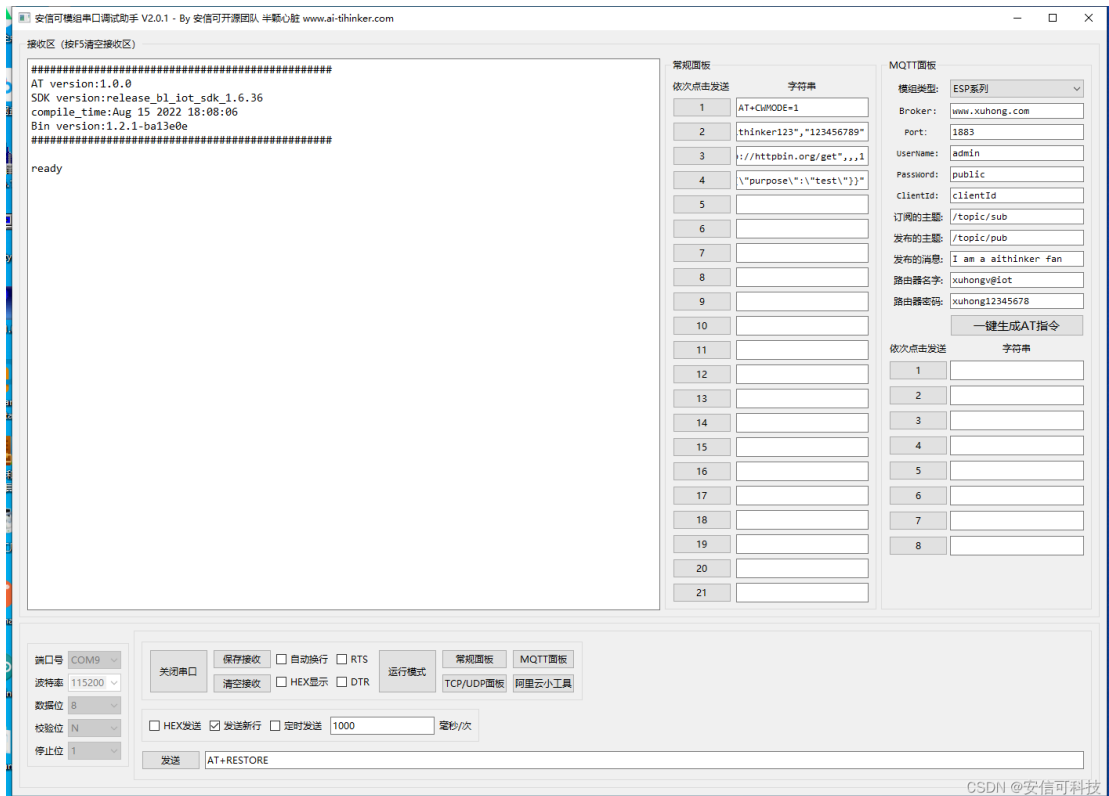# Ai-WB2 module's TCP-based MQTT connection server usage example
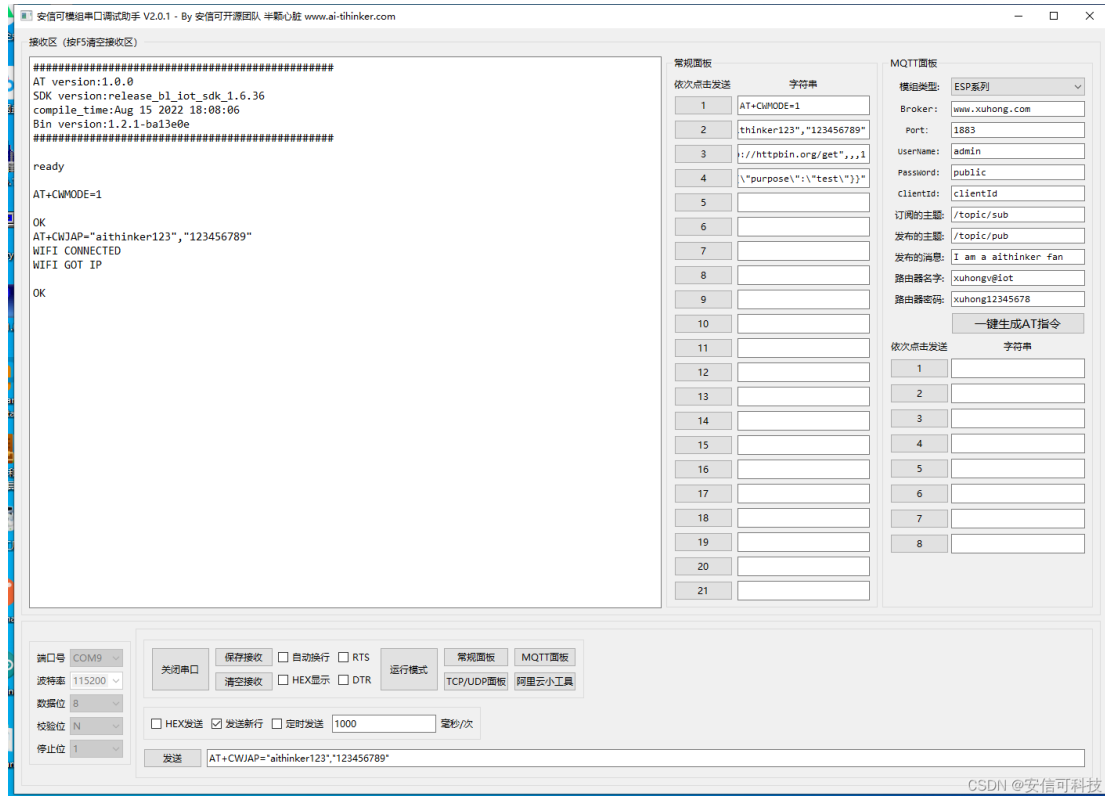
1. Preparations

