLS 1.2 to ensure security.

From firmware 2.0.2, the user can also select MQTT for the communication between gateways and AC. MQTT uses TCP port 8883 and TLS 1.2. MQTT improves the robustness of gateway and AC communication.

The user can set the preferred gateway-AC protocol by setting parameter “AC-Gateway Protocol Priority” on AC or gateway’s console. First, the gateway will use the preferred protocol to connect AC. If it failed, e.g. port is blocked by the firewall, the gateway will try the other protocol automatically.

NOTE: From firmware 2.0.3, the default “AC-Gateway Protocol Priority” on the gateway is MQTT. If the gateway was upgraded from lower versions, the default value will be CAPWAP.

The screenshot displays the 'Basic' configuration tab for a Cassia gateway. The interface includes a top navigation bar with icons for Status, Basic (selected), Container, Events, and Other. The main configuration area contains the following fields:

- Gateway Name: Text input field.
- Gateway Mode: Dropdown menu set to 'AC Managed Gateway'.
- Tx Power: Dropdown menu set to '19'.
- Statistics Report Interval: Dropdown menu set to '30 Seconds'.
- AC Server Address: Text input field containing '172.16.60.200'.
- AC-Gateway Protocol Priority: Dropdown menu with a red box highlighting the options: 'MQTT', 'CAPWAP', and 'MQTT' (which is the selected option, highlighted in blue).
- Wired: Dropdown menu.

The Cassia logo is visible in the bottom left corner of the interface.

After the gateway is online, the user can find the actually used protocol by checking “AC-Gateway Protocol” on AC or gateway’s console.

Status	Basic	Container	Events	Other
Model	E1000			
MAC	CC:1B:E0:E0:DE:AC			
Working Mode	AC Managed			
AC-Gateway Protocol	MQTT			
Uplink	Wired			
ETH IP	172.16.60.115			
WLAN IP				
Cellular IP				
Country/Region	Germany			
Firmware Version	2.1.1.2106240330			
Up Time	6hrs 6min 21sec			
AC Online Time	6hrs 5min 37sec			

For more information about MQTT and CAPWAP, please check Cassia User Manual.

10. Enable Local RESTful API

This step is only valid for the users who want to use RESTful APIs on the local gateways (not through AC or in a container).

From firmware 1.3, if the gateway is configured as standalone mode, local RESTful API will be automatically turned on. If the gateway is configured as AC managed mode, the local RESTful API will be automatically turned off.

The screenshot shows the 'Basic' configuration tab in the Gateway Console. The 'Router Mode' dropdown menu is open, showing three options: 'Standalone Router', 'AC Managed Router', and 'Standalone Router'. The first 'Standalone Router' option is highlighted with a red box. Below the dropdown, the 'Tx Power' is set to 19, 'Connection Priority' is set to Wired, and 'IP Allocation' is set to DHCP.

(v1.3) Configuration of Gateway Mode on Gateway Console

From firmware 1.3, the user can still enable the local RESTful API from the AC console like below, even if the gateway is configured as AC managed mode.

Cassia Router ONLINE

Details Devices Container **Config** Tools

Statistics Report Interval: 30 Seconds

AC Address: sandbox.cassia.pro

AC-Router Protocol Priority: MQTT

Save

Local RESTful API: ON (selected), OFF

Remote Assistance: OFF

Save

(v1.3) Turn on Local RESTful API in AC Console

Before firmware 1.3, the user needs to turn on Local RESTful API in the AC console or gateway console manually. By default, it is OFF. Please see the below figures.

Old Bootloader

ONLINE

Details

Devices

Config

General

Name

Old Bootloader

Group

SJCLab X

SJCLab

beijing

+ Add

AC Address

test.cassia.pro

AC-AP Comm.Ports

5246,5247

Local RESTful API

ON

Remote Assistance

ON

Save

Save

Save

Save

(v1.2) Turn on Local RESTful API in AC Console

Overview

Common

Networks

Bypass

Portal Password

Old Password

New Password

Confirm Password

Save

AC Address

AC-AP Comm. Ports

5246,5247

Save

Local RESTful API

OFF

Save

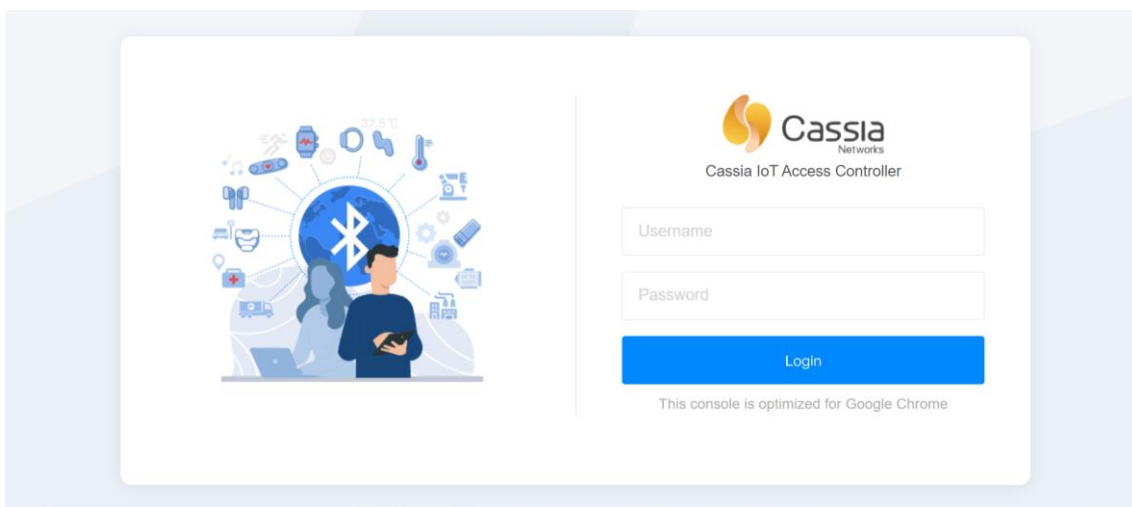
(v1.2) Turn on Local RESTful API in Gateway Console

