SJT-WCR2 Remote Monitor Device

(Wired & Wireless)

User Manual

Version：V1.0

Contents

Chapter 1 Specification of main components

1.1 Elevator Remote Monitor Device（wired& wireless）（SJT-WCR2-WL1）

Figure 1.1 SJT-WCR2-WL1 photo

SJT-WCR2-WL1 is used for elevator with Bluelight control system, to achieve remote monitoring function.

This product is installed in elevator control cabinet with antenna outside. It can connect to internet through 2.4G wireless (mode 1) or LAN (mode 2).

Mode 1: Use LAN connection to “Elevator Cloud” platform. Meanwhile, it supplies a hotspot for other wireless devices to connect.

Mode 2: Use 2.4G WIFI to connect to internet and switch in “Elevator Cloud” platform. Meanwhile, it supplies a LAN port for other devices to connect.

1.1.1 Characteristic

- ✧ Industrial grade MCU with stable performance；
- ✧ Four layer circuit board with high anti-interference and reliability；
- ✧ CAN bus communication, directly connected to Bluelight elevator control system；
- ✧ Metal shield；
- ✧ External antenna, stable signal.

1.1.2 Application

- ✧ Remote monitoring, debugging, and maintenance of elevators.

1.1.3 Power specifications

- ✧ 24V Power：24VDC±15% 400mA.

1.1.4 Working conditions

- ✧ Working temperature：-20℃--70℃;
- ✧ Working humidity: <95%, no condensation.

1.2 Installation dimension

L x W x H：109*102*30mm.

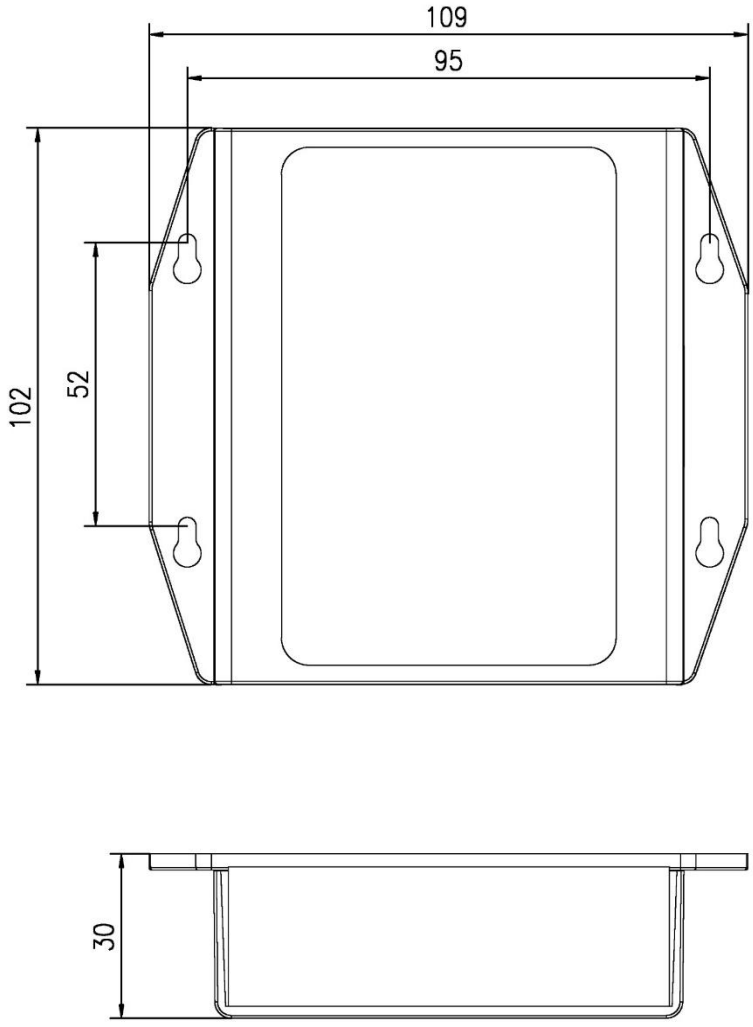


Figure 1.2 SJT-WCR2-WL1 Dimension（Uint：mm）

Chapter 2 System Installation and Debugging

2.1 Wiring diagram

SJT-WCR2-WL1 has 4 wires for connecting to Bluelight control system as following.

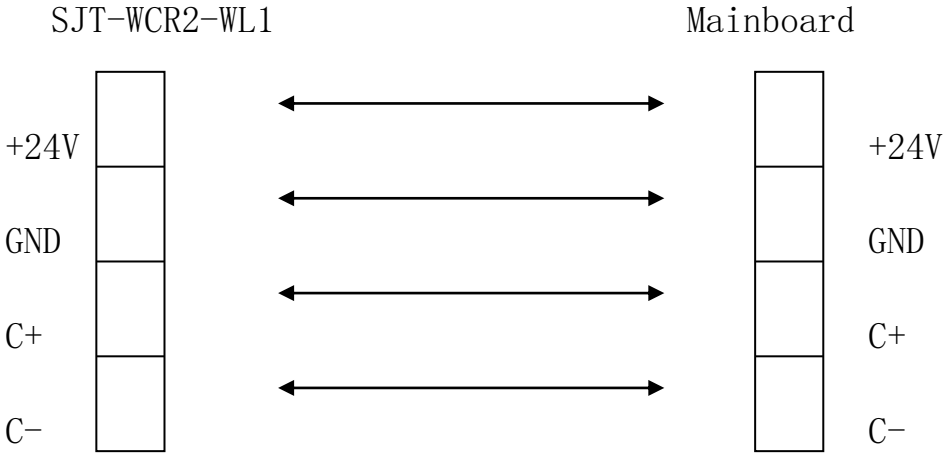
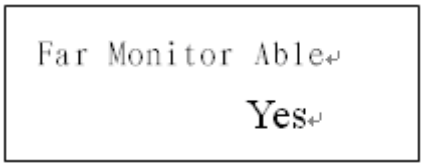


Figure 2.1 Diagram of controller connection

Chart 2.1 SJT-WCR2-WL1 Terminal Definition

Terminal	Pin	Lable	Definition
JP1	JP1-1	+24V	To 24V Power
	JP1-2	GND	To ground
	JP1-3	C+	To system CAN communication +
	JP1-4	C-	To system CAN communication -
JP2	JP2	JP2	Connect to Bluelight Operator or Bluetooth Module
WAN/LAN	WAN/LAN	network interface	Connect network cables to connect routers or devices that require networking

2.2 Elevator (Integrated Controller) mainboard remote monitor parameter enable



The setting method can be found in section 6.23 of the "BL6-U Series Serial Integrated Controller User Manual" for remote monitoring.

