Chengdu Ebyte Electronic Technology Co.,Ltd

Wireless Modem

User Manual



All rights to interpret and modify this manual belong to
Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Table of contents

Special Note 2

1. Overview 3
1.1. Product Introduction 3
1.2. Features 3
1.3. System parameters 4
1.4. Product Dimensions 5
1.5. Pin Definitions 6
2. Quick Start 8
2.1. Hardware preparation 8
4. Connect the USB to the computer (CH340 driver needs to be installed). 9
2.2. Parameter configuration 9
2、 Clicking "Open Serial Port" will then display "Close Serial Port". 9
7、 Set the server's "target port"; 10
2.3. Communication testing 10
1. Double-click to run XCOM V2.6 10
2. Select the serial port number to which the current module is connected, and select the correct baud rate, stop bits, data bits, and parity bits (default 115200/1/8, N). 10
3. Open serial port 10
4. Send any data, and you'll see the data returned in about a second. 10
5. Test completed 11
3. Product Functions 12
3.1. Data pass-through mode 12
3.1.1. Heartbeat Pack 12
3.1.2. Registration package 13
3.1.3. Multi-link protocol distribution 14
3.1.4. short connection 16
3.2. MQTT mode 16
3.2.1. Alibaba Cloud MQTT connection 17
3.2.2. Baidu Cloud MQTT connection 17
3.2.3. OneNET Cloud MQTT Connection 19
3.2.4. Huawei Cloud MQTT connection 19
3.2.5. Standard MQTT 3.1.1 connection 21
3.3. HTTP mode 22
3.3.1. GET request 22
3.3.2. POST request 23
3.4. SMS pass-through mode 24
3.5. Security Configuration 24
3.6. Quick AT commands 25
3.7. ModBus TCP to RTU 25
3.8. APN access point 26
3.9. Serial port upgrade function 27
3.10. Hardware factory reset 28
3.11. Serial port parameter settings 28
3.12. NTP time acquisition 29
3.13. IP address acquisition 29
3.14. No data restart 29
4. Important Announcement 30

5. Revision History 30

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Special Note

This document is compatible with three models: E840-TTL (EC05-DNC), E840-TL (EC05-DNE), and E840-TTL (EC05-DGC). The main differences are as follows; please refer to the documentation when using the device:

1、E840-TTL(EC05-DNC) and E840-TTL(EC05-DGC) are the domestic versions, while E840-TL(EC05-DNE) and E840-TL(EC05-DNE)-V2 are the European and Asian versions of the frequency bands. Please pay attention to the difference when using them.

2、Only the E840-TTL (EC05-DGC) supports GNSS positioning. When using it, you can query location information through AT commands or report your location through heartbeat packets.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

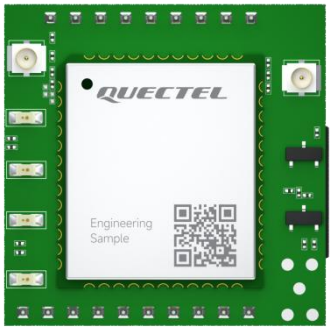
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1. Overview

1.1. Product Introduction

The E840-TTL (EC05-xxx) is a small-sized 4G pin module developed by Chengdu E-Bite Electronics Technology Co., Ltd. using 4G CAT1 technology. It features small size, high speed, low latency, and ease of use. Simple configuration enables serial device networking (bidirectional transparent transmission between serial devices and network servers). The product uses 2.0mm pin headers, facilitating debugging and easy configuration for serial networking, making it highly convenient for integration into IoT projects.

It supports two connections, the MQTT protocol, and access to Alibaba Cloud, OneNet, Baidu Cloud, and Huawei Cloud platforms, making it easy to implement IoT applications.



1.2. Features

- It adopts the 4G CAT1 solution with millisecond-level latency, meeting the needs of various data transmission application scenarios;
- Supports 4G full network compatibility;
- Supports transparent data transmission;
- Supports TCP, UDP, MQTT, and HTTP network protocols;
- Supports connection to standard MQTT 3.1.1 servers such as Alibaba Cloud, Baidu Cloud, Huawei Cloud, Tencent Cloud, and ONE Net;
- Supports heartbeat packages and registration packages;
- It supports simultaneous transmission and reception on two socket links, and each socket supports master/slave connection information settings;
- Supports automatic conversion between Modbus RTU and Modbus TCP;
- Supports fast AT commands;
- Supports network, serial port, and SMS AT command configuration (supported in some models);
- AWS certificates are supported (E840-TL(EC05-DNE)-V2 only).
- Security mechanisms can be configured, and passwords can be set by the user.
- The computer-based parameter configuration software is convenient and flexible.
- Supports transparent transmission of network and SMS data (supported by some models), and supports phone number filtering;
- The module supports restarting without data and reconnecting after disconnection.
- Supports APN;
- Supports IP address lookup;
- It supports a wide voltage power supply of DC4.5~18V or DC3.3~4.3V lithium battery power supply, adapting to a variety of application scenarios.
- Supports GPS/BeiDou positioning (only supported by E840-TTL(EC05-DGC))