11. Add Gateway to AC

NOTE: Please always use AC version equal or newer than gateway versions, otherwise you may see strange behaviors. For example, the gateway with 2.1.1 firmware can only connect with 2.1.0 AC with CAPWAP protocol, due to single port feature introduced in 2.1.1. So the 2.1.1 gateway which uses MQTT protocol needs 15 minutes to switch to CAPWAP and connect to 2.1.0 AC.

11.1. Login AC

Please switch your laptop to the WIFI SSID which will provide you with Internet access. Please open Google Chrome and enter the IP address or domain name of the AC, and log in.



Cassia AC login page

11.2. Discover the Gateway

Navigate to the Gateways page.



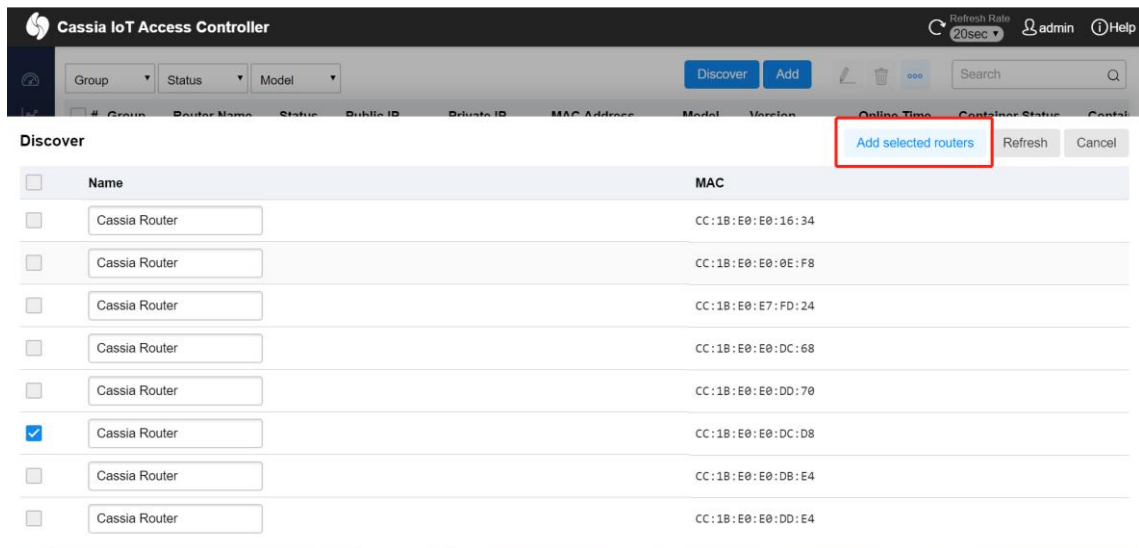
Discover Bluetooth gateways

After clicking the Discover button, Cassia AC will identify the gateways that are either in the same local network as the AC or have been configured to talk to this AC (set AC Server Address) but haven't been added to the AC yet.

11.3. Add the Gateway

Please find the gateways you want to add, then click the "Add selected gateways" button.

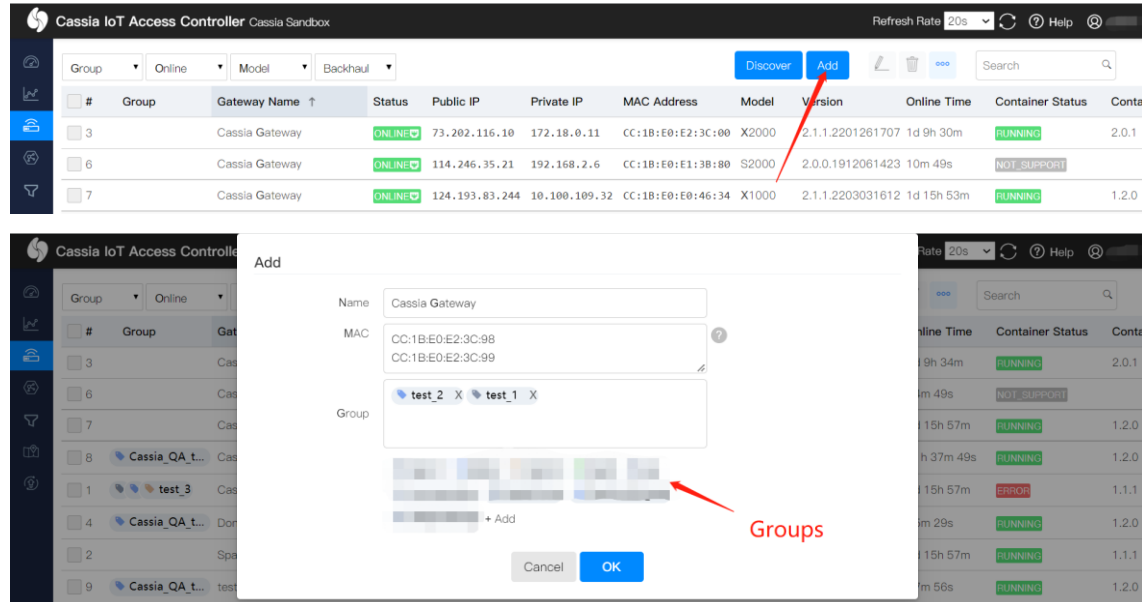
You can select multiple gateways and add all of them in one batch.



