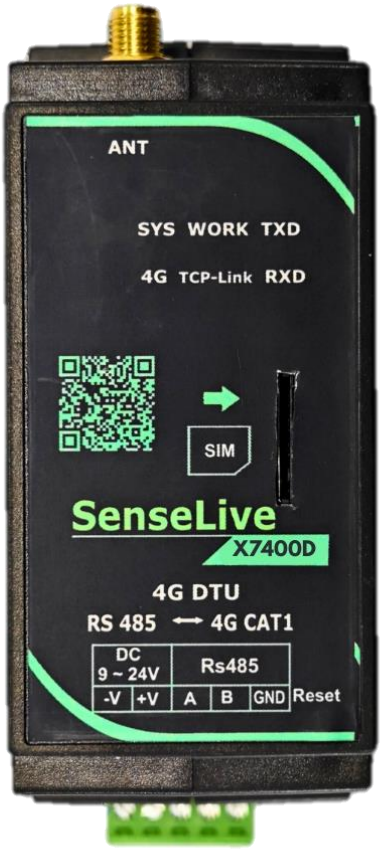
SenseLive7400D

Din-rail 4G CAT1 DTU

Configuration Datasheet

RS485 to 4G Modbus RTU to 4G Modbus TCP RS485 to MQTT DLT-645/RTU to Cloud/to platform JSON



Catalogue

1. Introduction:-

SL7400D: The SL7400D is a compact and cost-effective CAT1 4G DTU , supporting RS485-to-4G transmission with speeds up to 10Mbps. It features guideway installation, wide voltage input (9–24V), and a fire-retardant shell for industrial use. The SL7400DN adds P2P and M2M cloud forwarding, enabling remote monitoring without a dedicated server. Both models support MQTT, Modbus RTU to JSON, HTTP, and edge computing, allowing seamless data collection, remote management, and cloud integration for industrial automation and IoT applications.

2. Technical parameters:-

Outside Interface	
Serial interface	RS485：3.5mm terminal
Serial port	ONE，RS485（485A、485B、GND）
Power supply	3.5mm terminal
Reset	Push-button one-button reset factory Settings
Signal light	SYS, WORK, 4G LINK, TCP LINK, TXD, RXD
SIM card	Voltage：3V，1.8V；Size Micro SIM（none Nano SIM): Size is 12x15mm×0.8mm
Antenna interface	50Ω/SMA Female stick antenna or suction cup antenna (default suction cup)
Size：	L x W x H：37.6 x 83.6 x 89.2mm
Equipment：	35mm Din rail mounted
Communication Interface	
Wireless mode：	4G CAT1 supports modes: B3 (1800 MHz) – Airtel, Jio, Vi, BSNL B5 (850 MHz) – Jio, BSNL B8 (900 MHz) – Vi, BSNL B40 (2300 MHz) – Jio, Airtel, Vi B41 (2500 MHz) – Airtel (Limited areas)

Serial port parameter			
Baud rate	300~921.6Kbps ，customized baud rate	Check bit：	None, odd check, even check
Digit bit	5～8 bits	Stop bit：	1～2 bits
Software			
Working mode	TCP Client side、 UDP		
Transformer protocol	Modbus TCP、MQTT、JSON		
Modbus gateway	Modbus TCP to RTU		
JSON gateway	Device side support Modbus RTU、DLT-645； Server support HTTP POST/GET、MQTT		
SSL	Support SSL encryption		
Off-line storage	256K		
Address resolution：	Support DNS resolution		
Configuration	Vircom tool、serial port AT instruction configuration		
Hardware			
input voltage	9～24V DC		
input current	Dial up /4G communication 50mA@12V, idle 25mA@12V		
Environment			
operating temperature, humidity	-40~85℃ 5~95% RH		
storage temperature, humidity：	-45~100℃ 5~95% RH		

