



MQTT Application Guide

MQTT Topic & APIs on 4G Solar-powered Traffic Sensing Camera

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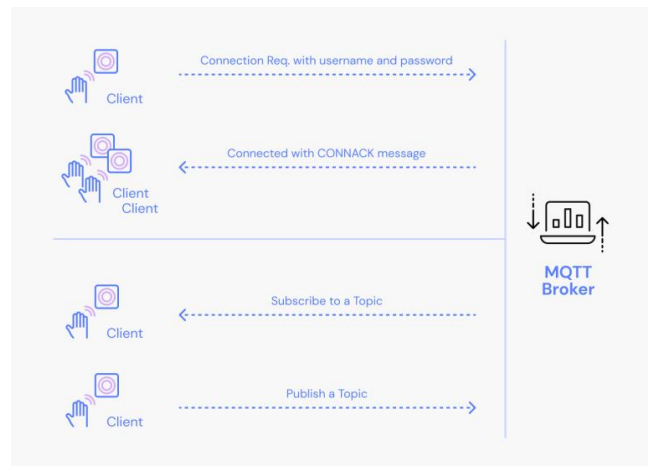
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MQTT Instructions

1. What is MQTT

MQTT is an open-source pub/sub communication protocol. It is efficient in its utilization of bandwidth and system resources. As a result, it is popular in use cases ranging from low-powered embedded systems to cloud-native micro services.

The pub/sub model is at the core of MQTT communication. Information is organized by topics. Client devices can publish data to a topic to send messages to any subscribers. Similarly, clients can subscribe to a topic to be notified when a message is published.



2. MQTT Topics on the Camera

There are 5 Topics on the camera:

1. Snapshot Topic
2. Status Topic
3. Alarm Topic
4. Remote Configure Topic
 - (1) Configuration Request Topic
 - (2) Configuration Respond Topic
5. Wake Topic (No shown on the page)

Note: Except the “Wake Topic”, all topic on the web page is customizable and has default value as shown below:

Enable Post	<input checked="" type="checkbox"/>
Post Content	<input checked="" type="checkbox"/> Snapshot <input checked="" type="checkbox"/> Status <input checked="" type="checkbox"/> Alarm
Snapshot Topic	<input type="text" value="4GSolarCam/Snapshot"/>
Status Topic	<input type="text" value="4GSolarCam/Status"/>
Alarm Topic	<input type="text" value="4GSolarCam/Alarm"/>
Configure Request Topic	<input type="text" value="4GSolarCam/ConfigureRequest"/>
Configure Respond Topic	<input type="text" value="4GSolarCam/ConfigureRespond"/>

3. Application on the Camera

1. Enable the “Enable Post” , then the MQTT application functions.
2. Check the “Post Content” option , then the camera will send corresponding topic data.

For instance, if you want receive snapshots from the camera, you MUST check the “Snapshot” option, and set the “Snapshot Topic” .

3. “Configure Request Topic” and “Configure Respond Topic” are for remote configuration, after setting the topic, they function always.
4. Client subscribe the topic to receive and send data.

Note: All data is in JSON format.

4. Topic Description

1. Snapshot Topic

- Client subscribes the “Snapshot Topic” .
- Camera publish snapshot data to the “Snapshot Topic”.
- After receiving snapshot data, the client needs to decode the data and transform it to an image file.

Data sample:

```
{
  "ts": 1682336818966,
  "values": {
    "devName": "4G Solar-powered ANPR Camera",
    "devMac": "5CC5638AE729",
    "file": "debug_202304240745431198T",
    "time": 1682336743,
    "imageSize": 20941,
    "image": "data:image/jpeg;base64,/9j/4AA...."
  }
}
```

2. Status Topic

- Client subscribes the “Status Topic”.
- Each time when the camera wakes up, it sends status data to the “Status Topic”.
- The Heartbeat mechanism keeps the camera sending status data per hour.