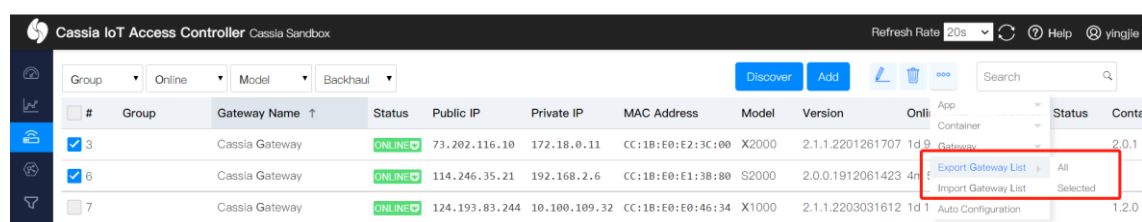
Add the gateways into the AC

11.4. Add a List of Gateways

Before sending the gateways to customers, please add the gateways in AC following below steps. You can also set name and group for the gateways. After that, when the gateways are powered up and correctly configured, they will connect to the AC automatically.



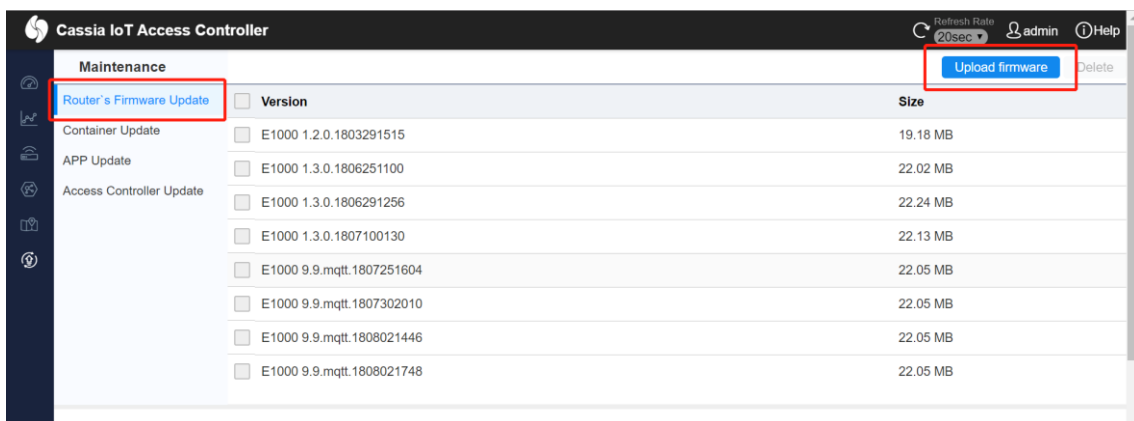
You can also export the selected gateways or all the gateways to a file and import it to another AC later.



12. Upgrade the Gateway

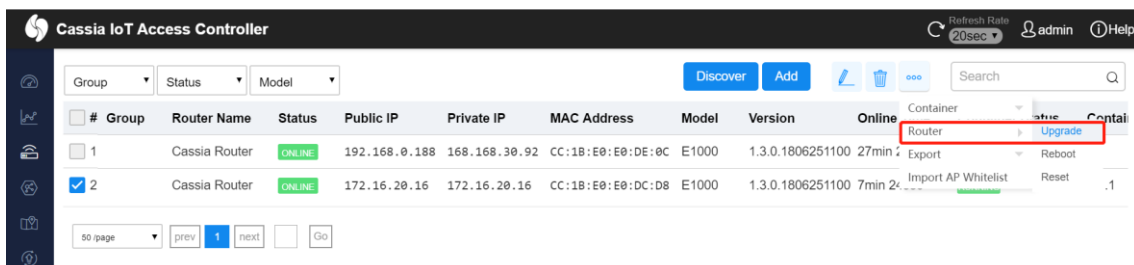
If your gateway is not running the latest firmware, you can upgrade the firmware.

If you don't have the latest firmware on the AC yet, please get it from Cassia, and then upload it to the AC maintenance page. The latest firmware download is available here: <https://www.cassianetworks.com/knowledge-base/router-gateway-firmware/>. This page is password protected. Please get in touch with your Cassia sales representative for assistance.