Software and hardware to be prepared: Ai-WB2 series module or development board, Type-C data cable.

2. Connect the router

① Make sure that the module or development board is ready for printing, as shown below:

② Send AT+CWMODE=1;AT+CWJAP="WIFI name", "WIFI password", for example, the WIFI name I am testing is aithinker123, and the password is 123456789, as shown in the following figure:

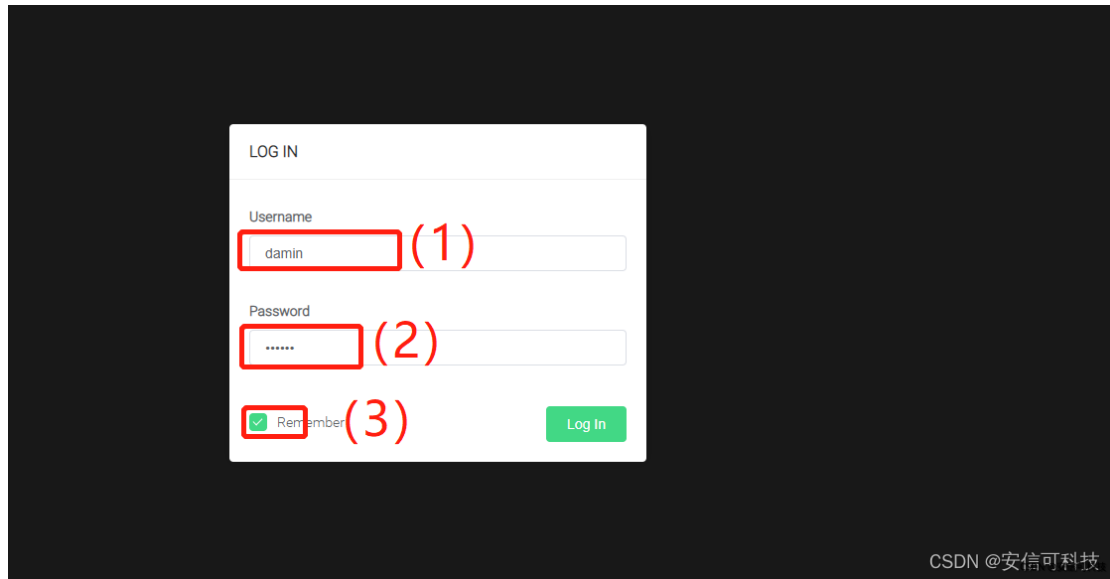# 3. TCP-based MQTT connections (suitable for small data volumes)

This example uses wx.aithinker.com as the MQTT server, console port number: 18083, TCP MQTT connection port: 1883