Data sample:

```
{
  "ts": 1689238041244,
  "values": {
    "devName": "4G Solar-powered ANPR Camera",
    "devMac": "1CC3164126A2",
    "battery": {
      "soc": 91,
      "capacity": 5682,
      "voltage": 4052,
      "healthy": 100,
      "chargeCurrent": 0,
      "chargeStat": 0,
      "chargeVoltage": 10560,
      "powerGoodStat": 0
    },
    "radar": {
      "enable": 1
    },
    "gps": {
      "latitude": "24.62493",
      "longitude": "118.03077",
      "altitude": "59.8"
    },
    "cellular": {
      "connectStatus": "4G Connected",
      "simStatus": "Valid",
      "signalStrength": 0,
      "imei": "868444050582056",
      "imsi": "460115211076172",
      "iccid": "89860322245922526572",
      "ipAddr": "10.33.177.77",
      "subMask": "255.255.255.252",
      "gateway": "10.33.177.78",
      "dns": "114.114.114.114",
      "dataMonthly": 6107722
    }
  }
}
```

3. Alarm Topic

- Client needs to subscribe to the “Alarm Topic”.
- Camera sends active alarms to this topic.
- Client parses the content after receiving it.

Data sample:

```
{
  "ts": 1682336818966,
  "values": {
    "devName": "4G Solar-powered ANPR Camera",
    "devMac": "5CC5638AE729",
    "alarm": "Low power"
  }
}
```

4. Remote Configure Topic

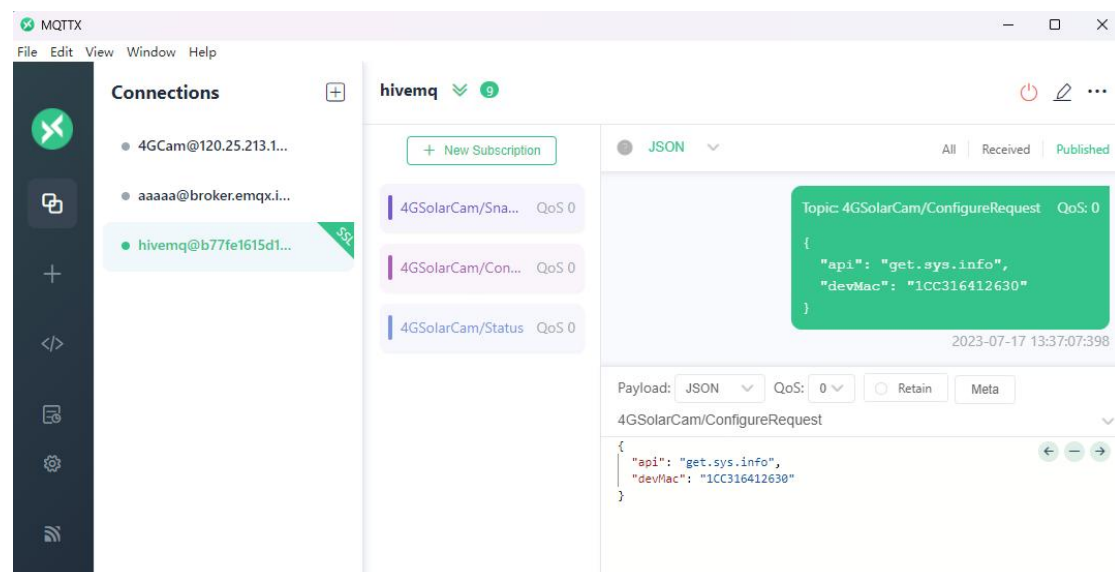
For more information about the API, please refer to the [API document](#).