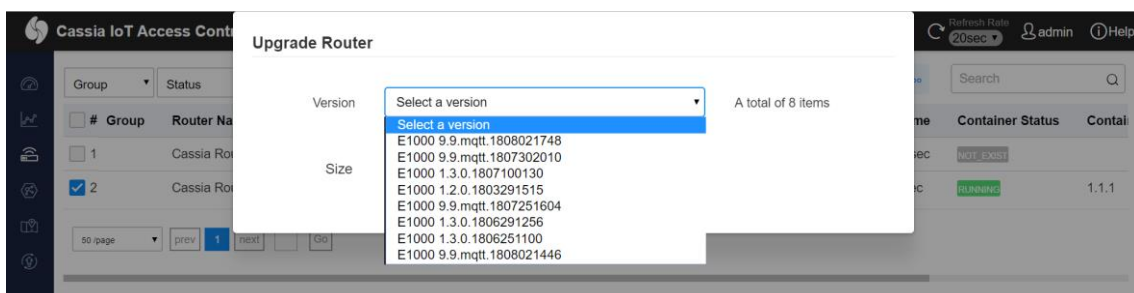
Upload firmware to the AC

Please navigate to the Gateways page, select the gateway(s) that you want to upgrade, and click the Upgrade button.



Upgrade a gateway

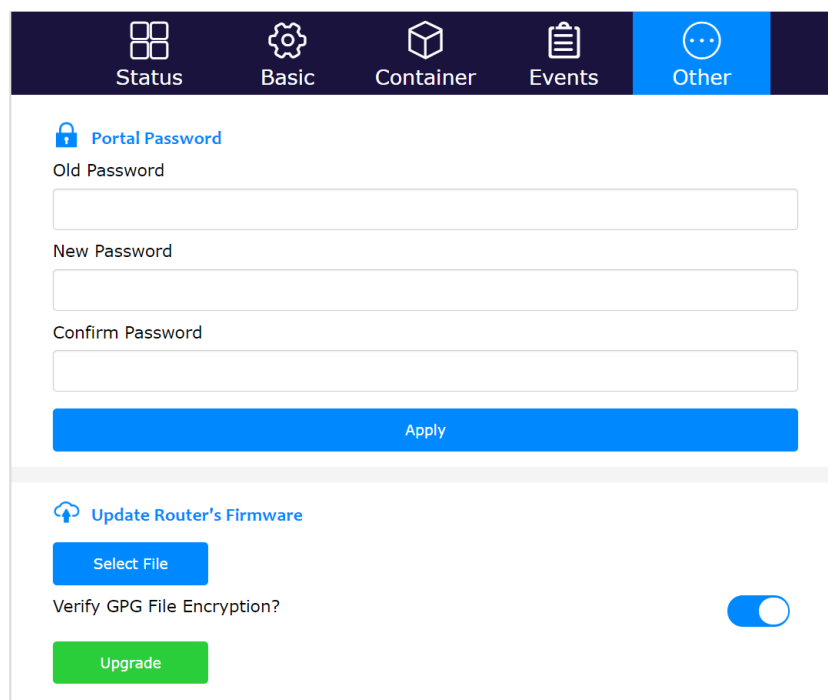
Please choose a firmware you want to upgrade to, and then click OK. If the E1000, X1000, and X2000 firmware upgrade fails during firmware download, it will resume from the last broken download.



Select firmware and upgrade the gateway

From firmware 1.3, the user can update the gateway's firmware locally from the gateway console by clicking the "Select File and Upgrade" button. If the firmware image is encrypted with *.gpg, please switch on "Verify GPG File Encryption?". Please turn it off, if the firmware image is *.gz file format. From 2022 May 1st, Cassia will only deliver gpg format firmware for all Cassia Bluetooth gateway types, except for S2000.

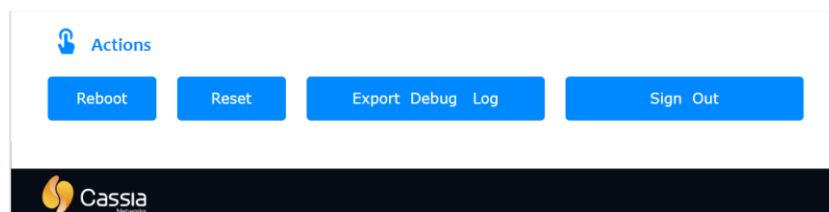
From firmware 1.4.2, the user can update the gateway's firmware from an Android smartphone locally. Please download the gateway firmware onto your smartphone in advance and log into the gateway's local console from WiFi hotspot (2.4GHz only) or the gateway's private IP.



Update gateway's firmware locally from gateway web

13. Finish Gateway Configurations and Sign out

Please follow Cassia User Manual to finish other gateway configurations, if necessary. After the configuration, please click the Sign Out button on the Other page to sign out.



Cassia gateway configuration page – other continued

To simplify and speed up the gateway deployment and the pre-configuration before shipping gateways to the end users, you can also try "Gateways Auto Configuration" and "Gateway Batch Configuration" features on AC. Please check Cassia user manual for the detailed guideline.

14. Trouble Shooting Tips

14.1. Gateway does not generate a WIFI hotspot

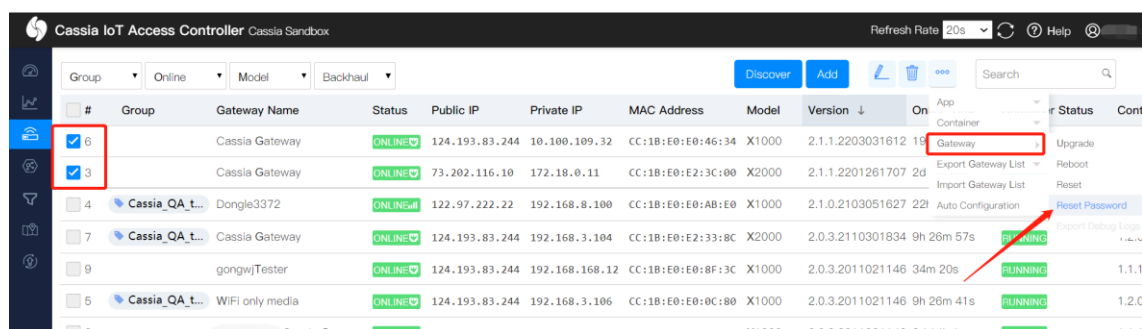
- Cassia gateway's WiFi hotspot is 2.4GHz only
- If the gateway is configured to use a WIFI network for uplink, the gateway will not generate a WIFI hotspot.
- Check the power supply and make sure the power and Wi-Fi LED are ON.
- Try to reset the Cassia Bluetooth gateway.