① Log in to the MQTT server console, open the browser and enter http://wx.ai-thinker.com:18083 to open the console, enter the user name and password at the arrow and save the login As   shown   below:
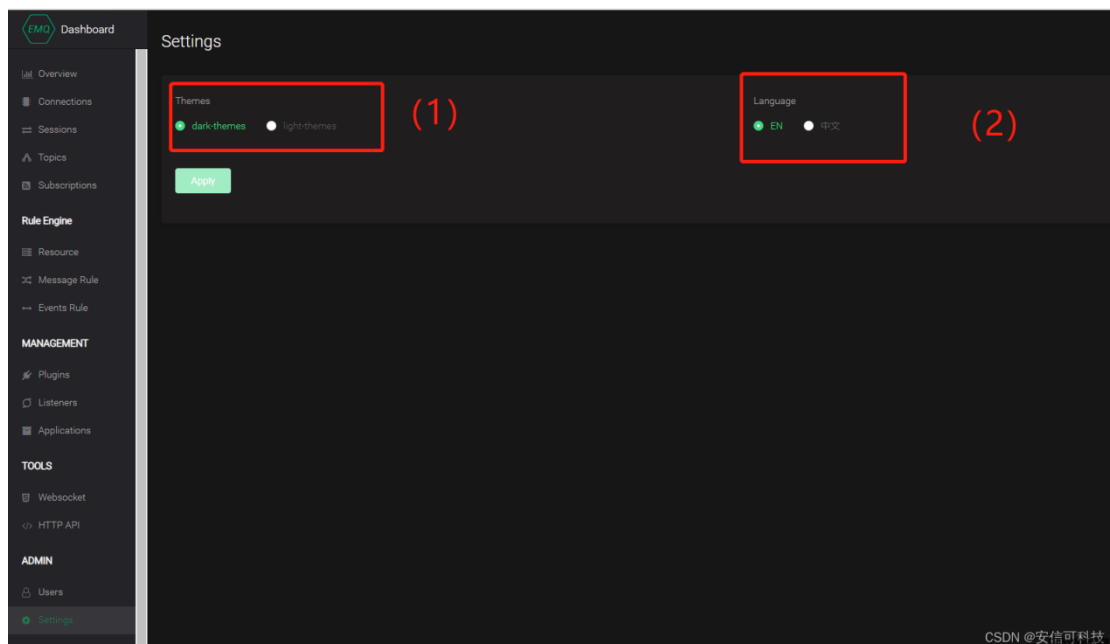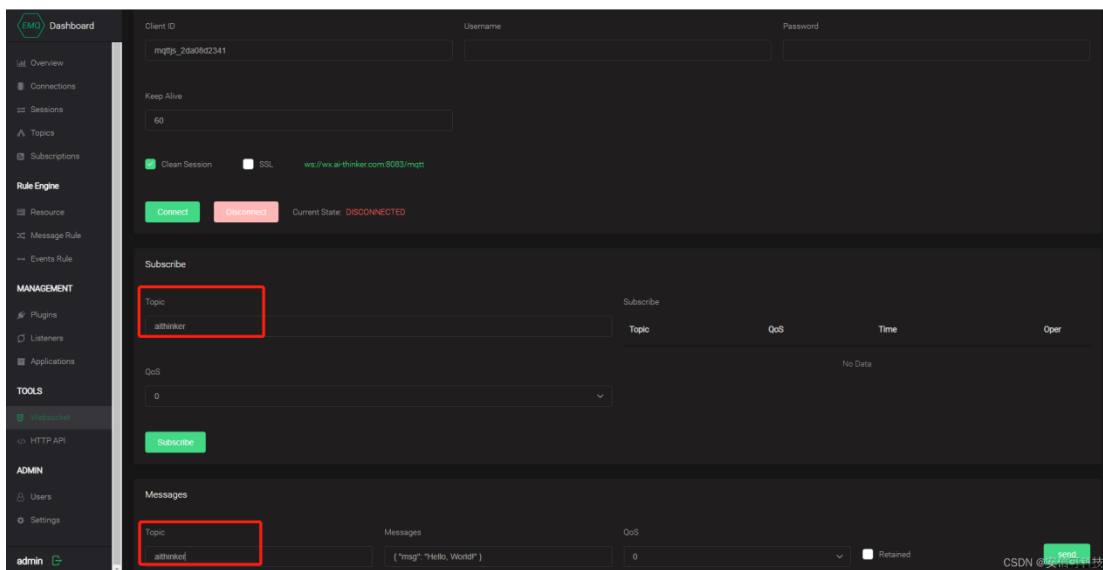
(1) Enter the account number