(1) Configure Request Topic

- Client send message to the “Configure Request Topic”

Get request sample:

```
{
  "api": "get.sys.info",
  "devMac": "1CC3164171FE"
}
```



Set request sample:

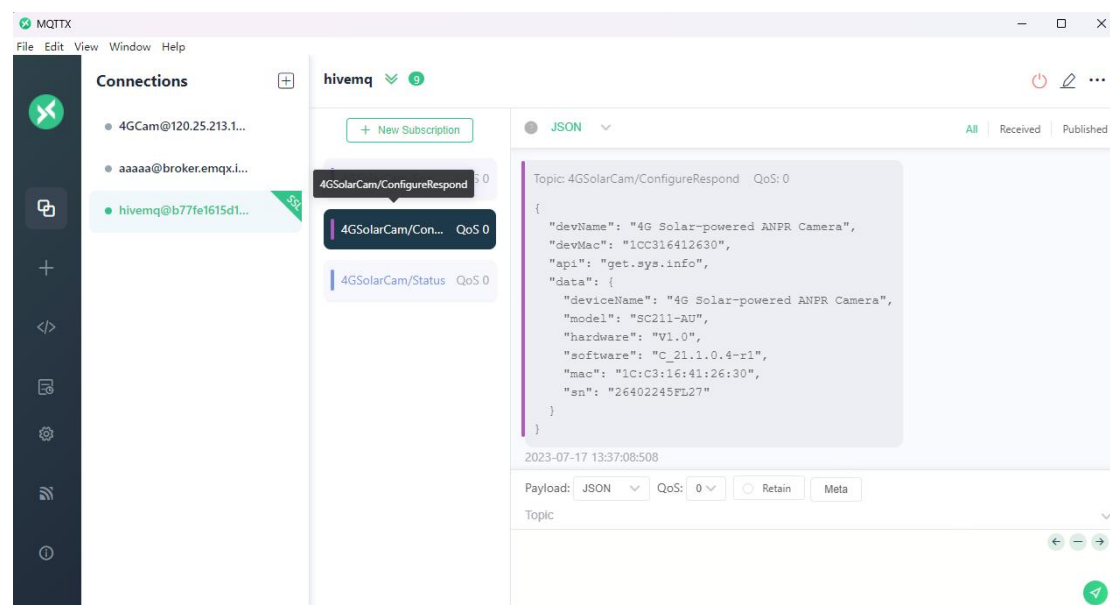
```
{
  "api": "set.sys.info",
  "devMac": "1CC3164171FE",
  "data": {
    "deviceName": "MQTT Test"
  }
}
```

(2) Configure Response Topic

- Client subscribes the “Configure Response Topic”

Get response sample:

```
{
  "devName": "4G Solar-powered ANPR Camera",
  "devMac": "1CC3164171FE",
  "api": "get.sys.info",
  "data": {
    "deviceName": "4G Solar-powered ANPR Camera",
    "model": "SC211-AU",
    "hardware": "V1.0",
    "software": "C21.1.0.4",
    "mac": "1C:C3:16:41:71:FE",
    "sn": "264922455YG0"
  }
}
```



Set response sample:

```
{
  "devName": "MQTT Test",
  "devMac": "1CC3164171FE",
  "api": "set.sys.info",
  "data": {
    "code": 0,
    "result": "OK"
  }
}
```

5. Wake

- When the camera is in sleep mode, Client sends any content to the "Wake Topic", "4GSolarCam/Wake/5CC5638AE24C", of which "5CC5638AE24C" is MAC address, to wake up the corresponding camera.
- After the camera wakes up, it will automatically turn on 4G cellular, then you can log in the web page.