NOTE: once reset, all gateway configurations in the below table will be reset to the default profile settings, except for country code, container, and customer APP. You need to configure the Cassia gateway again. What is more, the gateway debugs log and route event log will be cleaned. If you would like Cassia to troubleshooting this issue, please don't reset the gateway!

Parameter	Manufacturing Default Value
Gateway Console Username	admin
Gateway Console Password	Need to set new password
AC Server Address	Empty
Local RESTful API	OFF
Remote Assistance	OFF
Connection Priority	Wired
WIFI / Operating Mode	Hotspot
WIFI / SSID	cassia-xxxxxx
WIFI / Password	cassia-xxxxxx
Local Time Zone	UTC +08:00
Local Time	1970-01-02, 00:00:00
Enable Local SSH Login	OFF
AC-Gateway Protocol Priority	MQTT (this configuration is available from firmware 2.0.2)

14.2. Forget gateway login password

If you forget the gateway login password, you can reset it through the AC. The read only AC account doesn't have the permission to reset the gateway login password.



You can also reset the gateway, but once reset, all the gateway configurations will be set to the default profile settings. You need to configure the Cassia gateway again. The country code, container, and customer APP will not be impacted.

14.3. Make a mistake while configuring the WIFI

- From firmware 2.0.3, the user can enable “Verify before saving” before switching to Client mode. If the gateway can’t connect to Wi-Fi AP within 30 seconds, it will switch back to Hotspot mode automatically. This function will avoid an un-necessary gateway reset if the user sets the wrong Wi-Fi configuration. If the Wi-Fi client is set to static IP, after the gateway fail to connect to Wi-Fi AP and fall back to Wi-Fi hotspot mode, the hotspot IP address will be changed from 192.168.40.1 to the new static IP.
- If you didn’t enable “Verify before saving”, you have to reset the Cassia Bluetooth gateway. Once reset, all gateway configurations will be reset to the default profile settings, except for country code, container, and customer APP.

14.4. Wi-Fi or USB cellular uplink is not stable

- If you are using gateway firmware v2.0 or higher versions, please check the Wi-Fi and cellular network signal strength on AC->Gateway->Details->Uplink or gateway console Status tab. If the signal strength is POOR, please try other WiFi SSID, try 5G WiFi (only supported by E1000 and X2000), try SIM card from other cellular operators, or try other uplink solutions. Only some cellular modems support signal strength measurement. Please check the Cassia user manual for the list.
- If you are using gateway firmware lower than v2.0, please check the Wi-Fi and cellular signal strength on your mobile phone.
- The country code should be set correctly when using 5G Wi-Fi. Otherwise, 5G Wi-Fi may not work correctly.
- Cassia gateway supports USB cellular modem auto recovery function. After setting “Recover Action” to ON, Cassia gateway will power reset the USB cellular modem (X2000) or reset the USB interface (other gateways) if it can’t reconnect to the cellular network in 10 minutes. For an AC managed gateway, if the cellular connection can’t be recovered in one hour, the gateway will soft reboot automatically. All cellular modems connected by USB port are able to support this function.

Cellular Modem

USB Modem Type

HUAWEI E3372s-153/E8372h-153, Novatel USB730L

Recovery Action

OFF

Apply

Cassia Networks

Cassia IoT Access Controller Cassia Sandbox

Refresh Rate 20s

Help yingjie

#	Group	Router Name	Status	Public IP	Private IP	MA
1		Cassia Router	ONLINE	136.24.229.34	192.168.1.119	CC:
2		Cassia Router	ONLINE	96.64.240.30	10.1.10.237	CC:
3		Cassia Router	OFFLINE	50.35.185.130	192.168.254.178	CC:

50 /page prev 1 next Go

Cassia Router ONLINE

Details Devices Container **Config** Tools

Password: *****

IP: 192.168.40.1

Netmask: 255.255.255.0

Save

Cellular Modem

USB Modem Type: HUAWEI E3372s-153/E8372h-153, Novatel USB

Cellular modem auto power reset: ON

Save

Bypass

14.5. Gateway can't connect to AC

- Double-check the Bluetooth gateway configuration and Internet connection.
- Check Ethernet and Wi-Fi LED on Cassia Bluetooth gateway. Check the LED on the USB cellular modem. Check the 4G LED on X2000.
- In case a USB cellular modem is used, check the model is supported (check Cassia User Manual) and that the modem has established a connection to a mobile network.
- Check that the network does not use VPN.
- Check the network firewall settings.
- Check the connection to AC with Debug Tools in the Other tab. Please check Cassia User Manual for more information.