(2) Enter password

(3) Tick

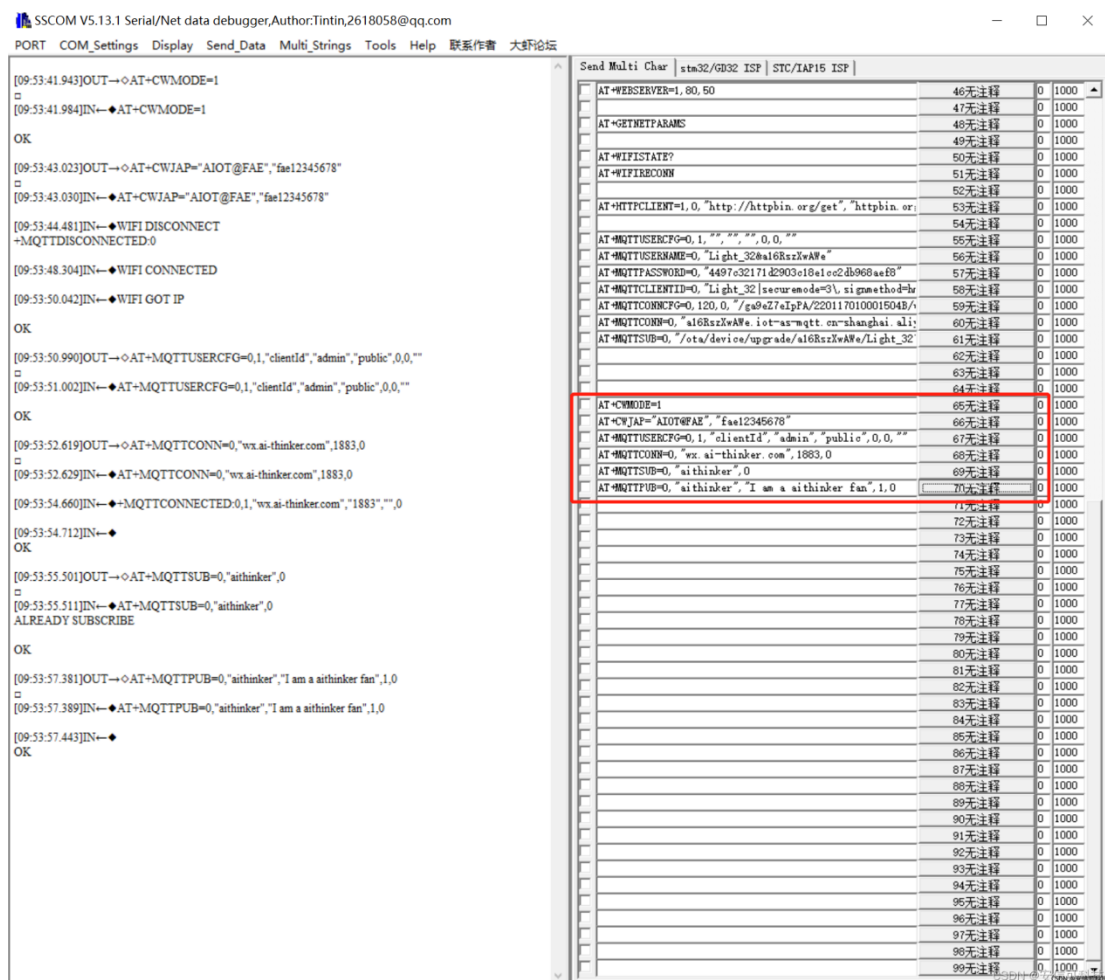② After logging in, click **"Settings"** to set the Chinese interface to facilitate debugging

(1) Switch themes

(2) Switch language

③ Click **" Websocket"**, click the connection directly in the connection area, and the parameters are default. Set the subscription topic and message topic and click subscribe, the topics are all aithinker:

④ Open the extension box and fill in all configuration instructions, as shown in the figure:

⑤ If you have connected to the router before, you can ignore the operations of setting the STA mode and connecting to the router, and directly click to configure the server, connect to the server, subscribe to the topic, and publish information. The above steps are correct and you can get the

following screenshot:

```
########################################
AT version:1.1.0
SDK version:release_bl_iot_sdk_1.6.36
compile_time:Aug 22 2022 17:15:37
Bin version:1.3.2-541f17f
########################################

ready

AT

OK
WIFI CONNECTED
AT+CWMODE=1                    (1)

OK
WIFI GOT IP
AT+CWJAP="AIOT@FAE","fae12345678"    (2)
WIFI DISCONNECT
WIFI CONNECTED
WIFI GOT IP

OK
AT+MQTTUSERCFG=0,1,"clientId","admin","public",0,0,""    (3)

OK
AT+MQTTCONN=0,"wx.ai-thinker.com",1883,0    (4)
+MQTTCONNECTED:0,1,"wx.ai-thinker.com","1883","",0

OK                            (5)
AT+MQTTSUB=0,"aithinker",0

OK                            (6)
AT+MQTTPUB=0,"aithinker","I am a aithinker fan",1,0
+MQTTSUBRECV:0,"aithinker",20,I am a aithinker fan

OK
```
(7)

(1) Set the wifi connection mode, here set the STA mode

(2) Set the access wifi account and password and start the connection

(3) Set connection parameters

(4) connect to the server

(5) Set subscription parameters

(6) Set publish parameters and publish data

(7) Subscribe to published content

⑥ At the same time, click send in the message box on the console, and the mod and subscription message list will receive { "msg": "Hello, World!" } at the same time:

(1) The data released by the module, the subscription's status of the platform

(2) Data published by the platform, and its subscriptions

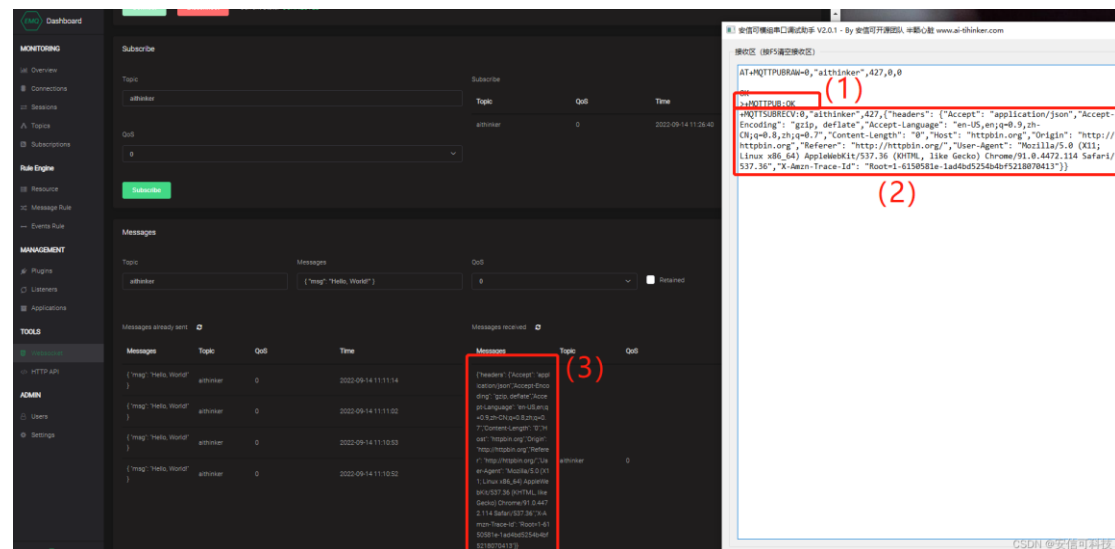# 4.TCP-based MQTT connection (for large amounts of data)

If the amount of data reported by your MQTT has exceeded the length threshold of 256 for a single AT command, it is recommended that you use the AT+MQTTPUBRAW command.
Suppose the JSON data you want to report is as follows, with a length of 427 bytes.

{"headers": {"Accept": "application/json","Accept-Encoding": "gzip, deflate","Accept-Language": "en-US,en;q=0.9,zh-CN;q=0.8,zh;q=0.7","Content-Length": "0","Host": "httpbin.org","Origin": "http://httpbin.org","Referer": "http://httpbin.org/","User-Agent": "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/91.0.4472.114 Safari/537.36","X-Amzn-Trace-Id": "Root=1-6150581e-1ad4bd5254b4bf5218070413"}}

command：AT+MQTTPUBRAW=0,"aithinker",427,0,0
The module will subscribe to the data just released, and at the same time, the data reported by the module will be received on the console, as shown in the following figure:

(1) Indicates that the length of the sent data has reached 427 bytes
(2) subscribed data
(3) Data content subscribed to by the platform

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