API Document

system

Get alarm ROI

Basic Information

Path: /api/roi

Method: GET

Interface Description: get.alarm.roi

```
{
  "mode": 0,
  "threshold": 8,
  "lineX1": 480,
  "lineY1": 270,
  "lineX2": 1440,
  "lineY2": 810,
  "region": [
    {
      "id": 1,
      "enable": 1,
      "point": [
        {
          "x": 0.25,
          "y": 0.25
        },
        {
          "x": 0.75,
          "y": 0.25
        },
        {
          "x": 0.75,
          "y": 0.75
        },
        {
          "x": 0.25,
          "y": 0.75
        }
      ]
    },
    {
      "id": 2,
```

```





"enable": 0,
"point": [
  {
    "x": 0.25,
    "y": 0.25
  },
  {
    "x": 0.75,
    "y": 0.25
  },
  {
    "x": 0.75,
    "y": 0.75
  },
  {
    "x": 0.25,
    "y": 0.75
  }
]
}
]
}

```

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
mode	number	No		Alarm Trigger Mode Max: 1 Min: 0 Enumeration: 0,1 Enumeration Description: 0: roi 1: line	
threshold	number	No		AI Confidence Max: 10 Min: 1	
interval	number	No		Capture Interval (100~15000)ms	
lineX1	number	No			
lineY1	number	No			
lineX2	number	No			
lineY2	number	No			
region	object []	No			Item Type: object
└ id	number	Yes			

Name	Type	Required	Default	Description	Note
 enable	number	Yes			
 point	object []	Yes		Clockwise: leftTop -> rightTop -> rightBottom -> leftBottom	Item Type: object
 x	number	Yes		Range 0~1	
 y	number	Yes		Range 0~1	

Get capture info

Basic Information

Path: /api/capture

Method: GET

Interface Description: get.capture.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
imageType	number	No			
width	number	No		Resolution Width	
height	number	No		Resolution Height	
indicator	number	No			
radarSensitivity	number	No		Sensor Sensitivity: 1~10	
lowSpeedLimit	number	No		LowSpeedLimit: 0~70	
captureTimeout	number	No		Capture Timeout: 1~10, default 3s	
continuous	number	No			

Name	Type	Required	Default	Description	Note
intervalUnit	number	No		Interval Unit{0: minute, 1: hour}	
interval	number	No		Unit: minute	
uploadMode	number	No			
frequency	number	No		1: Once a day; 2: Twice a day	
time1	string	No			
time2	string	No			
postEnable	number	No		Enable Post	
postType	number	No			
host	string	No			
port	number	No			
userName	string	No			
password	string	No			
httpUrl	string	No			
httpUserName	string	No			
httpPassword	string	No			
cropX	number	No		Coordinate X (0~100)	
cropY	number	No		Coordinate Y (0~100)	
cropW	number	No		Frame Width (0~100)	
cropH	number	No		Frame Height (0~100)	
postDelete	number	No	1	Delete snapshots after uploading	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: Don't Delete 1: Delete
tlsEnable	number	No		Enable TLS	

Name	Type	Required	Default	Description	Note
tlsType	number	No	0		Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: CA signed server 1: Self signed
caExist	number	No		CA File Exists	
certExist	number	No		Client Certificate File Exist	
keyExist	number	No		Client key file Exists	
snapshotEnable	number	No		Enable Snapshot Post (0~1)	
alarmEnable	number	No		Enable Alarm Post (0~1)	
statusEnable	number	No		Enable Status Post (0~1)	
snapshotTopic	string	No			
alarmTopic	string	No			
statusTopic	string	No			
configTopic	string	No			
configRespTopic	string	No			

Get cellular info

Basic Information

Path: /api/cellular

Method: GET

Interface Description: get.cellular.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
apn	string	No			
userName	string	No			
password	string	No			
pinCode	string	No			
authType	number	No			
networkType	number	No			
mtu	number	No			
billDay	number	No			
remoteWake	number	No			
callWake	number	No			
pingEnable	number	No		Enable Ping	
pingAddr	string	No		ping IP	

Get date&time

Basic Information

Path: /api/time

Method: GET

Interface Description: get .time.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
date	string	No			
time	string	No			
timezone	string	No			
zonename	string	No			
timeManual	string	No			

Name	Type	Required	Default	Description	Note
daylightSaving	number	No			
syncMode	number	No			
syncGps	number	No			