- Check CAPWAP and MQTT configuration. Please check Cassia User Manual for more information.
- Reboot the Bluetooth gateway (power off/on)

14.6. Check if a Bluetooth device can be scan or connect

- Check the Bluetooth device is power on and working well.
- Check the Bluetooth Low Energy LED is ON.
- Check Bluetooth Low Energy chip status on gateway webpage -> status tab or AC webpage -> gateway detail tab
- The gateway location or orientation needs to be changed if the Bluetooth devices are not reachable or if the RSSI is lower than -70, e.g. -80. If you are using AC software v1.4 or higher versions, you can try to scan and connect the Bluetooth device with Bluetooth Debug Tool in AC (read only user doesn't have the permission). Please use "Cassia Bluetooth Debugger 2" on <http://www.bluetooth.tech>, if you are using lower AC versions or you are a read only user.
 - RSSI value between 0 and -70 is OK
 - RSSI value between -70 and -80 is weak. The Bluetooth device might be scan and connect from time to time
 - RSSI value -80 or less is poor. Most probably the Bluetooth device cannot be reached.

NOTE: From firmware v2.0.3, CORS is disabled by default due to security reasons. Client-side scripts (e.g. JavaScript) are prevented from accessing the AC webpage and gateway local webpage, unless "Access Control Allow Origin" in AC settings and "Allow Origin" in gateway webpage is set.

For example, when using the Bluetooth debug tool, please set "Access Control Allow Origin" and "Allow Origin" to * or the URL of the requesting page <http://www.bluetooth.tech/>

X2000 LED (Green)

LED	Function	Status	Description
PWR	Power status	Off	Power off
		Solid on	Power on
SYS	System status	Off	The system didn't start or cannot operate normally
		Solid on	The system is starting, going to reset, or cannot operate normally

		Slow blinking	The system is operating normally
ETH	Ethernet status	Off	No Ethernet link
		On	Ethernet link present
		Blinking	Sending or receiving data
WIFI	Wi-Fi status	Off	Wi-Fi didn't start or is in disable mode
		On	Wi-Fi is operating normally in hotspot or client mode
		Blinking	Sending or receiving data
BT0/1	Bluetooth status	Off	Bluetooth chip didn't start
		Solid on	Bluetooth chip is operating normally
		Fast blinking	Bluetooth connection has been setup
		Slow blinking	Bluetooth scan has been enabled
4G	Cellular modem status	Off	USB cellular modem is not connected to X2000 or cellular modem works abnormally
		Solid on	1: PPPoE cellular modem*: X2000 has connected to the cellular network 2: DHCP cellular modem*: X2000 has connected to the cellular modem. NOTE: Does not guarantee cellular network connectivity
		Blinking	1: PPPoE cellular modem*: X2000 is sending or receiving data to the cellular network 2: DHCP cellular modem*: X2000 is sending or receiving data to the cellular modem. NOTE: Does not guarantee cellular network connectivity
AC	AC online status	Off	X2000 is offline on AC
		Solid on	X2000 is online on AC

* Huawei models E3372s-153 and E8372h-153 are DHCP cellular modems. MultiTech models MTCM-LNA3-B03 and MTCM2-L4G1 are PPPoE cellular modems. If you want to know the type of other USB cellular modems, please contact your Cassia sales/support contact

E1000/S2000 LED (Green)

LED	Function	Status	Description
PWR	Power status	Off	Power off
		Solid on	Power on
SYS	System status	Off	The system didn't start or cannot operate normally
		Solid on	The system cannot operate normally
		Fast blinking	The system is starting or going to reset
		Slow blinking	The system is operating normally
ETH	Ethernet status	Off	No Ethernet link
		On	Ethernet link present
		Blinking	Sending or receiving data
WIFI	Wi-Fi status	Off	Wi-Fi didn't start or is in disable mode
		On	Wi-Fi is operating normally in hotspot or client mode
		Blinking	Sending or receiving data
BT1/2	Bluetooth status	Off	Bluetooth chip didn't start
		Solid on	Bluetooth chip is operating normally
		Fast blinking	Bluetooth connection has been setup
		Slow blinking	Bluetooth scan has been enabled

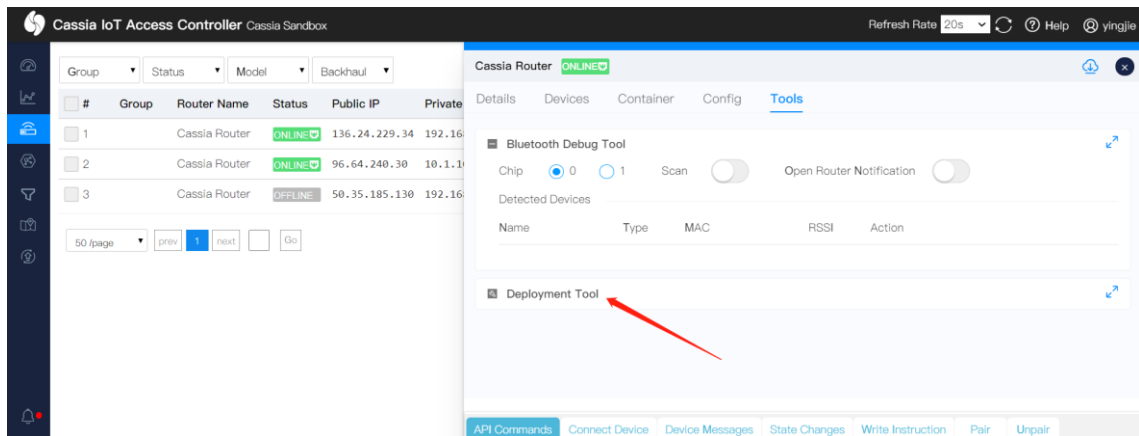
X1000 LED (Blue)