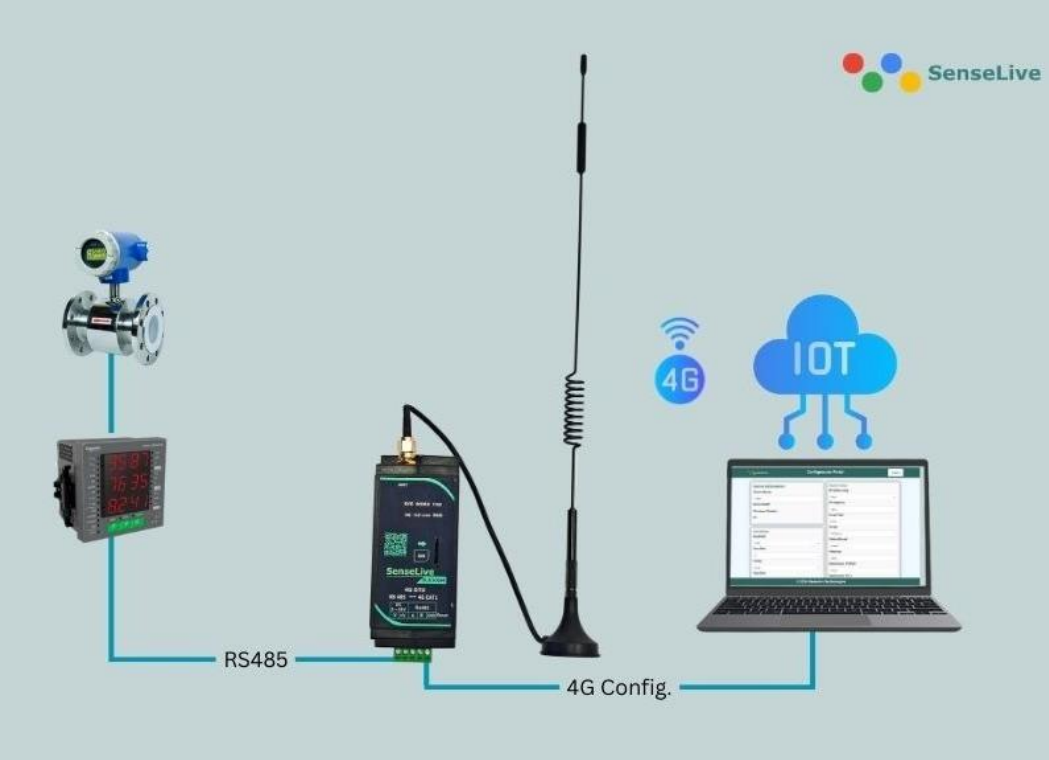
3. Software Installation:-

To download Vicrom software just click on the below link.

http://senselive.io/download/software/SLVirCom.zip

4. Hardware Connection:-

- **Power Supply:** Connect on-site 2-wire power to positive and negative terminals.
- **Serial Port:** Connect based on user device. For the first 485 port, connect 485+ to 1A and 485- to 1B.



5. Parameter Configuration

1. After installing Vircom, connecting the hardware, running the software, and clicking on "Device Management," proceed with the necessary configurations.