2.3 Debugging

2.3.1 SJT-WCR2-WL1 Product Manual

SJT-WCR2-WL1 front and rear panels are shown in the following figure.

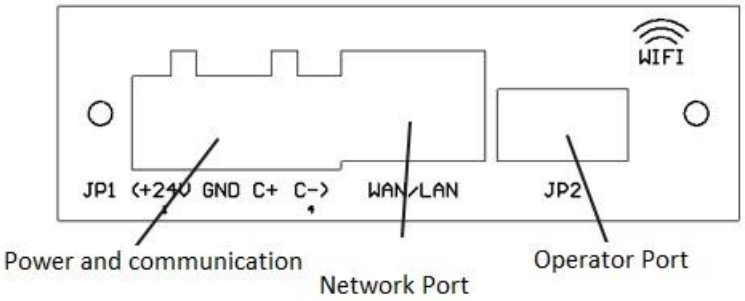


Figure 2.2 SJT-WCR2-WL1 back side

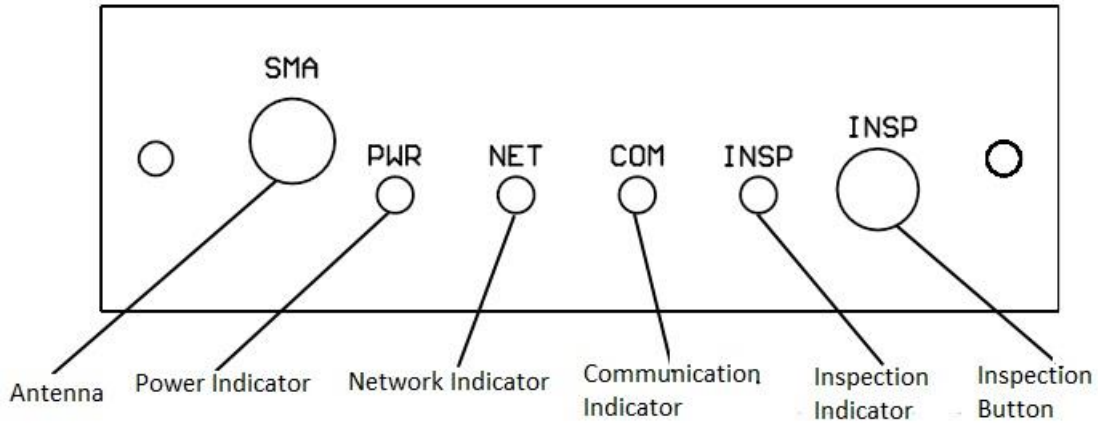


Figure 2.3 SJT-WCR2-WL1 front side

- ✧ Power indicator
  Power indicator, lighting constantly on during operation.
- ✧ Network indicator light, indicating GSM network status
  Constantly off：GSM unit not working；
  Fast flashing 1（0.1 sec on, 0.8 sec off）：Searching GSM network（If this state is maintained for a long time, check the SIM card installation and network signal strength）；
  Slow flashing（0.1 sec on, 3 sec off）：Register to GSM network（Initializing）；
  Fast flashing 2（0.1 sec on，0.3 sec off）：Register to GPRS network（Normal working）.
- ✧ Communication indicator
  Flicker：SJT-WCR2-WL1 in communication with remote monitoring；
  Constantly off：None communication.
- ✧ Maintenance indicator（reserve）.
- ✧ Maintenance button（reserve）.

2.3.2 Debugging manual

When installing and using SJT-WCR2-WL1 product for the first time, please follow the following steps：

- By default, wired network links are used (automatic IP acquisition method), and no configuration is required. For example：
  If connecting to a wired network interface (a regular home router) that supports DHCP, only connect the network cable, device power and communication cables, antenna, and power on to work normally without any debugging on the device side. (The monitoring platform needs to bind devices, which can be bound through the barcode pasted on the device (visible and readable to the naked eye).

- If you need to switch wireless network connections, in addition to using Bluetooth module or operator, you can connect the device's wireless hotspot: SJT-WCR2-WL1 through computer or mobile phone. Then, access 192.10.10.1:8081 through a browser, and a configuration page (similar to the wireless router configuration method) will pop up. Fill in the corresponding parameters on the configuration page, submit and save them.

  Note: If SJT-WCR2-WL1 is powered on by plugging and unplugging the JP1 terminal, as the instantaneous current can reach over 1A, it should be done when the elevator is not running.

- After the product SJT-WCR2-WL1 is powered on, observe the display indicator light. After about 8 seconds of power on, SJT-WCR2-WL1 enters the initialization state：
  Power light: Always on. If not, immediately cut off the power and check the wiring；
  Network light: constantly off: GSM unit not working；
  Fast flashing 1（0.1 sec on, 0.8 sec off）：Searching GSM network（If this state is maintained for a long time, check the SIM card installation and network signal strength）；
  Slow flashing（0.1 sec on, 3 sec off）：Register to GSM network, initialization is currently underway, please be patient and wait；
  Fast flashing 2（0.1 sec on，0.3 sec off）：Register to GPRS network, initialization passed, the system enters normal operation, and the status light will remain in this state.

  Note: If it cannot enter the normal operating state, SJT-WCR2-WL1 will automatically restart.

- If the network light enters the fast flashing 2 state, it indicates that SJT-WCR2-WL1 product has successfully run. At this time, SJT-WCR2-WL1 product will be able to connect to the server and provide remote monitoring function.

