



M2000 Compact  
Cellular  
Bluetooth  
Gateway



# Cassia Network M2000 Compact Cellular Bluetooth Gateway User Manual

[Home](#) » [Cassia Network](#) » Cassia Network M2000 Compact Cellular Bluetooth Gateway User Manual 

## Contents

- [1 Cassia Network M2000 Compact Cellular Bluetooth Gateway](#)
- [2 Overview](#)
- [3 Local Console](#)
- [4 Service](#)
- [5 Parameter Description](#)
- [6 AC Operations](#)
- [7 LED Status](#)
- [8 Documents / Resources](#)
  - [8.1 References](#)
- [9 Related Posts](#)



**Cassia Network M2000 Compact Cellular Bluetooth Gateway**



## Overview

M2000 is a compact Bluetooth gateway that supports 4G and Wi-Fi connectivity. It is easy to install and use and has excellent Bluetooth performance. Additionally, it is cost-effective, stable, secure, and scalable. M2000 is part of Cassia Network's enterprise-level Bluetooth gateways and can be managed through the Cassia Network's Access Controller (AC). M2000 is ideal for situations that require mobility and rapid deployment, but do not need high Bluetooth device density. It is commonly used for monitoring mobile vital signs, remote healthcare at home, and for monitoring vehicle assets. Moreover, M2000 has robust applications in supply chain management and for people and asset tracking on campuses and medical institutions.

### Notes for the M2000 official version:

- SIM card is not included in the M2000.
- The cellular connection with NB-IOT has minimal bandwidth (<5Kbps) and high network latency (1.6s-10s), so M2000 firmware will need to be further customized in the future to work in this case.
- AC software must be upgraded to the Cassia-AC-2.2.0.24 version to support M2000.
- AC software and M2000 firmware are available at: <https://www.cassianetworks.com/support/knowledge-base/>
- M2000 GA firmware cannot be upgraded on M2000 beta hardware.

## Local Console

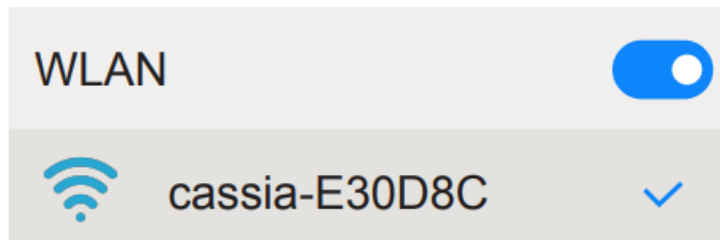
### Login

1. Please record the last six digits of the MAC address on the back of the M2000 chassis.

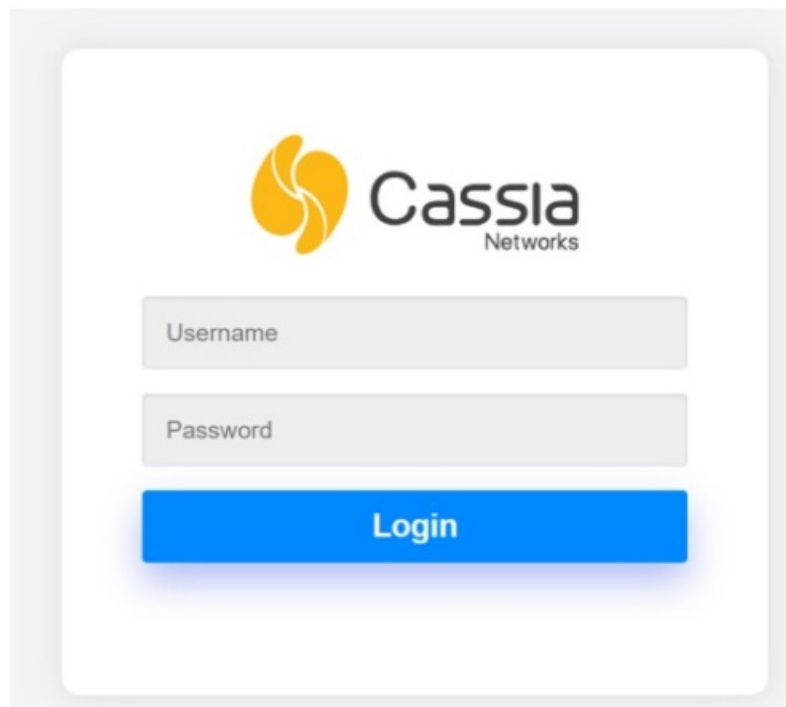


2. Connect to the M2000's Wi-Fi hotspot using a computer or mobile phone.

- The hotspot's name is cassia-xxxxxx.
- The password is the same as the name, cassia-xxxxxx xxxxxx is the last six digits of the M2000's MAC address.
- For instance, if the MAC address of an M2000 is CC:1B: E0:E3:0D:8C, both the Wi-Fi hotspot name and password are cassia-E30D8C.