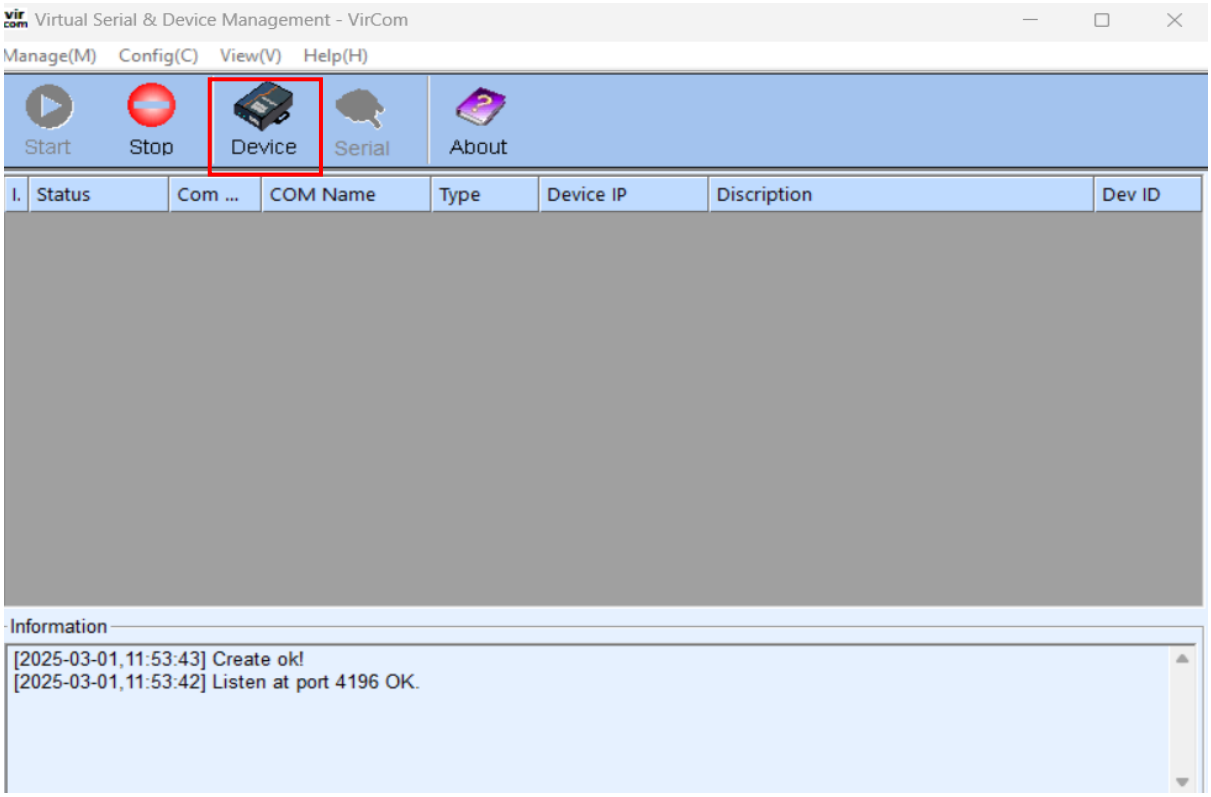


Fig.1 Device management

2. In the Device Management interface, click on “Search Serial” as shown in the figure 2. Then, select a baud rate and COM port. After that, click on "Search," and the device will be connected.