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

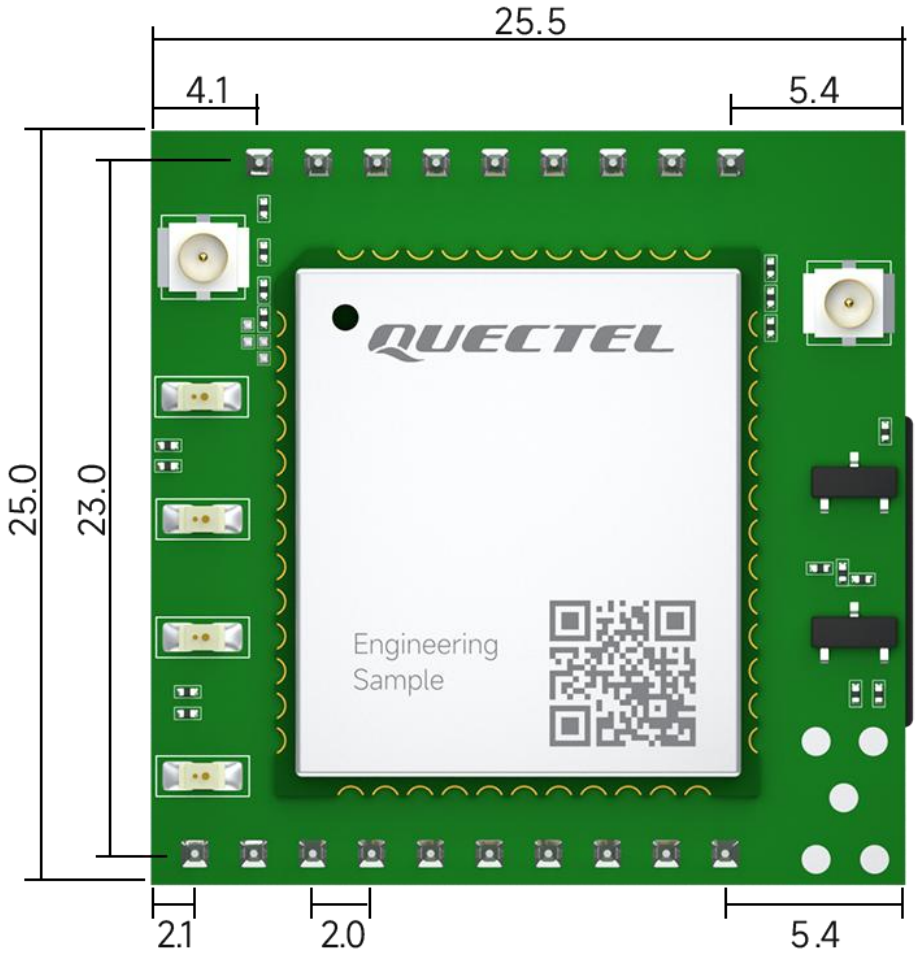
1.3. System parameters

Parameter name	Parameter value	describe
Characteristic parameters	Supported frequency bands	**E840-TTL(EC05-DNC), E840-TTL(EC05-DGC)** LTE-TDD: B34/B38/B39/B40/B41 LTE-FDD: B1/B3/B5/B8
		E840-TTL(EC05-DNE) LTE-FDD: B1/B3/B5/B7/B8/B20/B28
		E840-TTL(EC05-DNE)-V2 LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41
	Network protocol characteristics	Supports TCP/UDP/ MQTT/HTTP/DNS protocols
	RF interface	1st generation IPEX interface
	Positioning system	**Only E840-TTL (EC05-DGC) supports this.** Supports GPS/BDS/Galileo/GLONASS joint positioning
	AWS Certificates	**Only E840-TTL(EC05-DNE)-V2 supports this.**
Hardware features	Data Interface	3.3V TTL level
	baud rate	1200-230400 , default 115200 bps
	Data bits	8
	Stop bit	1 (default), 2
	Check bit	None (default), Odd, Even
	Operating voltage	VCC1: DC 4.5 ~ 18V VCC2: 3.3 ~ 4.3V Note: VCC1 and VCC2 should not be powered simultaneously. It is recommended to use the VCC1 pin.
	Operating current	Peak value - VCC1 pin: 2000mA@5V / 1000mA@12V Peak voltage - VCC2 pin : 2500mA@3.3V / 2300mA@4.2V Standby - VCC1 pin: 50mA@5V / 30mA@12V Standby - VCC pin 2: 80mA@3.3V / 60mA@4.2V
	Operating temperature	-40 ~ +85℃
	External dimensions	25×25mm
	Product weight	4.5±0.2g
indicator lights	PWR (blue)	Lights up when power is on
	STATE (yellow)	Off: The module is powered on and searching for the SIM card; Flashing: The module has detected the correct SIM card and is attaching to the network; Changliang: Module successfully attached to network;
	DATA (green)	Flashing: When the serial port is sending/receiving data.
	LINK (yellow)	Constant light: Module successfully connected to the server; Off: The module failed to connect to the server;