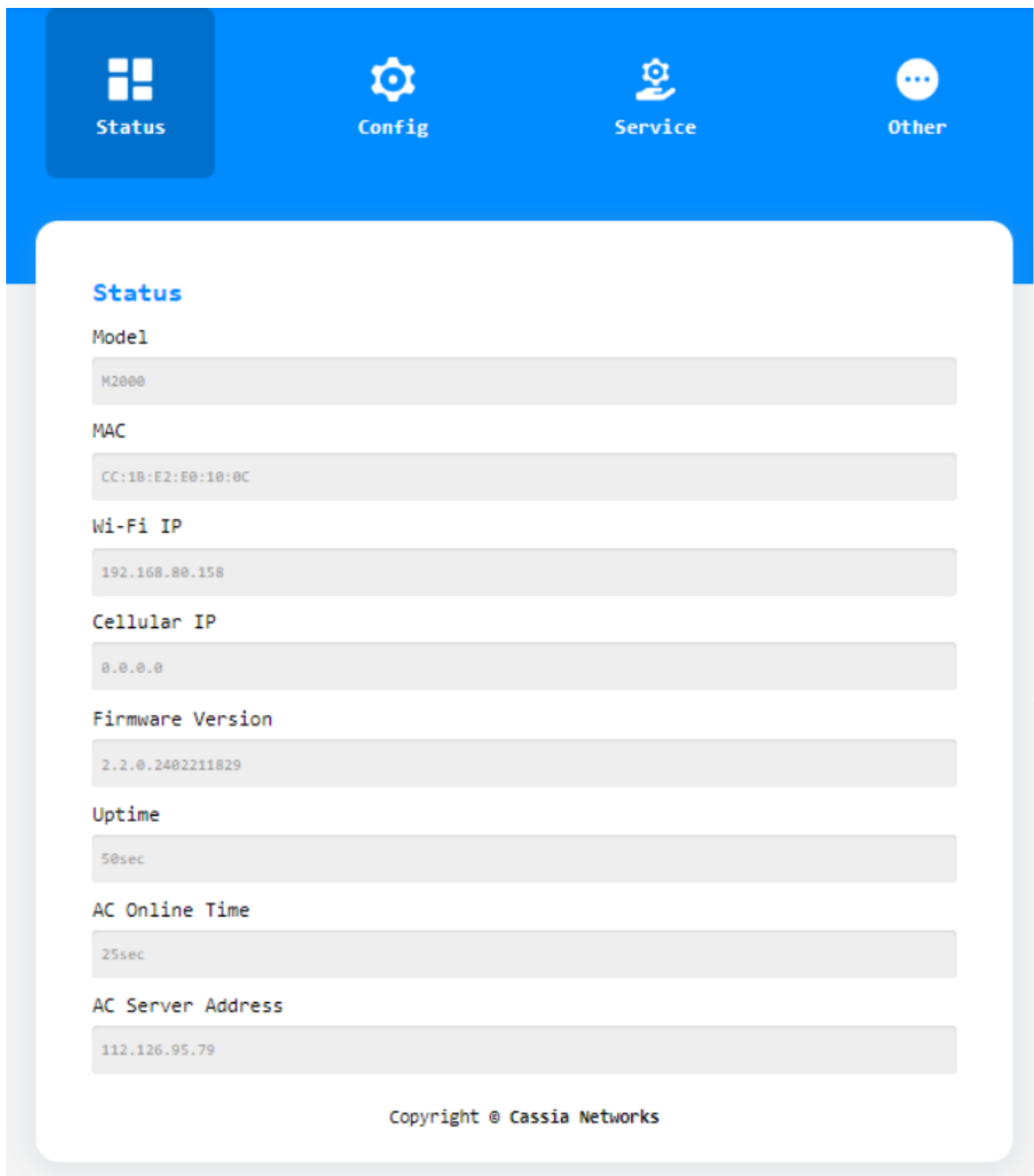


3. After connecting to the M2000's Wi-Fi hotspot, open a web browser and enter 192.168.40.1 into the address bar. You will be prompted to enter a username and password. The default username is admin, and the password is admin.



## Status

1. Upon successful login, you will be able to view the basic M2000 information on the 'Status' page, including its MAC address and IP address.



## Configuration

### Using 4G to connect to the network

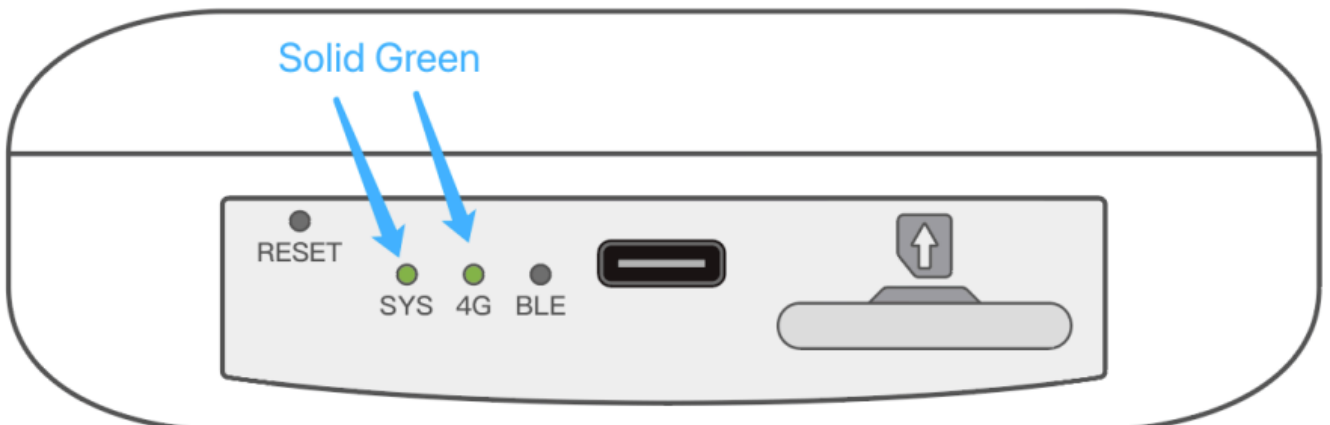
#### 1. Insert the Micro SIM card into the M2000.

Refer to the diagram below. Make sure that the beveled corner of the SIM card is facing the lower left corner.