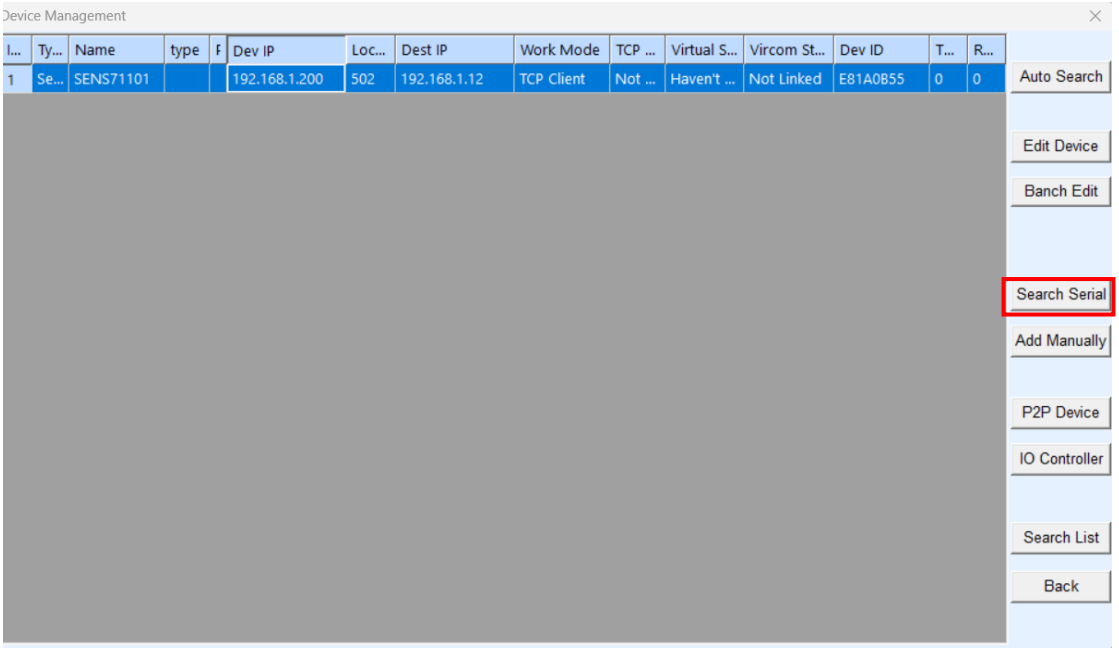


Fig.2 Device management

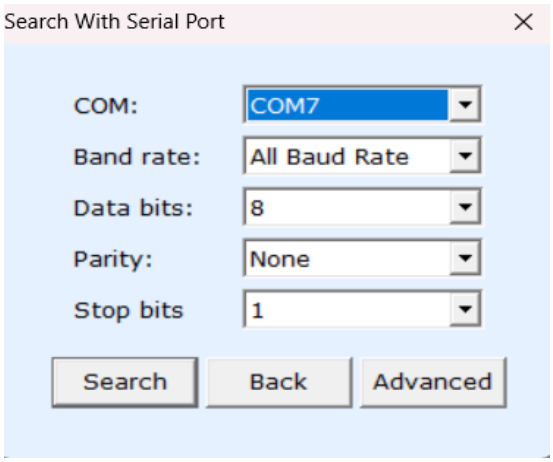


Fig.3 Search serial

3. After the serial port search, the configuration tool interface open as you see in fig 4.

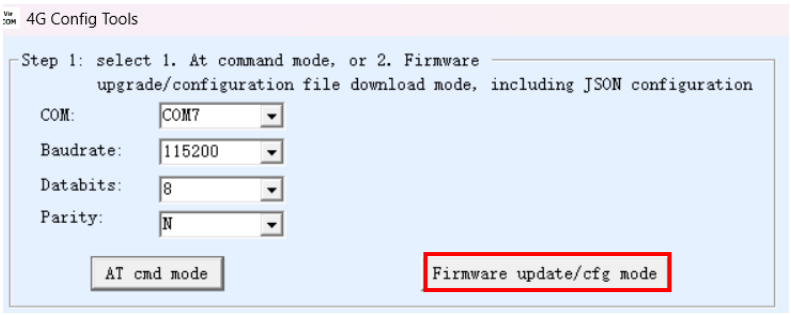


Fig.4 Configuration tool

6. MQTT Communication settings:-

1. Before MQTT communication make a folder on your PC, name as device.
2. In 4G configuration tool interface click on firmware configuration as show in fig 4.
3. In configuration save location select folder which is created on your PC, as show in fig 5.
4. Then click on MQTT configuration.