LED	Function	Status	Description
PWR	Power status	Off	Power off
		Solid on	Power on

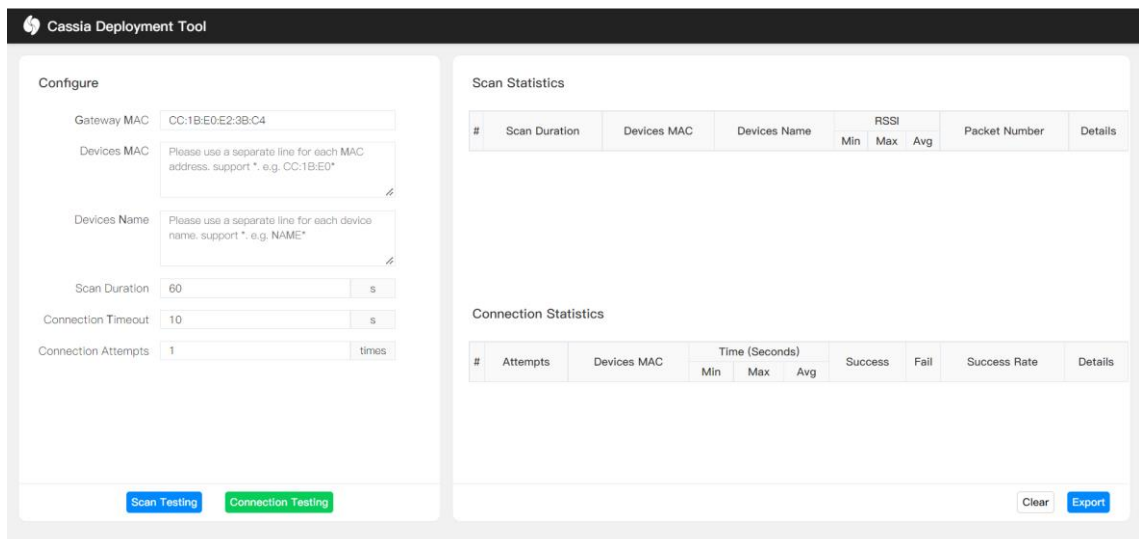
X1000 LED may keep on blinking if the PoE power supply is not stable. Please try to replace the PoE injector.

14.7. Check Bluetooth scan and connect performance in planning and deploy phase

From firmware 2.1.0, the user can run the deployment tool by selecting “Deployment” in the gateway’s local console, or run it from the AC console tools tab. Deployment tool can help the customer to assess the gateway and device’s Bluetooth performance during the planning and deploying phase.



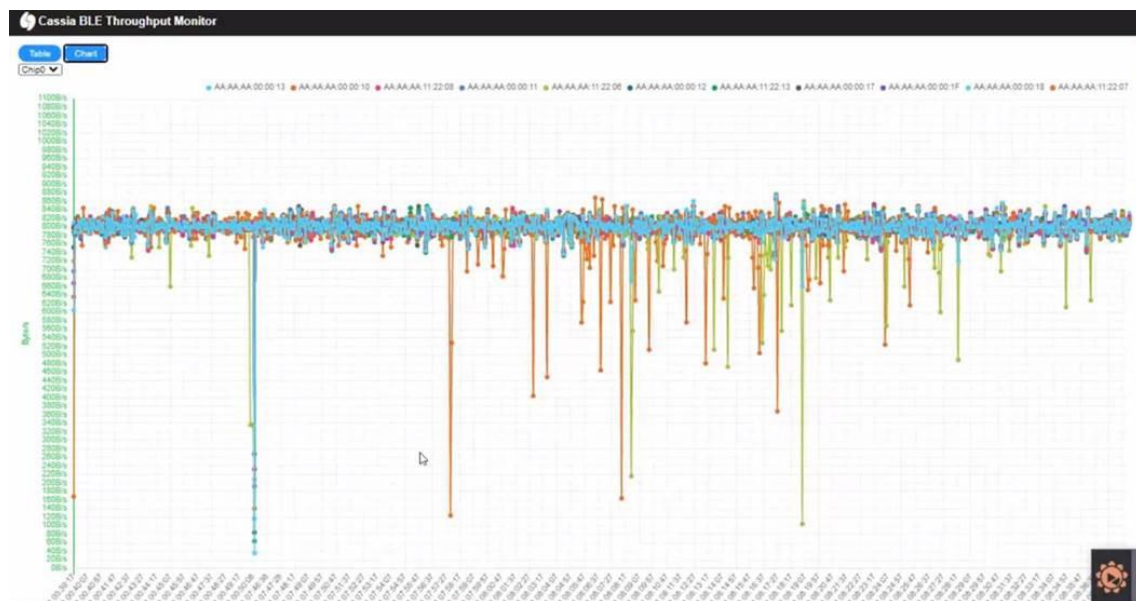
The customer can check the scan and connect performance in real-time, including RSSI, the number of scanned packets, scan and connect duration, connection success and failure rate, etc. Device name filter and MAC filter with wildcard are supported. To get the correct display format, please use this tool on the computer only.