- SJT-WCR2-WL1 product prompt：

1. This product transmits/receives radio waves, and its design complies with current laws and regulations. However, to prevent interference with other electronic devices during operation, it is necessary to comply with the recommendations and regulations of the place of use.

2. When the product is disconnected from the power supply equipment, the product has a backup power supply to ensure short-term operation. When the power indicator light is completely off, it indicates that the product is not in working state.

3. Live plugging and unplugging of wiring terminals should be carried out when the elevator is not running or during maintenance.

4. The explanation of this product belongs to our company and is subject to change without prior notice.

Chapter 3 Operator and Elevator Expert APP Commissioning Instructions

Through operator or elevator expert app, users can set and view device parameters. Before debugging, it is necessary to ensure that the parameter settings are correct.

Note：The default operation mode is operator when device power on. If you want to use elevator expert app for debugging, please follow the following steps：

1. Insert the equipped Bluetooth module into the device JP2 port and power on the device.

2. Open mobile Bluetooth ->Open elevator expert APP ->Settings ->Bluelight motherboard debugging ->Turn on debugging (ON).

3. Click the down arrow more than 10 times until the interface appears.

4. This method currently only supports Android phones.

Menu —— Return to main interface

Enter —— Enter the lower level menu or confirm when changing parameters

Esc —— Cancel the operation or return to the previous menu

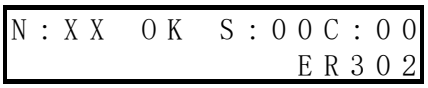
＞ —— Right shift

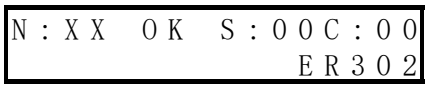
∧ —— Move Up or ＋1， Yes， ON

∨ —— Move down or －1， No， OFF

The device supports configuration through wireless hotspots, which can be connected to the device's wireless hotspot through a computer or mobile phone: SJT-WCR2-WL1. Then, access the 192.10.10.1:8081 address through a browser, and a configuration page (similar to the wireless router configuration method) will pop up. Fill in the corresponding parameters in the configuration page and submit and save it.

3.1 Main menu





First Line：

N:XX OK（Operating status: hexadecimal representation, 0D indicates normal, and displaying OK indicates normal operation）

S:00（reserve）

C:00（reserve）

Second Line：

Error Code：

ER-F：Flash abnormal

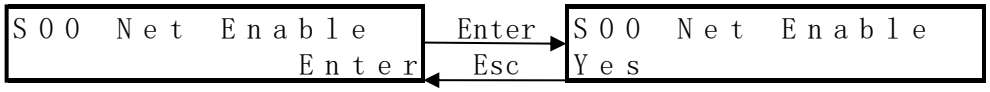
ER302：CAN communication abnormal

ER***：Elevator Fault Code

3.2 Parameter Setting

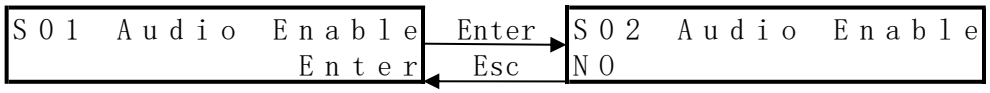
Press "Enter" in main menu to enter parameter setting menu.

3.2.1 Setting Monitor Function Enable



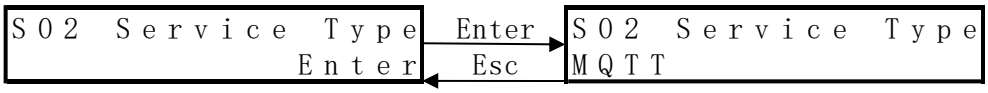
This interface can be set to enable remote monitoring function.

3.2.2 Voice Enable



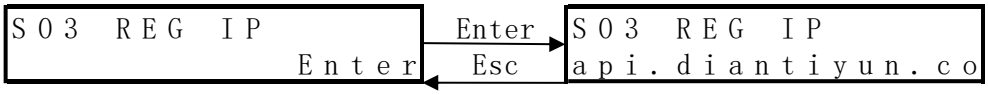
This interface can be set to enable voice broadcasting function (wireless & wired version does not have voice function).

3.2.3 Service Type Setting



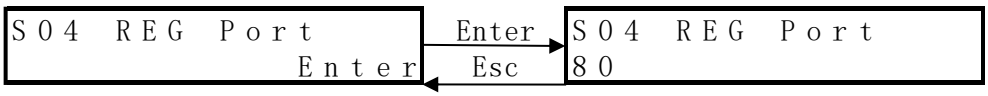
MQTT means accessing elevator cloud platform (www.diantiyun.com) through the MQTT protocol.

3.2.4 Monitor Platform IP Address Setting



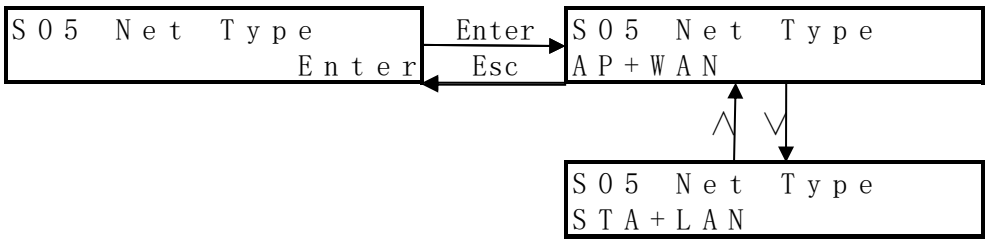
View and set the IP address of the monitoring platform on this interface. After setting, perform the save operation in the save menu.

3.2.5 Monitor Platform Port Setting



View and set the port number of the monitoring platform on this interface. After setting, perform the save operation in the save menu.

3.2.6 Network Type Setting

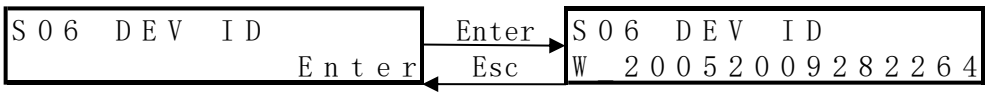


This interface allows users to view and set device networking Type.