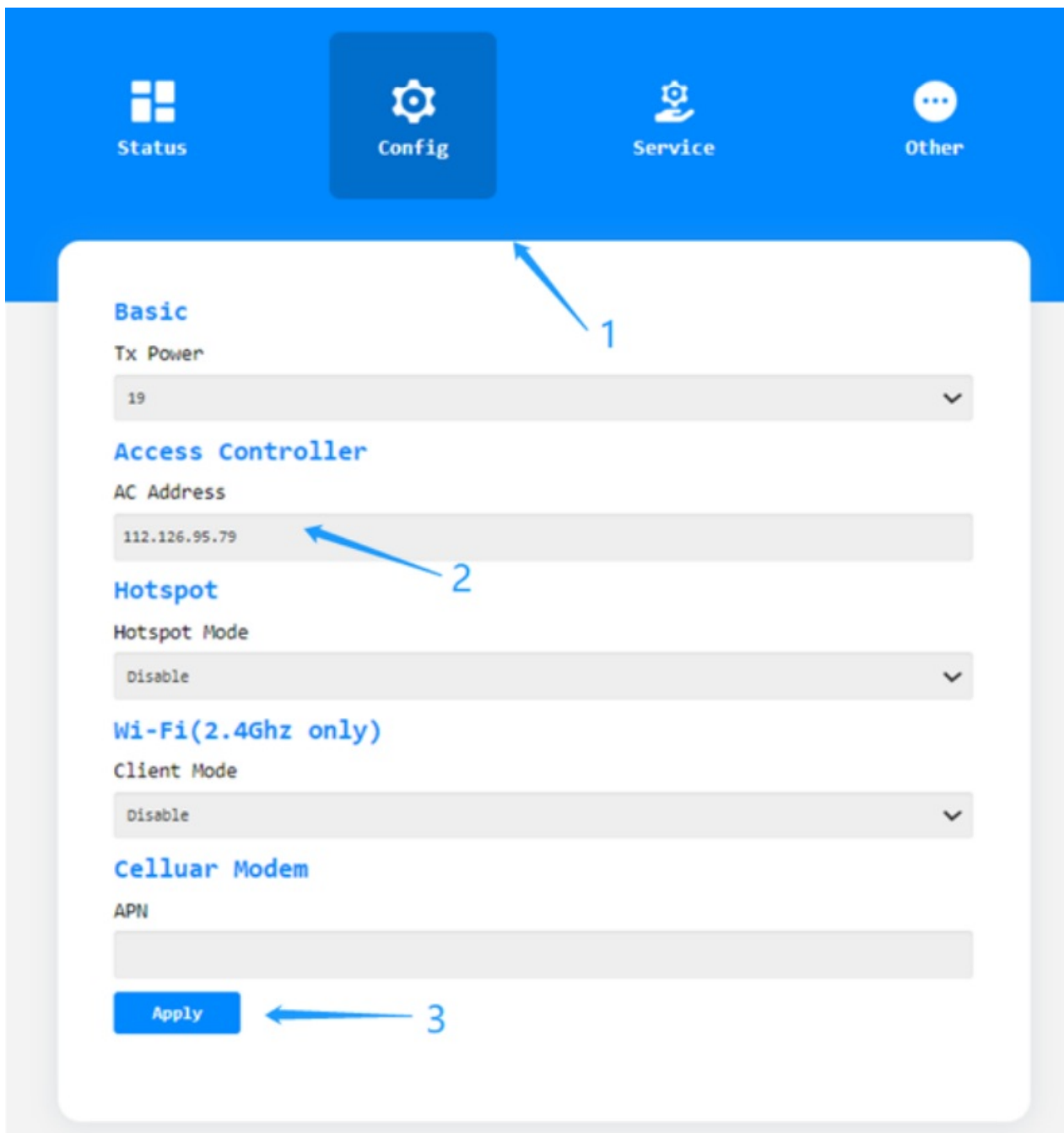
**2. Connect the USB power supply to the M2000.**

After 30 seconds, the M2000 will finish booting up and connect to the carrier's 4G network. The SYS light and 4G light will both turn solid.



**3. To connect with the AC server, go to the Configuration page on the M2000 local console.**

Enter the AC address (only AC version Cassia-AC-2.2.0.24 supports M2000) and click Apply. The AC version is available at: <https://www.cassianetworks.com/support/knowledge-base/ac-server-software/>



Please get in touch with your AC administrator to check if the M2000 is showing online on the AC.

**Notes:**

- When inserting the SIM card, make sure that the beveled corner of the SIM card is facing the lower left corner, as shown in the diagram above.
- When inserting the SIM card, push it in with your fingernail or the tip of a pen until it is held in place by the slot.
- When removing the SIM card, push it in with your fingernail or the tip of a pen until it pops out.

**Using Wi-Fi to connect to the network**

1. Click on the Configuration page first, enable Wi-Fi client mode, and complete SSID and other settings based on your Wi-Fi router information. For example, set the Security Mode to WPA2-PSK, enter the password, and click save.
2. To connect with the AC server, enter the AC address (only the 2.2.0 AC version supports M2000) and click

Apply.

The screenshot shows the configuration interface of the M2000 device. The top navigation bar has four tabs: Status, Config (selected), Service, and Other. The Config tab is divided into several sections: Basic, Access Controller, Wi-Fi, and Cellular Modem. The Basic section includes Tx Power (set to 3). The Access Controller section includes AC Address (112.126.95.79). The Wi-Fi section includes Client Mode (set to Enable), SSID (lab\_2g), Security Mode (WPA2-PSK), Password (masked with dots), IP Allocation (DHCP), DNS1, and DNS2. The Cellular Modem section includes APN. A blue arrow labeled '1' points to the Config tab. A blue arrow labeled '2' points to the Wi-Fi section. A blue arrow labeled '3' points to the SSID field. A blue arrow labeled '4' points to the Apply button at the bottom left.