Get day section

Basic Information

Path: /api/day/section

Method: GET

Interface Description: get.day.section

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
daySection	object []	No			Item Type: object
└─ month	number	Yes		0~11	
└─ hourStart	number	Yes			
└─ minStart	number	Yes			
└─ hourStop	number	Yes			
└─ minStop	number	Yes			

Get dhcp info

Basic Information

Path: /api/dhcp

Method: GET

Interface Description: get.dhcp.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
leaseTime	number	No			
interface	string	No			
ipAddr	string	No			
startIpAddr	string	No			
stopIpAddr	string	No			
netmask	string	No			
firstDns	string	No			
secondDns	string	No			

Get image info

Basic Information

Path: /api/image

Method: GET

Interface Description: get.image.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
brightness	number	No			
contrast	number	No			
saturation	number	No			
sharpness	number	No			
denoise	number	No			
dnMode	number	No			
dayToNight	number	No			
nightToDay	number	No			
irStrength	number	No			

Get schedule

Basic Information

Path: /api/schedule

Method: GET

Interface Description: get.schedule

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
trigger	string	No		00:00:08:00:0;09:00:12:00:1; Sectional format, 00:00:08:00 Means from 00:00 to 08:00 The last one is Status: 0- >trigger on, 1->trigger off	

Get security info

Basic Information

Path: /api/security

Method: GET

Interface Description: get.security.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
sshEnable	number	No			
sshPort	number	No			

Get storage info

Basic Information

Path: /api/storage

Method: GET

Interface Description: get.storage.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
status	number	No	0	SD Card status	Max: 5 Min: 0 Enumeration: 0,1,2 EnumerationDescription: 0: not sd card 1: insert, not formate 2: formate
mode	number	No	0	Mode	Max: 2 Min: 0 Enumeration: 0,1,2 EnumerationDescription: 0: Delete After Upload 1: Circular storage 2: Stops Storing When Full SD
capacity	number	No		Capacity: Unit K	
freeSpace	number	No		Free space: Unit K	

Get system info

Basic Information

Path: /api/sys

Method: GET

Interface Description: get.sys.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
deviceName	string	No			
model	string	No			
hardware	string	No			
software	string	No			
mac	string	No			
sn	string	No			

Get wifi info

Basic Information

Path: /api/wifi

Method: GET

Interface Description: get.wifi.info

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
enable	number	No			
module	number	No			
mode	number	No			
protocol	number	No			
bandwidth	number	No			
channel	number	No			
encryption	number	No			
clipher	number	No			
ipMode	number	No			
ssid	string	No			
key	string	No			

Name	Type	Required	Default	Description	Note
country	string	No			

Set alarm ROI

Basic Information

Path: /api/roi

Method: POST

Interface Description: set.alarm.roi

```
{
  "mode": 0,
  "threshold": 8,
  "lineX1": 480,
  "lineY1": 270,
  "lineX2": 1440,
  "lineY2": 810,
  "region": [
    {
      "id": 1,
      "enable": 1,
      "point": [
        {
          "x": 0.25,
          "y": 0.25
        },
        {
          "x": 0.75,
          "y": 0.25
        },
        {
          "x": 0.75,
          "y": 0.75
        },
        {
          "x": 0.25,
          "y": 0.75
        }
      ]
    },
    {
      "id": 2,
      "enable": 0,
      "point": [
        {
          "x": 0.25,
```

```
"y": 0.25
},
{
  "x": 0.75,
  "y": 0.25
},
{
  "x": 0.75,
  "y": 0.75
},
{
  "x": 0.25,
  "y": 0.75
}
]
}
]
}
```






Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/x-www-form-urlencoded	Yes		

Return Data

Name	Type	Required	Default	Description	Note
mode	number	No		Alarm Trigger Mode Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: roi 1: line	
threshold	number	No		AI Confidence Max: 10 Min: 1	
interval	number	No		Capture Interval (100~15000)ms	
lineX1	number	No			
lineY1	number	No			
lineX2	number	No			
lineY2	number	No			