Mode 1: AP+WAN：Connect to network with wired network (The device's WAN port needs to be connected to the router's LAN port) and provide a wireless hotspot (AP mode) SSID2 for other wireless devices to connect to network.

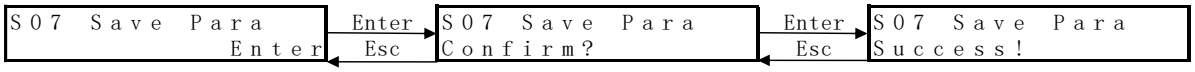
Mode 2 STA+LAN：Use wireless 2.4G WIFI (STA mode) SSID1 to connect to network, while providing a wired network interface (device LAN port) for other wired devices to connect to network.

3.2.7 Device ID



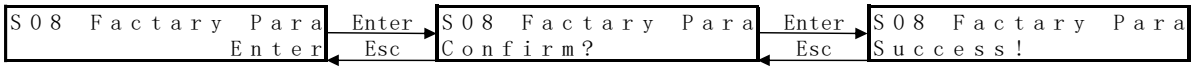
You can view the device ID in this menu. The platform registration binding elevator is based on this ID, and modification function is not currently available.

3.2.8 Save Parameter



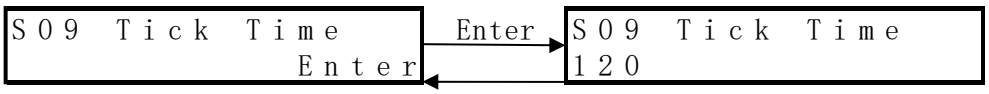
After setting each parameter, save it to ensure these parameter settings are still valid after power off. After successfully saving, press "Esc" button to return to save parameter interface.

3.2.9 Restore to factory setting



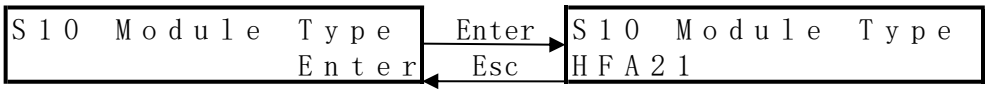
If parameter errors are caused by interference, customer may restore to factory setting and then save parameters.

3.2.10 Setting Heartbeat Interval with Server



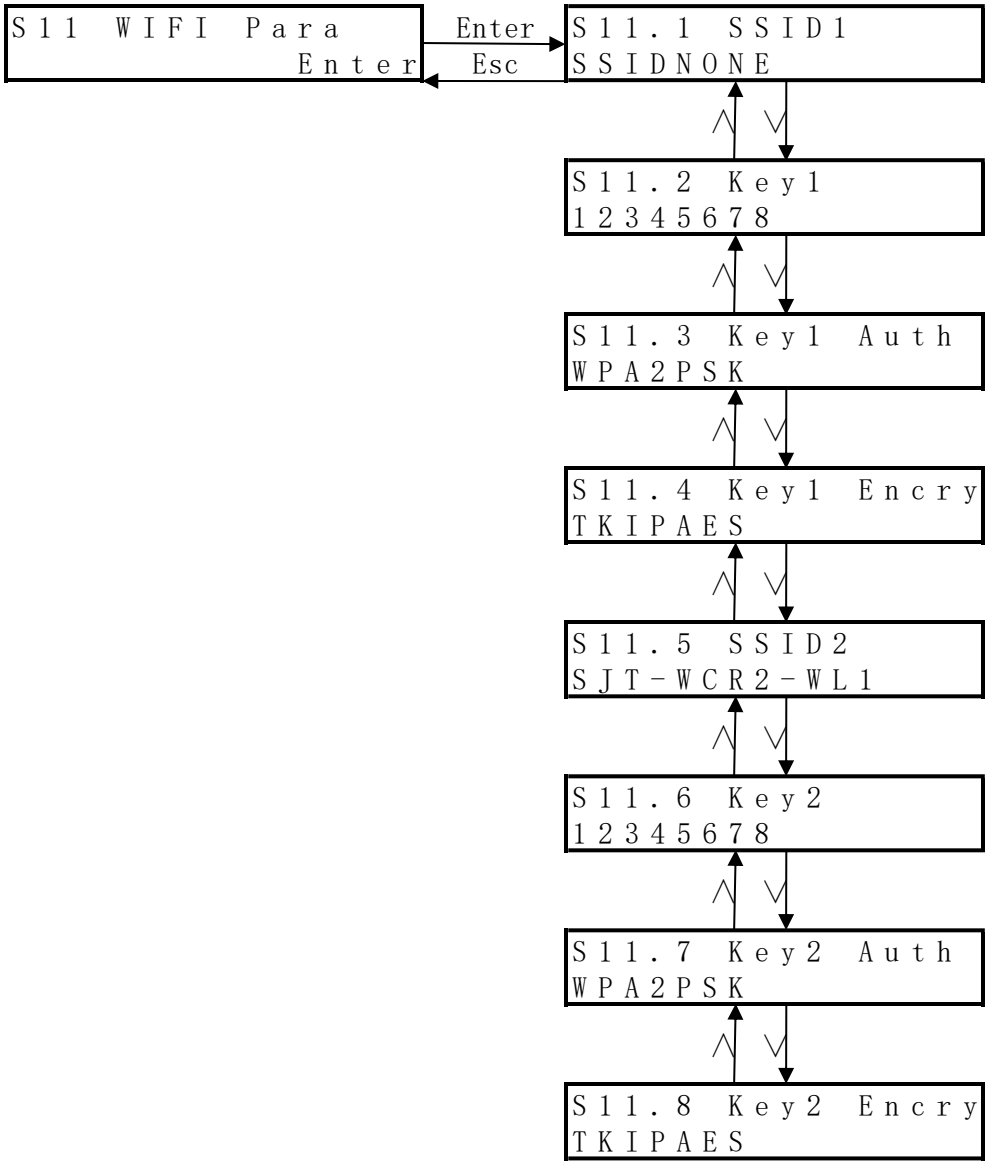
This interface allows users to view and set the heartbeat interval between the terminal and platform (seconds).