**Basic**

Tx Power

3

**Access Controller**

AC Address

112.126.95.79

**Wi-Fi**

Client Mode

Enable

SSID

lab\_2g

Security Mode

WPA2-PSK

Password

\*\*\*\*\*

IP Allocation

DHCP

DNS1

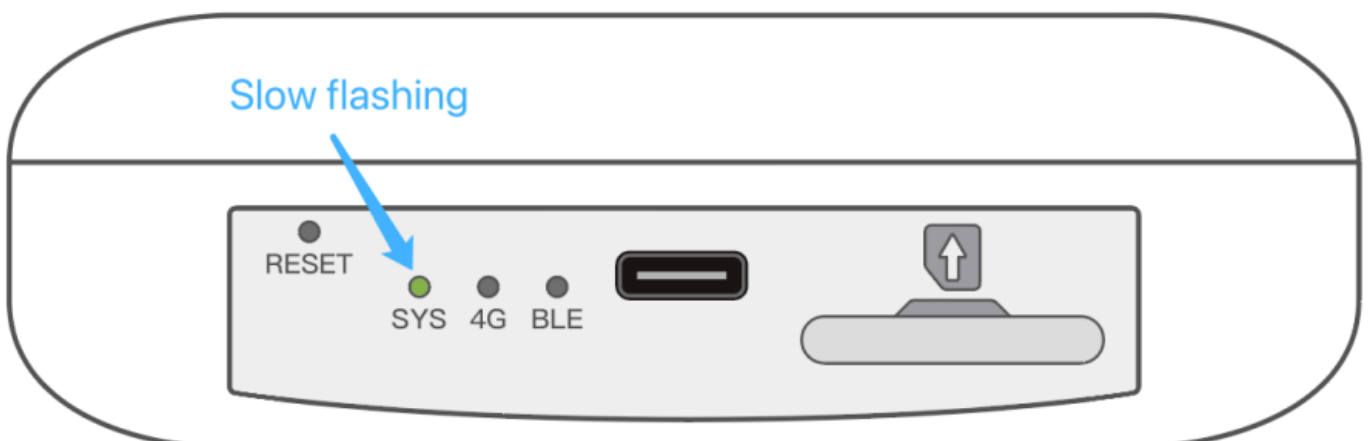
DNS2

**Cellular Modem**

APN

Apply

After 30 seconds, the M2000 will finish booting up and connect to the AC server. Please get in touch with your AC administrator to check if the M2000 is showing online on the AC.





## Notes:

- M2000 can only connect to the internet through the 2.4Ghz Wi-Fi router and does not support a 5Ghz Wi-Fi router.

## Service

The M2000 MQTT Bypass Service can route BLE advertising packets directly to the MQTT server by configuring MQTT and scanning setting information in the Service tab.

The screenshot shows the 'Service' tab of the M2000 configuration interface. The top navigation bar has four tabs: 'Status', 'Config', 'Service' (which is highlighted), and 'Other'. The 'Service' tab is divided into two sections: 'Overall' and 'MQTT'. The 'Overall' section contains three input fields: 'Service Access' with the value 'mqtt', 'Data Push Interval(ms)' with the value '100', and 'Data Cache Size(packets)' with the value '20'. The 'MQTT' section contains several fields: 'Host' (empty), 'Port' (empty), 'Connection Type' (a dropdown menu set to 'Long'), 'User Name' (empty), 'Password' (empty), 'Topic' (empty), 'QoS' (a dropdown menu set to 'At most once (0)'), and 'Encryption Mode' (a dropdown menu set to 'None').

Tab	Field	Value
Overall	Service Access	mqtt
	Data Push Interval(ms)	100
	Data Cache Size(packets)	20
MQTT	Host	
	Port	
	Connection Type	Long
	User Name	
	Password	
	Topic	
	QoS	At most once (0)
	Encryption Mode	None

## Scan Setting

Scan Mode

OFF

Name Filter

e.g. Cassia\_AP,Cassia\*,\*Cassia

MAC Filter

e.g. CC:1B:E0:E0:00:01,CC:1B:E0\*

UUID Filter

e.g. 0201,0202

RSSI Filter

e.g. -60

Value Filter

offset

data

Duplicates Filter

e.g. 0,1,>=1000

Include Timestamp

No

Apply

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## Others

Users can perform various operations on the “Others” page, such as modifying their login password, rebooting, resetting, and signing out.

Status

Config

Service

Other

Portal Password

Old Password

New Password

Confirm Password

Apply

Web Security

Allow Origin

\*

HTTPS Enable

Disable

Apply

Actions

Reboot

Reset

Sign Out

## Parameter Description

### Status Tab (Not Changeable)

meter	Description
Model	M2000
MAC	Gateway MAC Address – printed on the bottom of the M2000
Wi-Fi IP	Gateway IP address for Wi-Fi connection
Cellular IP	Gateway IP address for cellular connection
Firmware Version	Firmware version
Uptime	The gateway up time in hours since the last reboot
AC Online Time	The time of the gateway connected with the AC. If not connected, it shows offline.
AC Server Address	AC Server Address

### Config Tab

Parameter	Description
Tx Power	Transmit power for Bluetooth. The default value is 19dbm (or 8dbm for Japan). To change this, follow local regulations for the maximum transmit power for 2.4 GHz devices.
AC Server Address	AC Server IP address or domain name.  Note: Remove http:// or https:// header or port number
Country Code	Country code configuration for the Wi-Fi function. The default value is U.S.  This option can only be set from the AC server by the administrator.
Client Mode	Wi-Fi Client Enable (default) or Disable
SSID	SSID of Wi-Fi AP
Security Mode	Wi-Fi Security Mode:  None (no password or encryption, default value), WPA2-PSK WPA[TKIP]+WPA2[AES]
Password	The password of Wi-Fi AP's SSID.
IP Allocation	DHCP (default) or Static IP
IP	Static IP address
Netmask	Static IP network mask
Gateway	Static IP network gateway
DNS1	DNS server address 1
DNS2	DNS server address 2