Name	Type	Required	Default	Description	Note
region	object []	No			item Type: object
 id	number	Yes			
 enable	number	Yes			
 point	object []	Yes		Clockwise: leftTop -> rightTop - > rightBottom -> leftBottom	Item Type: object
x 	number	Yes		Range: 0~1	
y 	number	Yes		Range: 0~1	

Set capture info

Basic Information

Path: /api/capture

Method: POST

Interface Description: set.capture.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
imageType	number	No	0	Capture Type	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: Full Image 1: ROI Cropping
width	number	No		Resolution Width	
height	number	No		Resolution Height	
indicator	number	No	1	Capture Indicator	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: off 1: on
radarSensitivity	number	No		Sensor Sensitivity: 1~10	
lowSpeedLimit	number	No		Low Speed Limit: 0~70	
captureTimeout	number	No		Sleep Delay: 1~10, default 3s	
continuous	number	No	0	Enable continuous capture	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: off 1: on
intervalUnit	number	No		Interval Unit {0: minute, 1: hour}	
interval	number	No	1440	Continuous Capture Interval: unit minute	Max: 1440 Min: 1

Name	Type	Required	Default	Description	Note
uploadMode	number	No	0	Upload Mode	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: Timming 1: Immediacy
frequency	number	No	1	Frequency	Max: 2 Min: 1 Enumeration: 1,2 EnumerationDescription: 1: Once a Day 2: Twice a Day
time1	string	No		Time 1	
time2	string	No		Time 2	
postEnable	number	No		Enable Post	
postType	number	No	0	Post Type	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: MQTT 1: HTTP
host	string	No			
port	number	No			
userName	string	No			
password	string	No			
httpUrl	string	No			
httpPort	number	No			
httpUserName	string	No			
httpPassword	string	No			
cropX	number	No		Coordinate X (0~100)	
cropY	number	No		Coordinate Y (0~100))	

Name	Type	Required	Default	Description	Note
cropW	number	No		Frame Width (0~100)	
cropH	number	No		Frame Height (0~100)	
pushNow	number	No	0	Push now	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: Don't push 1: Execute Timing Upload Once
postDelete	number	No	1	Delet Snapshots After Uploading	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: Don't Delete 1: Delete
tlsEnable	number	No		Enable TLS	
tlsType	number	No		One-way Or Two-way Authentication	
snapshotEnable	number	No		Enable Snapshot Post (0~1)	
alarmEnable	number	No		Enalbe Alarm Post (0~1)	
statusEnable	number	No		Enable Status Post (0~1)	
snapshotTopic	string	No		Snapshot Topic	
alarmTopic	string	No		Alarm Topic	
statusTopic	string	No		Status Topic	
configTopic	string	No		Configure Request Topic	
configRespTopic	string	No		Configure Respond Topic	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set cellular info

Basic Information

Path: /api/cellular

Method: POST

Interface Description: set.cellular.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
apn	string	No		APN	
userName	string	No		user name	
password	string	No		password	
pinCode	string	No		PIN Code	
authType	number	No	0	Authentication Type	Max: 4 Min: 0 Enumeration: 0,1,2,3,4 EnumerationDescription: 0: Auto 1: PAP 2: CHAP 3: MS-CHAP 4: MS-CHAPv2

Name	Type	Required	Default	Description	Note
networkType	number	No	0	Network Type	Max: 3 Min: 0 Enumeration: 0,1,2,3 EnumerationDescription: 0: Auto 1: 4G only 2: 3G only 3: 2G only
mtu	number	No		mtu (1200~1500)	
billDay	number	No		Bill Day	
remoteWake	number	No		Remote Wake (0~1)	
callWake	number	No		Call Wake (0~1)	
pingEnable	number	No		Enable Ping	
pingAddr	string	No		ping Address	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set date&time