3.2.11 Internal Network Module Setting



This interface allows users to view and set internal network module. Without special instructions, customers should not set this parameter.

3.2.12 WIFI Parameter Setting



This interface allows users to view and set WIFI parameters.

SSID1：SSID to access wireless network (only used in STA+LAN mode)

Key1：Password of the wireless network to be connected (only used in STA+LAN mode)

Key1 Auth：The authentication method of the wireless network to be accessed (only used in STA+LAN mode, not support WEP)

Key1 Encry：The encryption algorithm for the wireless network to be connected (only used in STA+LAN mode)

SSID2：The SSID of the wireless network provided by the device

Key2：The password for the wireless network provided by the device

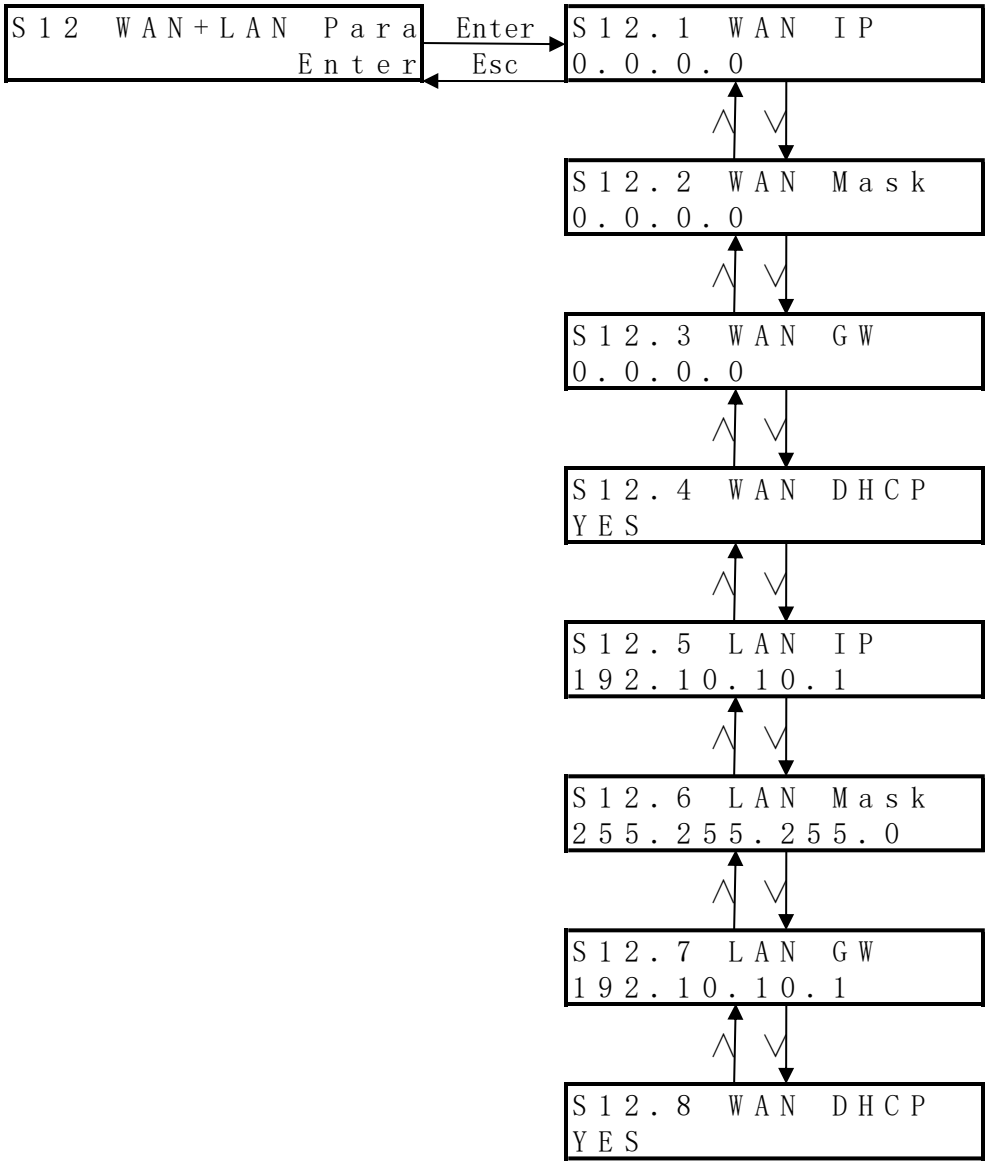
Key2 Auth：The authentication method of the wireless network provided by the device (not support WEP)

Key2 Encry：Encryption algorithm for wireless networks provided by devices

Cautions !

SSID2 is also used as an access point for configuration, and when configuring parameters through WIFI, SSID2 needs to be connected.

3.2.13 Network Parameter Setting



This interface allows users to view and set WAN+LAN parameters:

WAN IP：The IP address of the device after it is connected to the network

WAN Mask：The subnet mask for device access to the network

WAN GW：Gateway address for device access to the network

WAN DHCP：The IP acquisition method after the device is connected to the network (YES: Auto configuration, NO: manual setting)

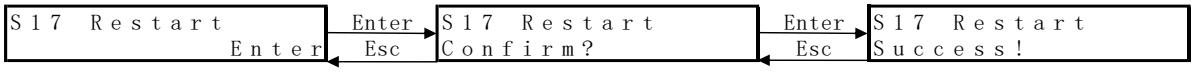
LAN IP：The device IP address of the network provided by the device

LAN Mask：The subnet mask of the network provided by the device

LAN GW：The gateway address of the network provided by the device

LAN DHCP：The IP allocation method for the network provided by the device (YES: Auto configuration, NO: manual setting)

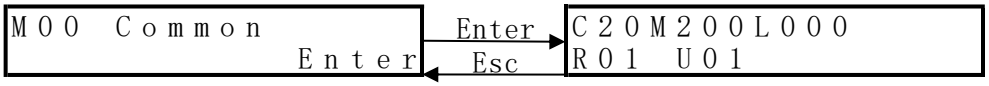
3.2.14 Restart Device



Users can perform device restart through this menu.