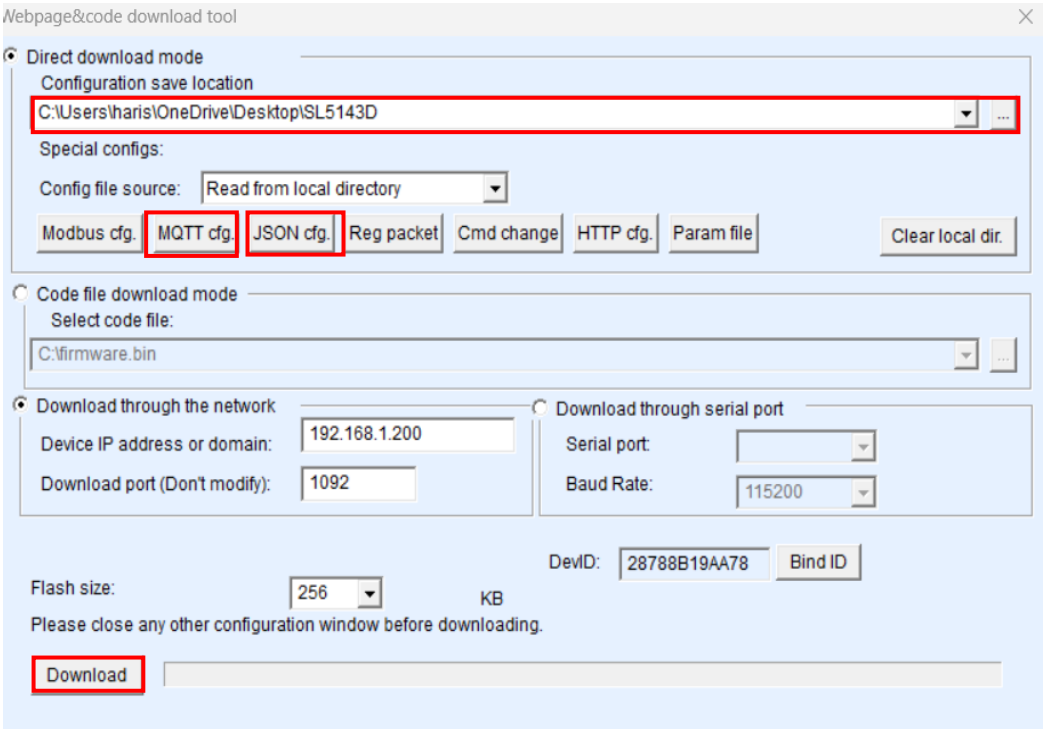


Fig.5 firmware configuration

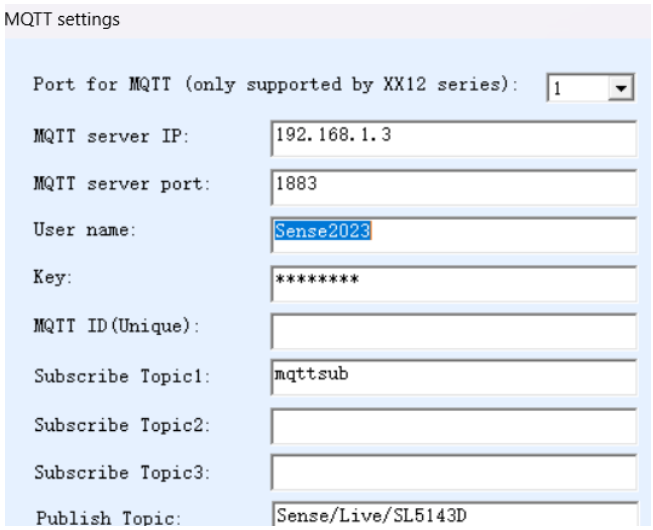


Fig.6 MQTT Setting

5. Configure the MQTT Broker, MQTT server IP, port, username, password, subscribe topic, publish topic and save it, then click on ”Download” as you see in fig 5.

7. JSON Configuration:-

1. After configuring MQTT, return to the firmware configuration and click on the JSON configuration, as shown in Figure 5.