Basic Information

Path: /api/time

Method: POST

Interface Description: set.time.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
timezone	string	No		Timezone	
timeManual	string	No		Manually Setting	
daylightSaving	number	No	0	Daylight-saving Time	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 1: Automatic 0: Disable
syncMode	number	No	0	Synchronization Mode	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: GPS 1: Manual
syncGps	number	No		Enalbe GPS Synchronization	
zonename	string	No		Timezone Name	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set day section

Basic Information

Path: /api/day/section

Method: POST

Interface Description: set.day.section

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/x-www-form-urlencoded	Yes		
Body				

Name	Type	Required	Default	Description	Note
	object []	No			Item Type: object
└─ month	number	Yes			
└─ hourStart	number	Yes			
└─ minStart	number	Yes			
└─ hourStop	number	Yes			
└─ minStop	number	Yes			

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set dhcp info

Basic Information

Path: /api/dhcp

Method: POST

Interface Description: set.dhcp.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
leaseTime	number	No			
interface	string	No			
ipAddr	string	No			
startIpAddr	string	No			
stopIpAddr	string	No			
netmask	string	No			
firstDns	string	No			
secondDns	string	No			

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set image info

Basic Information

Path: /api/image

Method: POST

Interface Description: set.image.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
brightness	integer	No			
contrast	integer	No			
saturation	integer	No			
sharpness	integer	No			
denoise	integer	No			
dnMode	integer	No			
dayToNight	integer	No			
nightToDay	integer	No			
irStrength	integer	No			

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set schedule

Basic Information

Path: /api/schedule

Method: POST

Interface Description: set.schedule

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
trigger	string	No		00:00:08:00:1;09:00:12:00:1; Sectional format, 00:00:08:00 Means from 00:00 to 08:00 The last one is Status: 0->off, 1- >trigger	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set security info

Basic Information

Path: /api/security

Method: POST

Interface Description: set.security.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
sshEnable	integer	Yes	0		Max: 1 Min: 0 Enumeration: 0,1
sshPort	integer	Yes	6022		Min: 0

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set storage info

Basic Information

Path: /api/storage

Method: POST

Interface Description: set.storage.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
mode	number	No	0		Max: 2 Min: 0 Enumeration: 0,1,2 EnumerationDescription: 0: Delete After Upload 1: Circular storage 2: Stops Storing When Full SD

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set system info

Basic Information

Path: /api/sys

Method: POST

Interface Description: set.sys.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
deviceName	string	No	sun_device	device name	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Set user info

Basic Information

Path: /api/user

Method: POST

Interface Description: set.user.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
name	string	Yes			
password	string	Yes		MD5 Encrypted	
newPassword	string	Yes		New Password, Cleartext	
level	number	Yes	2		Max: 5 Min: 1 Enumeration: 1,2,3,4,5

Return Data

Name	Type	Required	Default	Description	Note
code	integer	No			
result	string	No			

Set wifi info

Basic Information

Path: /api/wifi

Method: POST

Interface Description: set.wifi.info

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
module	number	No			
mode	number	No			

Name	Type	Required	Default	Description	Note
protocol	number	No	0	Protocol	Max: 2 Min: 0 Enumeration: 0,1,2 EnumerationDescription: 0: 802.11b (2.4G) 1: 802.11g (2.4G) 2: 802.11n (2.4G)
bandwidth	number	No	0	Bandwidth	Max: 1 Min: 0 Enumeration: 0,1 EnumerationDescription: 0: 20MHz 1: 40MHz
channel	number	No	0	Channel:0=auto	Max: 14 Min: 0
encryption	number	No	0	Encryption Method	Max: 5 Min: 0 Enumeration: 0,1,2,3,4,5 EnumerationDescription: 0: No Encryption 1: WEP Open System 2: WEP Shared Key 3: WPA-PSK 4: WPA2-PSK 5: WPA-PSK/ WPA2-PSK
clipher	number	No	0	WPA Encryption Method	Max: 2 Min: 0 Enumeration: 0,1,2 EnumerationDescription: 0: AES 1: TKIP 2: AES/TKIP
ipMode	number	No			
ssid	string	No			