3.3 Monitor Interface for Status Checking

3.3.1 Device Status Monitoring



This interface is used to view device status information

C20:CAN communication frame status

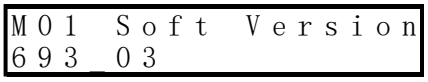
M200:CAN communication count

L000: All parameter lengths of motherboard

R01：Received server requests

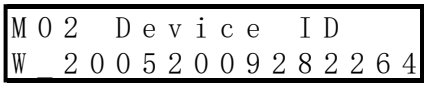
U01：Response pushed to the server

3.3.2 Software Version



In this interface, you can view the current software version of the collector.（e.g.：693_02）

3.3.3 Checking Device ID



You can view the device ID in this menu. The platform registration binding elevator is based on this ID .

3.3.4 WAN IP

In this interface, you can view WAN IP addresses.

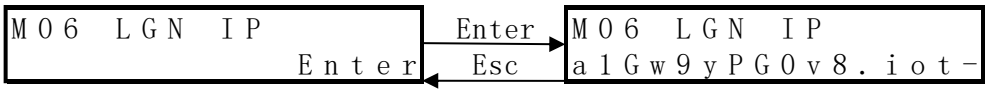
3.3.5 LAN IP

In this interface, you can view LAN IP.

3.3.6 Device MAC

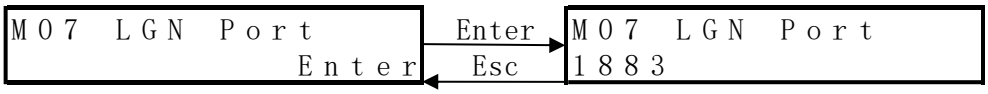
In this interface, you can view device MAC.

3.3.7 MQTT Login IP



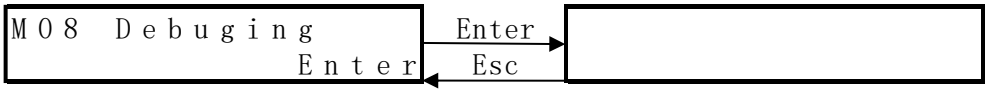
In this interface, you can view MQTT login IP.

3.3.8 MQTT Login Port



In this interface, you can view MQTT login port.

3.3.9 Debugging Interface

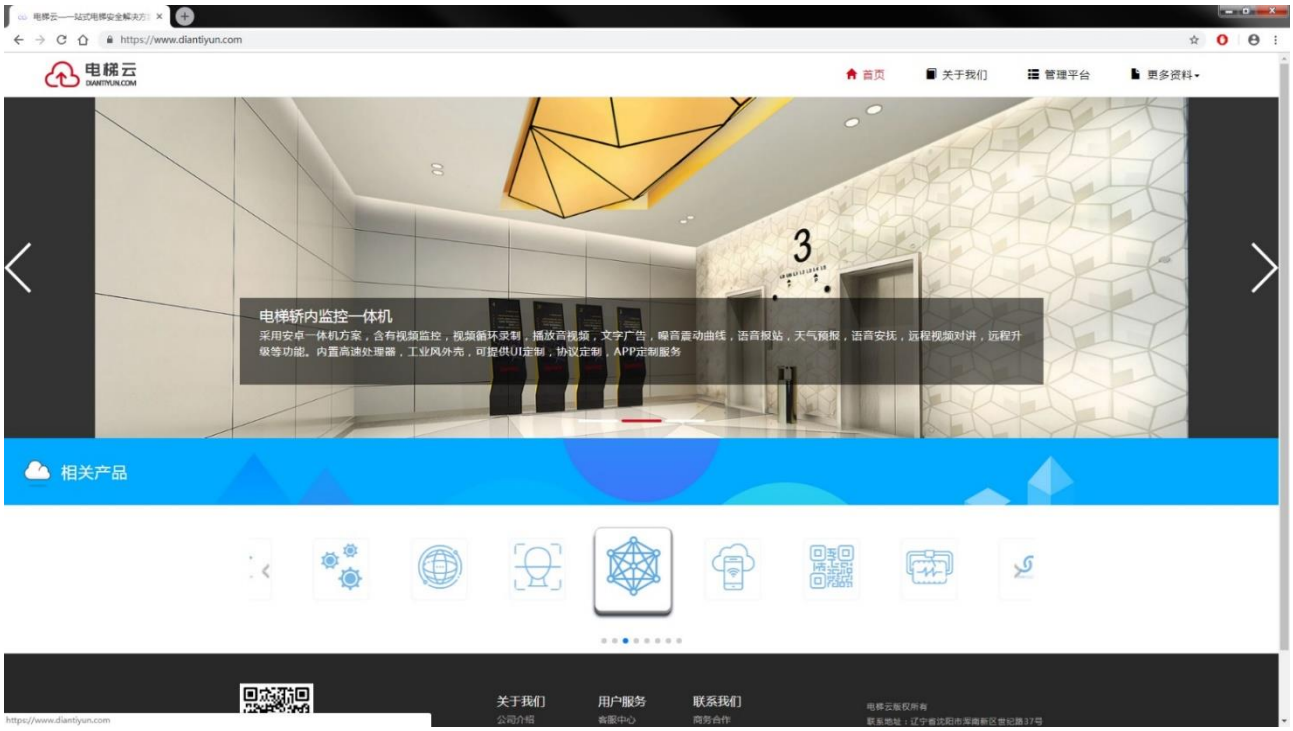


In this interface, you can view device debugging information.