14.8. Check the multiple connection performance and the throughput

From firmware 2.1.0, the user can run the Bluetooth Low Energy throughput monitor tool by selecting “Throughput” in the gateway’s local console. This tool can show how many Bluetooth Low Energy connections on each chip and show the Bluetooth Low Energy throughput of all the connections or part of them. The user can check the result in chart format (not supported by S2000) or table format.

This tool is not available on the AC console because the traffic amount is huge. To get the correct display format, please use this tool on the computer only.

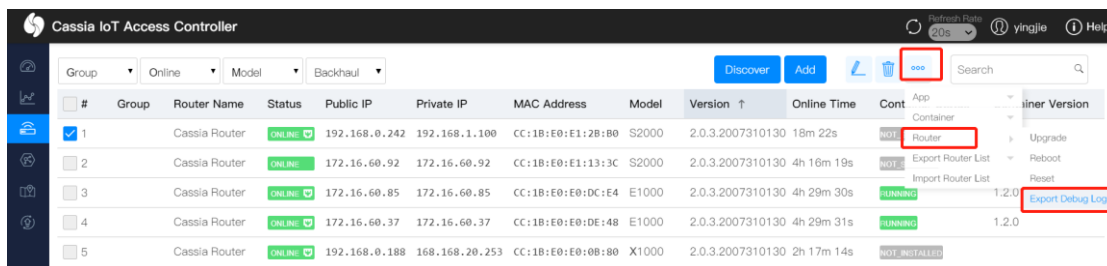


15. Contact Cassia Support

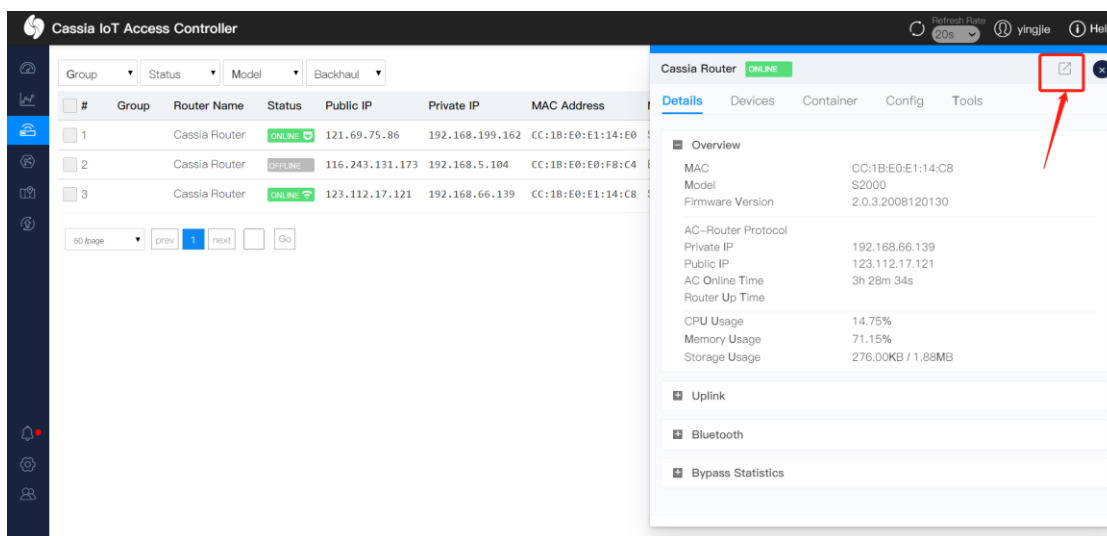
If you can't fix the issue following the above tips, please contact Cassia support support@cassianetworks.com. Please export the gateway debug log and gateway event log, and email them to us for further analysis.

NOTE: the gateway debug log and route event log will be cleaned after the gateway reset. If you would like Cassia to troubleshoot, please don't reset the gateway!

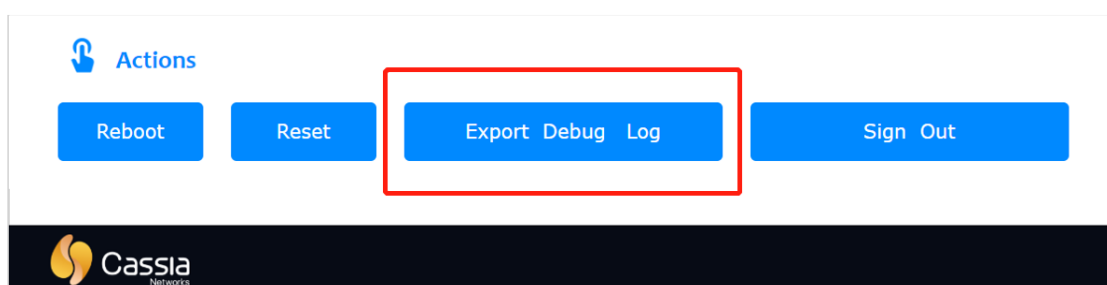
From firmware 2.0.3, the user can download the gateway debug log from AC too (see below screenshot). Only one gateway's debug log can be downloaded from AC at the same time. It may take 2-5 minutes (time out in 10 min) to download one gateway debug log. Please don't touch the AC console and wait until the download is finished, otherwise, the download may be interrupted. This log is not readable to end-users.



On the AC console, the user can export the gateway event log by clicking the below button.



On the gateway console, the user can export the gateway debug log by clicking the Export Debug Log button on the Other tab. This log is not readable to end-users.



On the gateway console, the user can export the gateway event log by clicking the Export button on the Events tab.