Name	Type	Required	Default	Description	Note
key	string	No			
country	string	No			

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Get cellular status

Basic Information

Path: /api/status/cellular

Method: GET

Interface Description: get.cellular.status

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
isp	string	No		ISP Type	
connectStatus	string	No		0: disconnect; 1: connect	
simStatus	string	No		0: No SIM; 1: Invalid; 2: Valid	
signalStrength	number	No		Signal Strength (dBm)	
imei	string	No		IMEI	
imsi	string	No		IMSI	
iccid	string	No		ICCID	
ipAddr	string	No		IP Address	
subMask	string	No		Mask	
gateway	string	No		Gateway	
dns	string	No		DNS	

Name	Type	Required	Default	Description	Note
dataMonthly	number	No		Data Consumption This Month (MB)	

Get device status

Basic Information

Path: /api/status/device

Method: GET

Interface Description: get.device.status

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
uptime	string	No		XXXX-XX-XX XX:XX:XX	
batteryLevel	number	No		Percentage (0~100)	
batteryHealth	number	No		Percentage (0~100)	
powerSupply	number	No		Power Source (0: internal; 1: external)	
latitude	string	No		Latitude	
longitude	string	No		Longitude	
altitude	number	No		Altitude	

Snapshot

Basic Information

Path: /live/snapshot

Method: GET

Interface Description: cmd.snapshot

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
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cmd

Reboot

Basic Information

Path: /api/cmd/reboot

Method: GET

Interface Description: cmd.reboot

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Reset

Basic Information

Path: /api/cmd/reset

Method: GET

Interface Description: cmd.reset

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Upgrade check

Basic Information

Path: /api/cmd/checkupgrade

Method: GET

Interface Description: upgrade.check

Request Parameter

Return Data

Name	Type	Required	Default	Description	Note
updateState	number	No		0: It's the latest version; 1: Update Availabe;	
softversion	string	No		Software Version	
url	string	No		Mirror URL	
fileSize	number	No		File Size	
description	string	No		Description	

Upgrade online

Basic Information

Path: /api/upgrade/online

Method: POST

Interface Description: upgrade.online

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Body				

Name	Type	Required	Default	Description	Note
url	string	No		Mirror URL	

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

Format SD card

Basic Information

Path: /api/cmd/sdformat

Method: GET

Interface Description: cmd.sd.format

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/x-www-form-urlencoded	Yes		

Return Data

Name	Type	Required	Default	Description	Note
code	number	No			
result	string	No			

storage

Storage search

Basic Information

Path: /storage/search

Method: POST

Interface Description: storage.search

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Query				

Name	Required	Example	Description
startTime	Yes	1970-01-01+00:00:00	
endTime	Yes	2022-08-13+19:40:30	
start	Yes	0	Start of Index
length	Yes	30	Length
type	Yes	3	Type (3: all, 1: Continue, 2: Trigger)
Body			

Name	Type	Required	Default	Description	Note
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Return Data

Name	Type	Required	Default	Description	Note
list	object []	No			Item Type: object
└─ file	string	Yes			
└─ startTime	string	Yes			
└─ type	number	Yes			
└─ size	number	Yes			

Name	Type	Required	Default	Description	Note
total	number	No			

Storage export

Basic Information

Path: /storage/export

Method: POST

Interface Description: storage.export

Request Parameter

Headers

Parameter Name	Parameter Value	Required	Example	Description
Content-Type	application/json	Yes		
Query				

Parameter Name	Required	Example	Description
path	Yes	/mnt/mmc	File Path
name	Yes	CV197001011258387T.jpg	File Name
size	Yes	24301	File Size
Body			

Name	Type	Required	Default	Description	Note
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Return Data

Name	Type	Required	Default	Description	Note
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