## AC Operations

**Check M2000 information details**

Cassia IoT Access Controller Cassia AC A1100

Refresh Rate 20s

Help admin

GroupStatusM2000Backhaul

DiscoverAdd

Search

#	Group	Gateway Name	Status	Public IP	Private IP	MAC Address	Model	Version	Online Time	Container Status
8	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.153	CC:1B:E2:E0:10:10	M2000	2.2.0.2402222249	2h 29m 23s	NOT_SUPPORT
6	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.152	CC:1B:E2:E0:10:14	M2000	2.2.0.2402222249	2m 35s	NOT_SUPPORT
15	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.151	CC:1B:E2:E0:10:18	M2000	2.2.0.2402222249	2h 30m 16s	NOT_SUPPORT
7	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.150	CC:1B:E2:E0:10:1C	M2000	2.2.0.2402222249	2h 30m 8s	NOT_SUPPORT
14	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.149	CC:1B:E2:E0:10:20	M2000	2.2.0.2402222249	2h 29m 23s	NOT_SUPPORT
10	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.148	CC:1B:E2:E0:10:24	M2000	2.2.0.2402222249	2h 29m 49s	NOT_SUPPORT
9	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.147	CC:1B:E2:E0:10:28	M2000	2.2.0.2402222249	2h 30m 54s	NOT_SUPPORT
11	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.145	CC:1B:E2:E0:10:2C	M2000	2.2.0.2402222249	2h 29m 6s	NOT_SUPPORT
13	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.144	CC:1B:E2:E0:10:30	M2000	2.2.0.2402222249	2h 29m 57s	NOT_SUPPORT
12	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.142	CC:1B:E2:E0:10:34	M2000	2.2.0.2402222249	2h 30m 40s	NOT_SUPPORT

Cassia IoT Access Controller Cassia AC A1100

Refresh Rate 20s

Help admin

GroupStatusM2000Backhaul

DiscoverAdd

Search

#	Group	Gateway Name	Status	Public IP	Private IP	MAC Address	Model	Version	Online Time	Container Status
8	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.153	CC:1B:E2:E0:10:10	M2000	2.2.0.2402222249	2h 29m 23s	NOT_SUPPORT
6	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.152	CC:1B:E2:E0:10:14	M2000	2.2.0.2402222249	2m 35s	NOT_SUPPORT
15	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.151	CC:1B:E2:E0:10:18	M2000	2.2.0.2402222249	2h 30m 16s	NOT_SUPPORT
7	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.150	CC:1B:E2:E0:10:1C	M2000	2.2.0.2402222249	2h 30m 8s	NOT_SUPPORT
14	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.149	CC:1B:E2:E0:10:20	M2000	2.2.0.2402222249	2h 29m 23s	NOT_SUPPORT
10	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.148	CC:1B:E2:E0:10:24	M2000	2.2.0.2402222249	2h 29m 49s	NOT_SUPPORT
9	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.147	CC:1B:E2:E0:10:28	M2000	2.2.0.2402222249	2h 30m 54s	NOT_SUPPORT
11	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.145	CC:1B:E2:E0:10:2C	M2000	2.2.0.2402222249	2h 29m 6s	NOT_SUPPORT
13	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.144	CC:1B:E2:E0:10:30	M2000	2.2.0.2402222249	2h 29m 57s	NOT_SUPPORT
12	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.142	CC:1B:E2:E0:10:34	M2000	2.2.0.2402222249	2h 30m 40s	NOT_SUPPORT

Cassia Gateway ONLINE

DetailsContainerConfigTools

Overview

MAC

Model

Firmware Version

Private IP

Public IP

Last Offline Time

AC Online Time

Gateway Up Time

CPU Usage

Memory Usage

Storage Usage

Uplink(Wi-Fi)

Cassia IoT Access Controller Cassia Sandbox

Refresh Rate 20s

Help admin

GroupStatusM2000Backhaul

DiscoverAdd

Search

#	Group	Gateway Name	Status	Public IP	Private IP	MAC Address	Model	Version	Online Time	Container Status
3	Kevin	M2000 Test 1	ONLINE	162.244.250.156	10.62.3.80	CC:1B:E2:E0:10:10	M2000	2.2.0.2402222249	2h 29m 23s	NOT_SUPPORT
2	Kevin	M2000 Test 2	OFFLINE	162.244.250.149	10.80.39.67	CC:1B:E2:E0:10:14	M2000	2.2.0.2402222249	2m 35s	NOT_SUPPORT
1	Kevin	M2000 Test 3	ONLINE	162.244.250.149	10.80.38.3	CC:1B:E2:E0:10:18	M2000	2.2.0.2402222249	2h 30m 16s	NOT_SUPPORT

M2000 Test 1 ONLINE

DetailsConfigTools

Overview

Uplink(cellular)

Down Bytes

Up Bytes

Uplink MAC

IMEI

IMSI

ICCID

Signal Strength

4.43MB

234.10MB

867107063493188

310030002296815

89010303300022968151

GOOD

Cassia IoT Access Controller Cassia AC A1100						
Refresh Rate 20s						
Connected Detected Locationing History						
Export Connect History						
CC:1B:E2:E0:10:10						
#	Time	Device	Gateway	Event	Reason	
1	2024-02-23 12:37:38	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		
2	2024-02-23 12:37:37	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	disconnected	host disconnect	
3	2024-02-23 12:37:06	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		
4	2024-02-23 12:37:04	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	disconnected	host disconnect	
5	2024-02-23 12:36:34	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		
6	2024-02-23 12:36:33	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	disconnected	host disconnect	
7	2024-02-23 12:36:02	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		
8	2024-02-23 12:36:01	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	disconnected	host disconnect	
9	2024-02-23 12:35:31	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		
10	2024-02-23 12:35:28	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	disconnected	host disconnect	
11	2024-02-23 12:34:58	AA:AA:AA:88:88:03	CC:1B:E2:E0:10:10	connected		