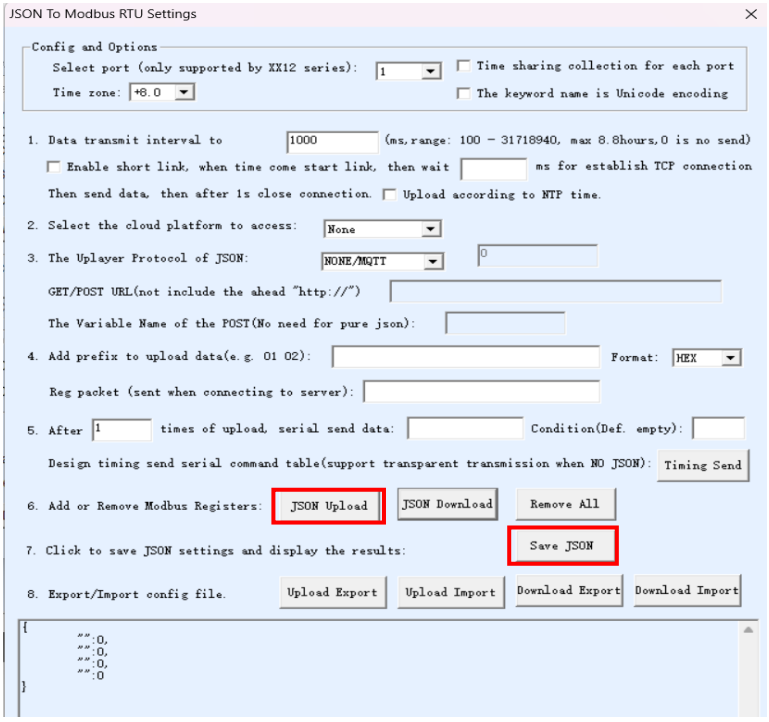


Fig.7 MQTT Setting

2. To set (water, energy) meters parameters ,Click on the “JSON upload”.
3. Add slave address.
4. Add the corresponding JSON keyword to store multiple readings of the energy meter. This keyword can be a number or a character, depending on the energy meter.
5. Add the Modbus function code so that you know which number corresponds to which function.
6. Add register address as per energy meter.
7. Then, click on “Enter Next.” The register address will increase by 1, and you must assign the corresponding JSON keyword one by one after every click.
8. Click on “Save and Exit.” The saved JSON parameters will be visible. Then, go back to firmware configuration interface and click on “Download as show in fig 7.”

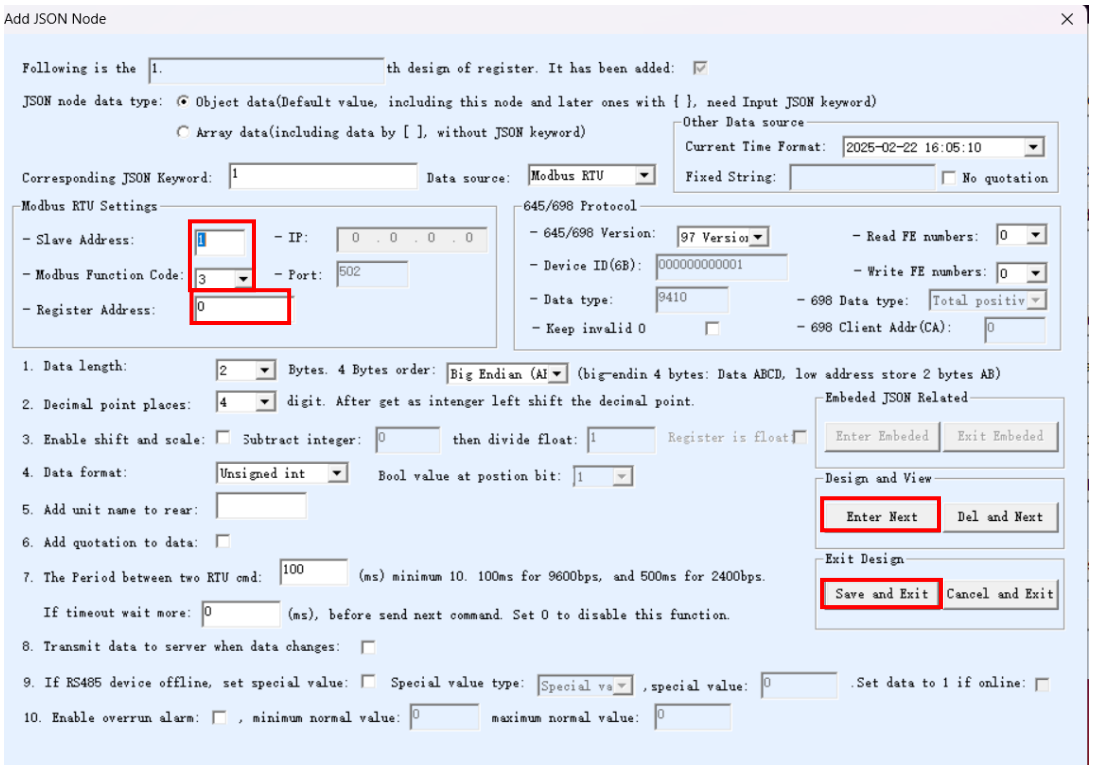


Fig.8 Add JSON node

8. Check parameter in configuration tool:-

1 Go back to the device management interface, click on Serial Search, and the Configuration Tool interface will open.

2. Click on “AT cmd mode.” On right side information box show the data.
3. Click on “Login.”
4. The default login key is 666666.
5. After logging in, you can change the baud rate and other parameters by clicking on “Advance parameters”.