Chapter 4 Elevator Cloud Platform Binding and Checking

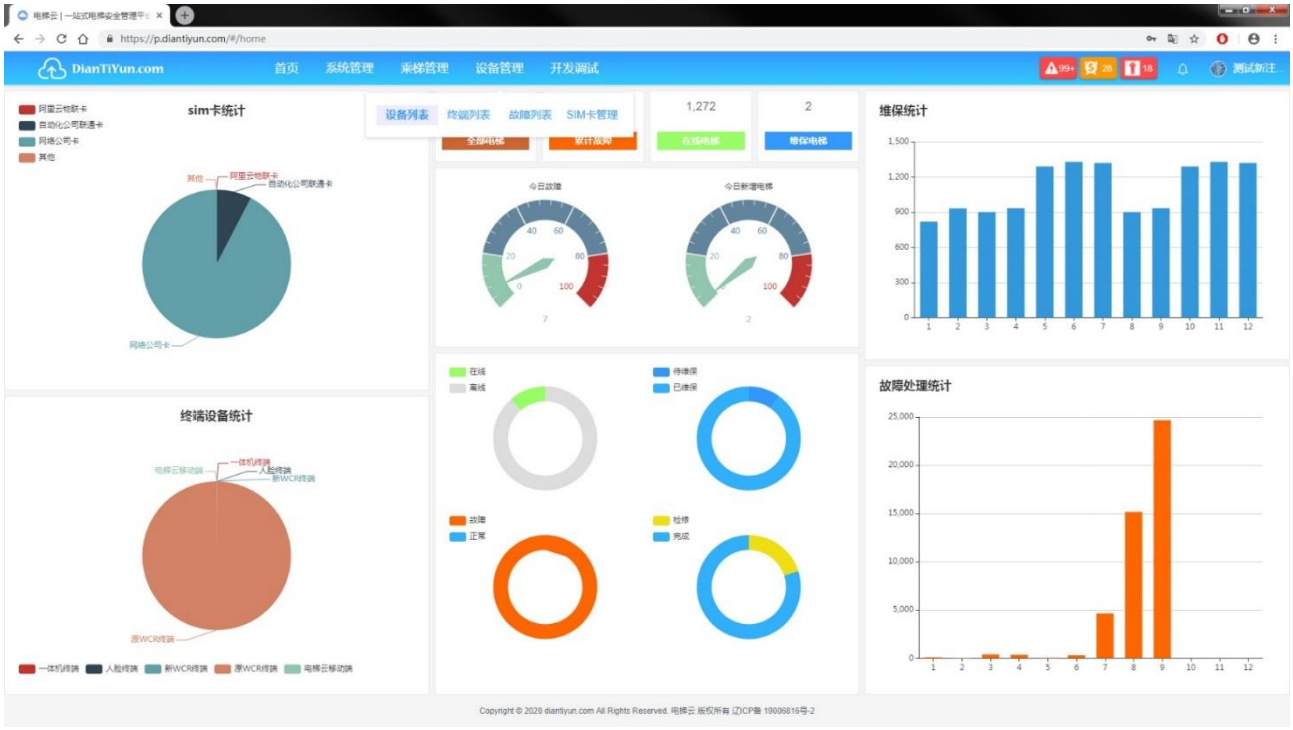
4.1 Device binding

- First step: visit elevator cloud platform www.diantiyun.com .

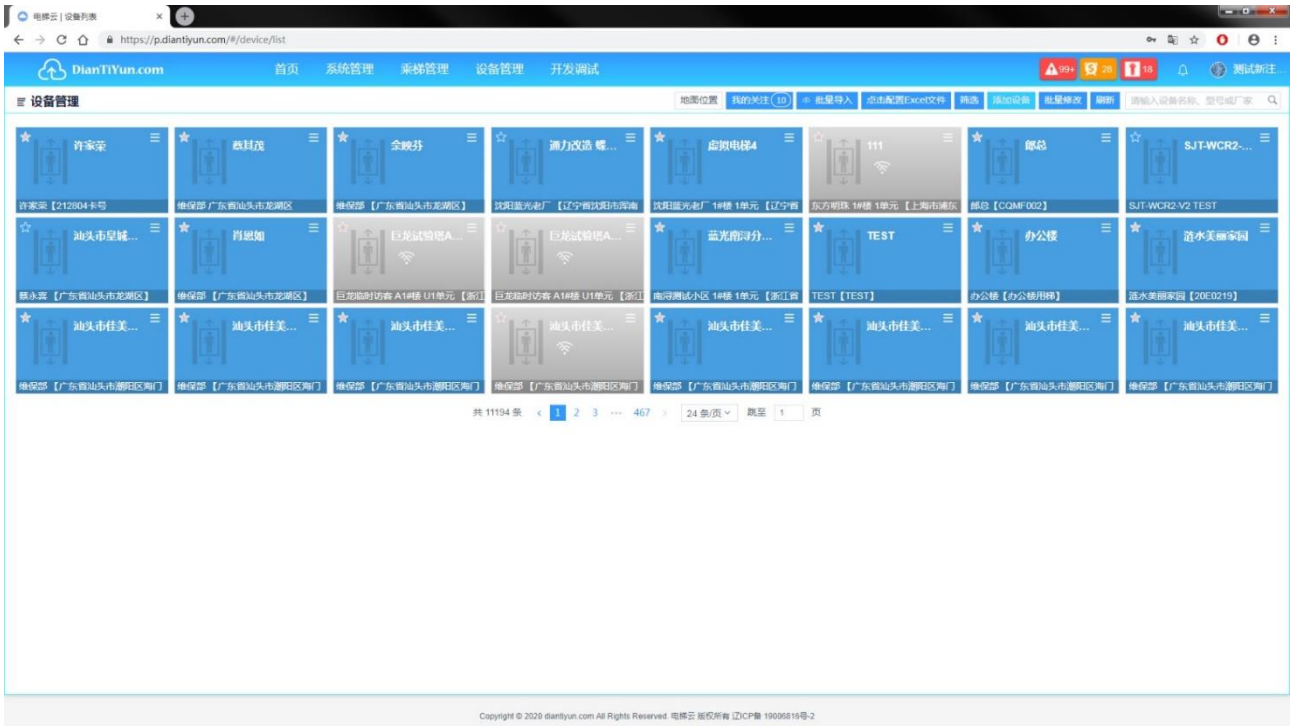


- Second step: Click “Manage Platform” at top right corner of main page to enter login interface. (If without account, please contact with factory to open a new account) .