Configure M2000 from AC

Group

Status

M2000

Backhaul

#	Group	Gateway Name	Status	Public IP	Private IP	M
8	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.153	CC
6	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.152	CC
15	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.151	CC
7	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.150	CC
14	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.149	CC
10	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.148	CC
9	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.147	CC
11	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.145	CC
13	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.144	CC
12	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.142	CC
5	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.143	CC
4	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.141	CC
17	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.140	CC
16	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.138	CC
2	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.137	CC

Cassia Gateway

ONLINE

Details

Container

Config

Tools

General

Country of Deployment

United States

Save

Name

Cassia Gateway

Save

Group

发货

M2000

E1000\_API

E1000\_GWJ

X2000

X1000

x1000

X2000\_API

Simulator

Simulator1

发货

M2000

+ Add

Save

Group

Status

M2000

Backhaul

14	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.149	CC
10	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.148	CC
9	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.147	CC
11	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.145	CC
13	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.144	CC
12	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.142	CC
5	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.143	CC
4	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.141	CC
17	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.140	CC
16	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.138	CC
2	M2000	Cassia Gateway	ONLINE	192.168.0.133	192.168.80.137	CC

Cassia Gateway

ONLINE

Details

Container

Config

Tools

Networks

Wi-Fi(5Ghz Wi-Fi is not supported)

Mode

Client

SSID

lab\_2g

Security Mode

WPA2-PSK

Password

.....

IP Allocation

DHCP

DNS1

DNS2

Save

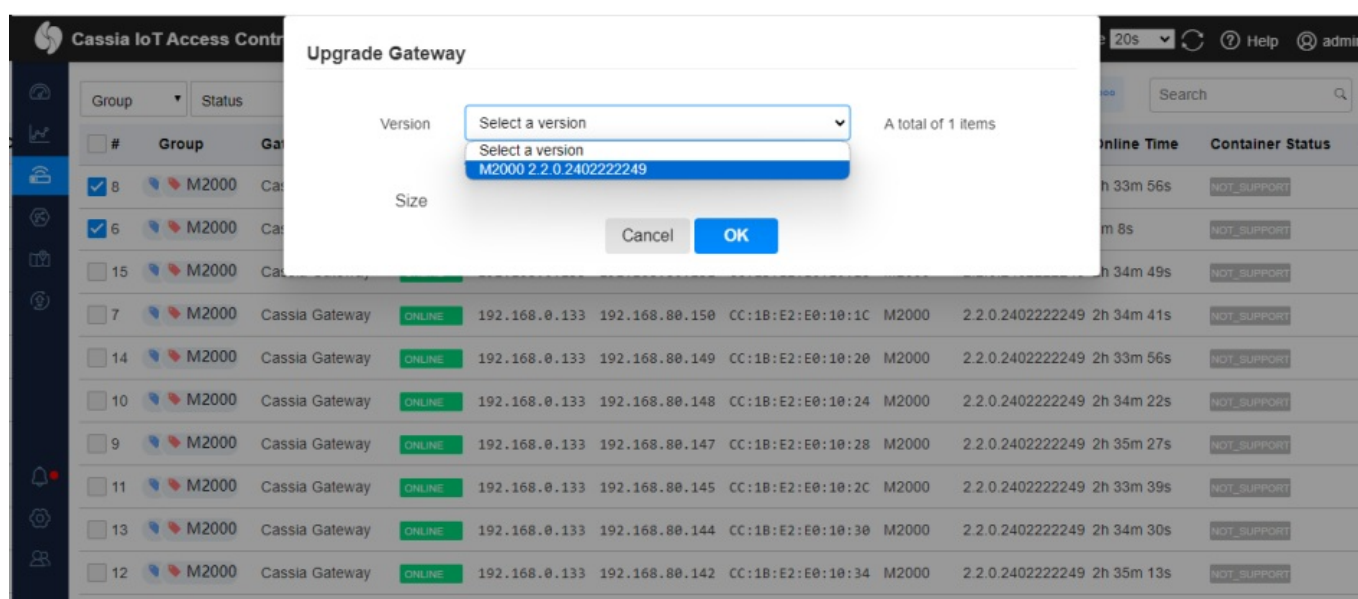
OTA firmware update



1. Upload M2000 firmware to the AC server from the AC Maintenance Tab -> Gateway's Firmware Update section



02. Select M2000 to upgrade to this firmware version.



## Cassia RESTful API

M2000 supports the Cassia RESTful API, which can be called from the AC server or the local network. Please refer to the following link for details of the "Cassia SDK Implementation Guide."