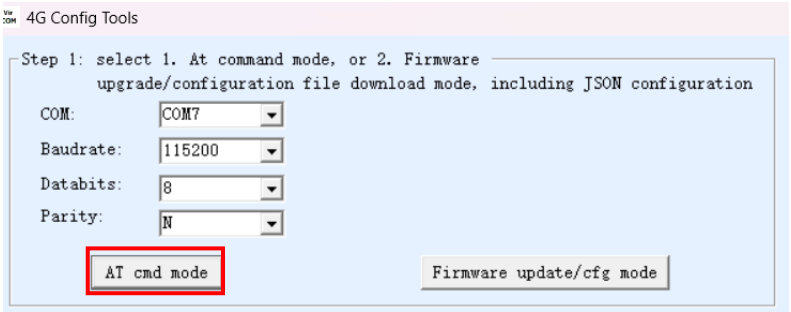


Fig.9 Configuration tool

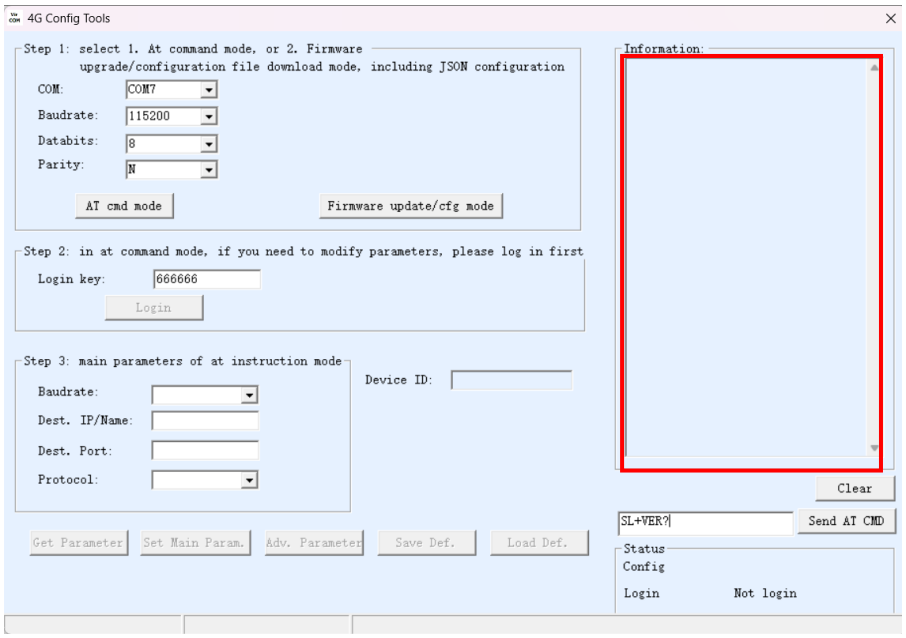


Fig.10 Configuration tool (information box)