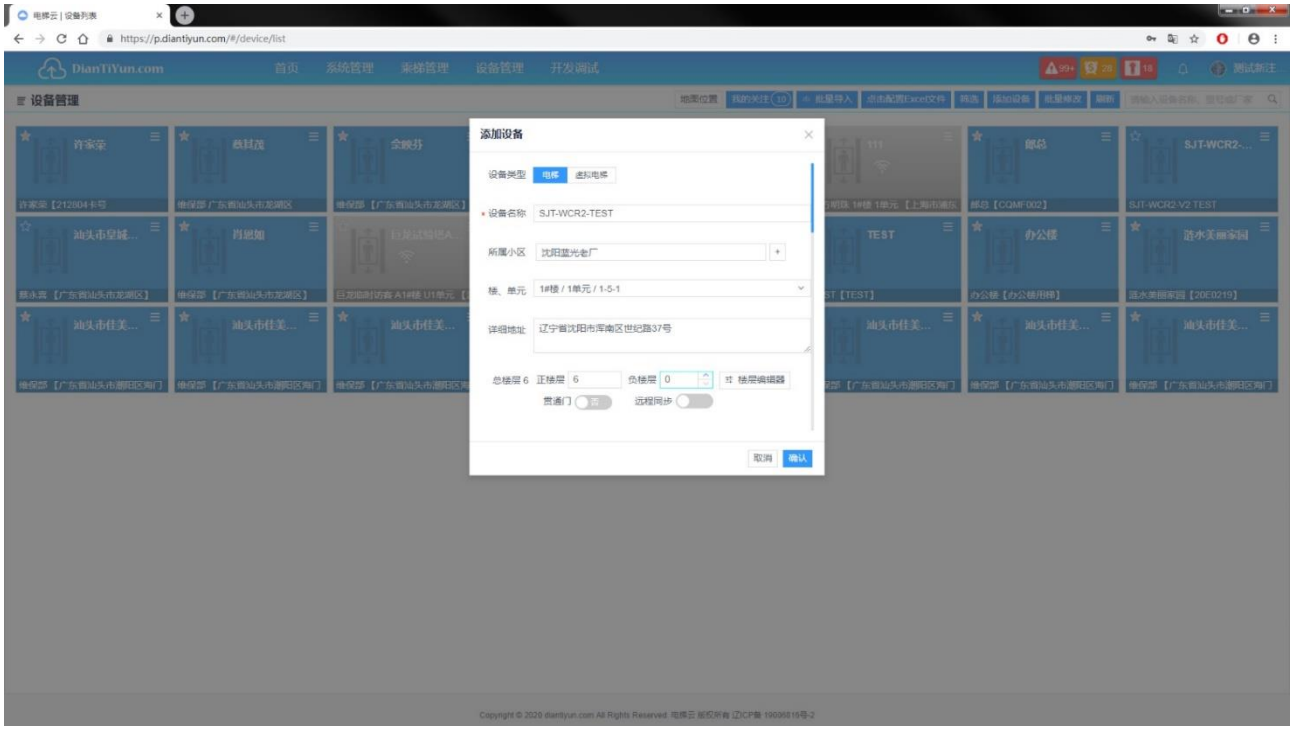
- Third Step,: Input account with password and click Login to enter management interface.



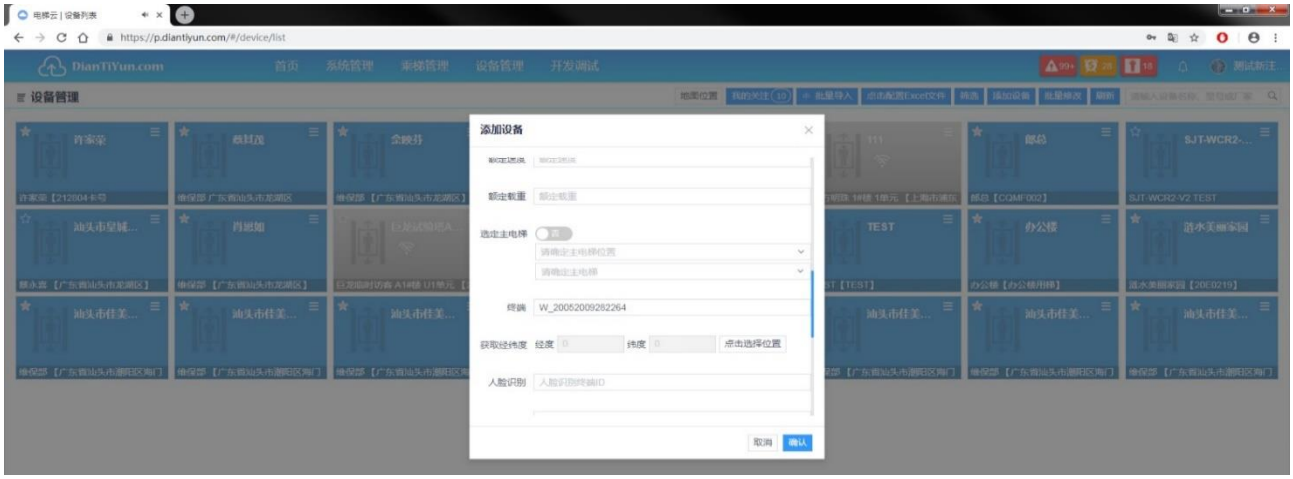
- Fourth step: Click on "Device List" under "Device Management" to enter the device management interface.



- Fifth step: Click on "Add Device" in the upper right corner to enter the elevator and device information input interface.



- Sixth step: On the "Add Device" page, enter the elevator profile and device information (device ID), bind them, then device registration and binding are completed.



Attention! The binding of elevators and equipment is based on the "Terminal" field. Please enter the device ID in the "Terminal" input box. The device ID should be pasted on the product shell in the format of "W_XXXXXXXXXXXX" (note the "W_").

4.2 View elevator

After adding, you can view the corresponding elevator status on the "Device Management" page and click on the elevator you want to view.