<https://github.com/CassiaNetworks/CassiaSDKGuide/wiki>

## Scan

```
← → × ⌂ Not secure | 192.168.1.156/gap/nodes?event=1
gateway JIRA License CassiaNAS cassia api Home · CassiaNet... Azure ac 安耐糖_new

:keep-alive

data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:05:00:14","bdaddrType":"random"},"rssi":-50,"evtType":0,"name":"CASSIA-BEACON-520","adData":"02010612094341535349412D424541434F4E2D533230"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:20:00:5D","bdaddrType":"random"},"rssi":-53,"evtType":0,"name":"CASSIA-BEACON-P93","adData":"02010612094341535349412D424541434F4E2D503933"}]
data: {"bdaddrs":[{"bdaddr":"AA:AA:AA:88:88:00","bdaddrType":"public"},"rssi":-62,"evtType":0,"name":"gwi_dongle0","adData":"020106020A000C096777695F646F6E676C6530"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:0F:00:55","bdaddrType":"random"},"rssi":-64,"evtType":0,"name":"CASSIA-BEACON-?85","adData":"02010612094341535349412D424541434F4E2D3F3835"}]
data: {"bdaddrs":[{"bdaddr":"D8:08:C8:62:5C:28","bdaddrType":"public"},"rssi":-49,"evtType":0,"name":"(unknown)","adData":"020106030200F11FF313233342B5C62C808D800003254EE03"}]
data: {"bdaddrs":[{"bdaddr":"55:27:07:38:23:34","bdaddrType":"public"},"rssi":-68,"evtType":3,"name":"(unknown)","adData":"0201060302F0FF16FF0506552707382334000000000000000000000032320000"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:22:00:2A","bdaddrType":"random"},"rssi":-49,"evtType":0,"name":"CASSIA-BEACON-R42","adData":"02010612094341535349412D424541434F4E2D523432"}]
data: {"bdaddrs":[{"bdaddr":"35:21:5B:78:05:69","bdaddrType":"random"},"rssi":-42,"evtType":3,"name":"(unknown)","adData":"1EFF0600010F20222C031572D9EAF017B0ED723869A534F440084F658C9CE6"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:08:00:00","bdaddrType":"random"},"rssi":-35,"evtType":0,"name":"CASSIA-BEACON-800","adData":"02010612094341535349412D424541434F4E2D383030"}]
data: {"bdaddrs":[{"bdaddr":"05:7C:E3:E2:C7:7A","bdaddrType":"random"},"rssi":-40,"evtType":3,"name":"(unknown)","adData":"1CFF06000109210A5258FE06D04445534B544F502D434C563843354D"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:08:00:00","bdaddrType":"random"},"rssi":-36,"evtType":0,"name":"CASSIA-BEACON-802","adData":"02010612094341535349412D424541434F4E2D383032"}]
data: {"bdaddrs":[{"bdaddr":"CC:1B:E0:E2:8F:2E","bdaddrType":"public"},"rssi":-55,"evtType":3,"name":"(unknown)","adData":"0201065094E3A414"}]
data: {"bdaddrs":[{"bdaddr":"18:5D:6D:FA:D6:C0","bdaddrType":"random"},"rssi":-40,"evtType":3,"name":"(unknown)","adData":"1EFF060001092022D0F769FB4E48811E3988C17AC51677BDCAB7B55A1778F"}]
data: {"bdaddrs":[{"bdaddr":"CC:DD:EE:22:00:2E","bdaddrType":"random"},"rssi":-54,"evtType":0,"name":"CASSIA-BEACON-R46","adData":"02010612094341535349412D424541434F4E2D523436"}]
data: {"bdaddrs":[{"bdaddr":"60:54:34:A9:06:A8","bdaddrType":"random"},"rssi":-41,"evtType":3,"name":"(unknown)","adData":"1EFF060001092002D7D1B9C253ECB165982F68E53148F66913E3AE9441D254"}]
data: {"bdaddrs":[{"bdaddr":"27:75:2A:E7:8A:5A","bdaddrType":"random"},"rssi":-56,"evtType":3,"name":"(unknown)","adData":"1EFF0600010920222EADD591F84ADCCDD0804147F562D52C41FE9E50F735E3"}]
```

## Connect device

```
← → ↺ ⌂ Not secure | 112.126.95.79/api2/gap/nodes/?connection_state=connected&mac=CC:1B:E0:E3:15:78
gateway JIRA License CassiaNAS cassia api Home · CassiaNet... Azure ac 安耐糖_new

{"nodes":[{"bdaddrs":{"bdaddr":"00:80:98:9C:D7:DD","bdaddrType":"public"},"handle":"","id":"00:80:98:9C:D7:DD","connectionState":"connected","name":"","chipId":0,"pairStatus":"none"}, {"bdaddrs":{"bdaddr":"00:80:98:9C:D8:E4","bdaddrType":"public"},"handle":"","id":"00:80:98:9C:D8:E4","connectionState":"connected","name":"","chipId":0,"pairStatus":"none"}, {"bdaddrs":{"bdaddr":"04:00:84:94:C1:6F","bdaddrType":"public"},"handle":"","id":"04:00:84:94:C1:6F","connectionState":"connected","name":"","chipId":0,"pairStatus":"none"}]}
```

## Cassia MQTT API

M2000 supports bi-directional communication with BLE devices via the gateway MQTT interface. Please refer to <http://docs.ble.xin/latest/en/api/mqtt/overview.html> for API details.

## Input Service information



  
Status

  
Config

  
Service

  
Other

## Overall

### Service Access

mqtt

### Data Push Interval(ms)

100

### Data Cache Size(packets)

20

## MQTT

### Host

168.168.30.246

### Port

1883

### Connection Type

Long

### User Name

### Password

### Topic

### QoS

At most once (0)

### Encryption Mode

None

## Scan Setting

Scan Mode

Passive

Name Filter

CGH\*

MAC Filter

e.g. CC:1B:E0:E0:00:01,CC:1B:E0\*

UUID Filter

e.g. 0201,0202

RSSI Filter

e.g. -60

Value Filter

offset

data

Duplicates Filter

e.g. 0,1,>=1000

Include Timestamp

No

Apply

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MQTT server sends API to the gateway to make a BLE connection MQTT API sample code is available at [https://github.com/CassiaNetworks/CassiaSDKGuide/tree/master/node\\_examples/MQTT](https://github.com/CassiaNetworks/CassiaSDKGuide/tree/master/node_examples/MQTT)


The screenshot displays the MQTTX application interface. On the left, a sidebar shows a list of connections: 'tester01@168.168.30...', 'tester02@121.40.54.2...', and 'Sinacare@114.55.254...'. The main window is titled 'tester01' and shows a list of subscriptions for the topic 'up/CC:1B:E0:E3:F8:70'. The messages pane on the right shows three messages: a 'Topic up/CC:1B:E0:E3:F8:70/api\_reply' message with a timestamp of 2024-02-07 17:41:31.938, a 'Topic up/CC:1B:E0:E3:F8:70/connection\_state' message with a timestamp of 2024-02-07 17:41:33.219, and a 'down/CC:1B:E0:E3:F8:70/api' message with a timestamp of 2024-02-07 17:41:33.266. The messages are displayed in a JSON format, showing details like 'id', 'action', 'timestamp', 'gateway', 'data', 'code', 'body', 'url', 'method', 'type', 'timeout', and 'discovergatt'.