9.Output on MQTT Explore:-

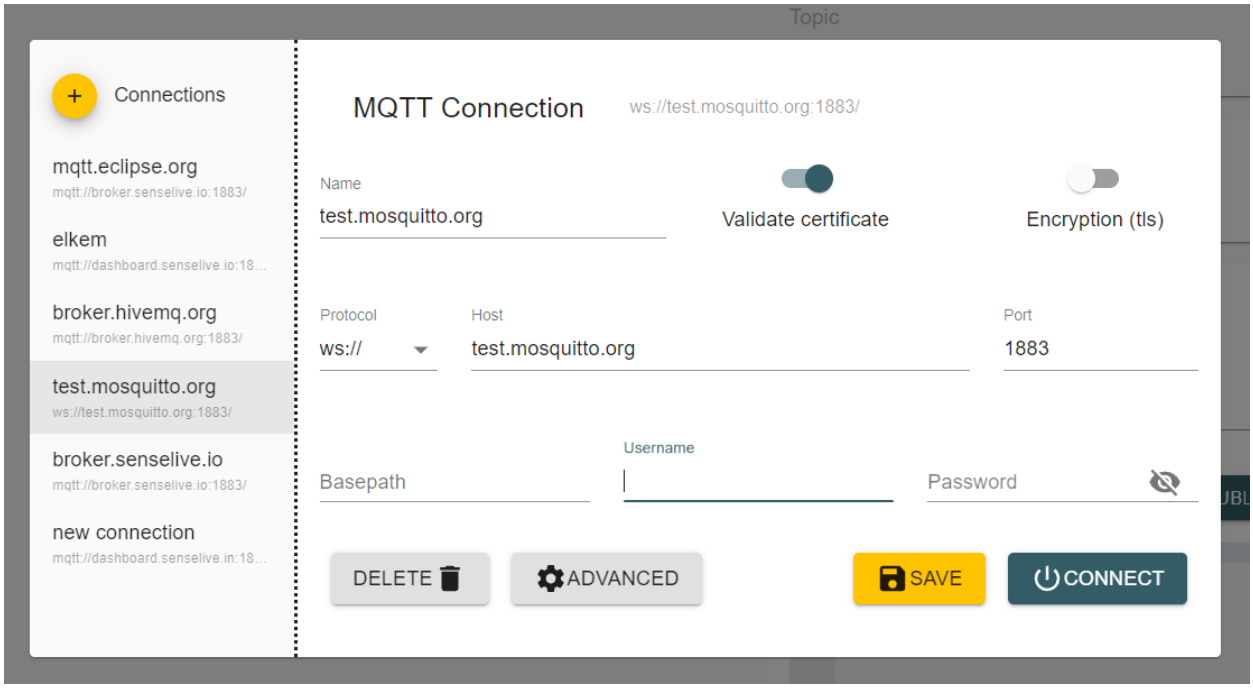


Fig.11 MQTT Explore Application

- You can search the topic which is configure in device.

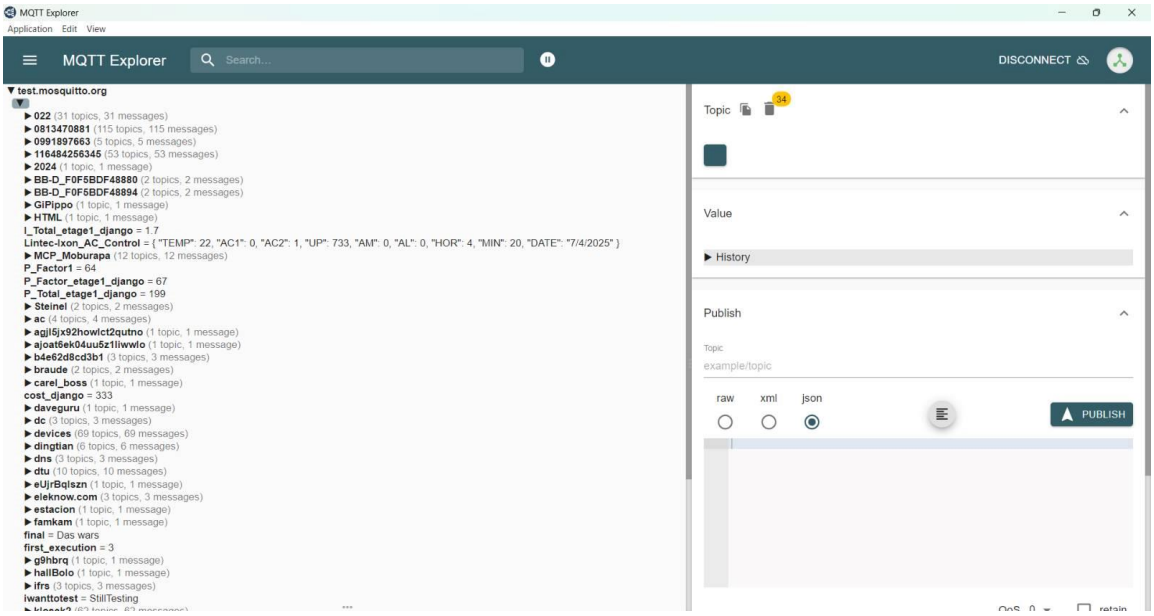


Fig.12 Broker interface