## LED Status


LED	Status	Description
SYS	Off	Power off
	Fast flashing	The system is starting
	Solid on	The system is operating normally. Wi-Fi connection is NOT established.
	Slow flashing	The system is operating normally. A Wi-Fi connection is established.
4G	Slow flashing (200ms High/1800ms Low)	Network searching.
	Slow flashing (1800ms High/200ms Low)	Idle
	Fast flashing (125ms High/125 Low)	Data transfer is ongoing.
BLE	Off	The Bluetooth chip didn't start
	Solid on	Bluetooth is operating normally.
	Flashing	Flash twice when the Bluetooth connection is established


## Obtain GPS Location

### 1. To acquire the GPS location from the local console:

  
Status

  
Config

  
Service

  
Other

### Status

**Model**

M2000

**MAC**

CC:1B:E0:E4:A1:B0

**Wi-Fi IP**

192.168.3.12

**Cellular IP**

0.0.0.0

**Firmware Version**

2.2.2000.2409061628

**Uptime**

9min 46sec

**AC Online Time**

9min 20sec

**AC Server Address**

112.126.95.79

**Longitude**

117.141667

**Latitude**

39.124167

**GPS Time**

14:41:33

**GPS Signal**

normal

[Update GPS](#)

2. To acquire the GPS location from the AC Server

- Obtain a token for the Cassia RESTful API from the AC Server.
- Initiate the GPS service by using the following API call:
- GET AC\_IP/api2/cassia/GPS/start?mac=CC:1B:E0:E4:A0:A4

- Wait for 2 to 4 minutes for the gateway to cycle offline and online.
- Retrieve the GPS information from the gateway status webpage or by calling: GET AC\_IP/api2/cassia/info? mac=CC:1B:E0:E4:A0:A4

```
{
  "model": "M2000",
  "version": "2.2.2000.2408221523",
  "mac": "CC:1B:E0:E4:A0:A4",
  "local-api": "1",
  "uptime": 379,
  "capwap-state": 7,
  "capwap-runtime": 353,
  "free-memory": 3412559,
  "free-internet": 107475,
  "spiram": 3307583,
  "features": [
    "wifi_avoid_auto",
    "dual-wireless"
  ],
  "scan": {
    "scan_interval": 15,
    "scan_window": 10,
    "one_scan_time": 0,
    "chip-params": 1,
    "conn_params": {
      "type": 0,
      "scan_intval": 60,
      "scan_window": 30,
      "conn_min_intval": 7.5,
      "conn_max_intval": 30,
      "latency": 0,
      "supvtimeout": 5000,
      "connect_interval_priority": 0,
      "latency_priority": 0,
      "supervision_timeout": 0,
      "ble_power": 19,
      "ac": {
        "address": "3.101.4.177",
        "capwap-ip": "3.101.4.177",
        "wireless": {
          "mode": "sta",
          "signal": "-36 dBm",
          "ssid": "SpectrumSetup-EF31",
          "password": "*****",
          "encryption": "psk2",
          "proto": "dhcp",
          "iface": {
            "mac": "CC:1B:E0:E4:A0:A4",
            "ip": "192.168.1.15",
            "country": "US",
            "wireless_ap": {
              "disabled": 0,
              "ssid": "cassia-E4A0A4",
              "password": "*****",
              "ip": "192.168.40.1",
              "netmask": "255.255.255.0",
              "ca_hidden": 0,
              "dongle": {
                "iface": {
                  "ip": "10.62.40.177",
                  "rx": 264,
                  "tx": 475,
                  "imsi": "310030002296815",
                  "cnum": "866639076909728",
                  "tccid": "89010303300022968151",
                  "signal": 16,
                  "apn": "iot.kore.com",
                  "gps": {
                    "time": "09:06:45",
                    "lon": 117.14.18,
                    "lat": 32.47.21,
                    "ns": "N",
                    "we": "W"
                  }
                }
              }
            }
          }
        }
      }
    }
  },
  "start": {
    "bypass": {
      "use": "mqtt",
      "send_interval": 100,
      "cache_max": 20
    },
    "https": {
      "en": 0,
      "capwap-uplink": "wireless",
      "capwap-uplinkmac": "CC:1B:E0:E4:A0:A4"
    }
  }
}
```

## To acquire the GPS location with local API:

- Log in with the API.

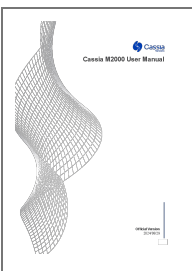
## Trigger the GPS service by calling:

- GET gateway\_IP/cassGPSps/start
- Wait for 2 to 4 minutes for the gateway to gather GPS data.
- Retrieve the GPS information from the gateway status webpage or by calling: GET gateway\_IP/cassia/info.

## Notes:

- In the current iteration of M2000, it is recommended that GPS data be acquired no more frequently than every 5 minutes. Work is underway to further optimize the system and reduce the time taken to acquire GPS data.
- It is recommended to stop BLE API requests when acquiring GPS information, as GPS operation interrupts LTE service and temporarily disables the network.

## Documents / Resources

	<p><a href="#">Cassia Network M2000 Compact Cellular Bluetooth Gateway</a> [pdf] User Manual M2000, M2000 Compact Cellular Bluetooth Gateway, M2000, Compact Cellular Bluetooth Gateway, Cellular Bluetooth Gateway, Bluetooth Gateway, Gateway</p>
---	---

## References

- [CassiaSDKGuide/node\\_examples/MQTT at master · CassiaNetworks/CassiaSDKGuide · GitHub](#)
- [Home · CassiaNetworks/CassiaSDKGuide Wiki · GitHub](#)
- [Support | Connect with Cassia Networks](#)
- [AC Server Software \\* - Cassia Networks](#)
- [User Manual](#)