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.4. Product Dimensions

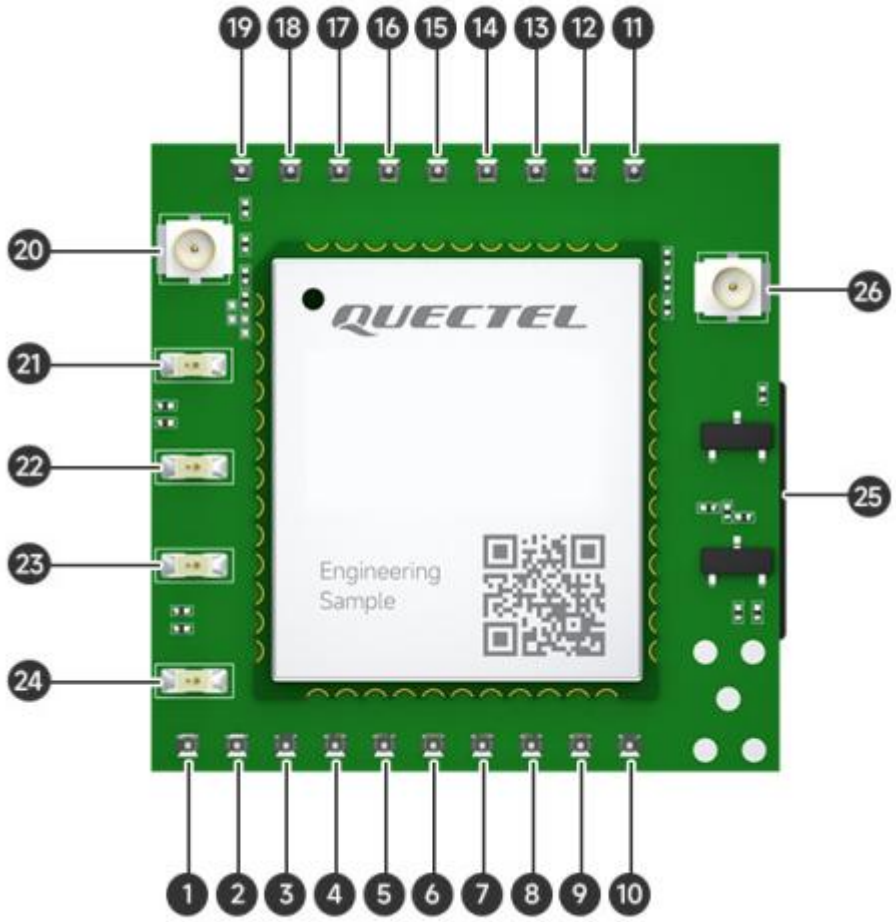


Unit : mm
Tolerance value : ±0.1mm

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.5. Pin Definitions



Serial Number	name	Function	illustrate
1	GND	ground pin	Can be used as a power source ground
2	VCC1	4.5 ~ 18V input	If a power supply of 4.5V or higher is required (note the module's operating voltage range), the VCC1 pin must be used, and the recommended power supply load capacity of VCC1 is 2A @5V or higher. Do not supply power to VCC2 simultaneously!!!
3	NC	Empty pin	When customizing, use it as a regular I/O; when not in use, simply leave it floating.
4	GND	ground pin	Can be used as a power source ground
5	SIM_VDD	External SIM card pins	External SIM card VDD, used for connecting external SIM cards.
6	SIM_CLK	External SIM card pins	External SIM Card CLK is used to accept external SIM cards.
7	SIM_RST	External SIM card pins	RST for external SIM cards, used for connecting external SIM cards.
8	SIM_DATA	External SIM card pins	External SIM card DATA, used for connecting external SIM

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

			cards.
9	GND	ground pin	Can be used as a power source ground
10	RESET	Restart pin	Pulling it low will restart the module; it is recommended to pull it up externally when not in use.
11	RXD	Serial port receive pin	Connect to a microcontroller or TTL debugger via TXD.
12	TXD	Serial port transmit pin	Connect to a microcontroller or TTL debugger RXD
13	RS485_EN	RS485 chip enable pin	The RS485 enable control pin is set high when the serial port is sending data, and is normally low.
14	RELOAD	Factory reset pin	Pull the button low for 3-5 seconds to restore factory settings. All indicator lights will illuminate successfully. Pulling the power down enters upgrade mode; all indicator lights flash.
15	STATE	STATE indicator external pin	For external LED use, common cathode connection.
16	LINK	LINK indicator external pin	For external LED use, common cathode connection.
17	DATA	DATA indicator external pin	For external LED use, common cathode connection.
18	VCC2	3.3 ~ 4.3V input	4.2V battery system power supply (note the module's operating voltage range) , VCC2 power supply load capacity recommended to be 2.5A @4V or higher. Do not supply power simultaneously with VCC1, and do not reverse the connection!!!
19	GND	ground pin	Can be used as a power source ground
20	ANT-GNSS	Antenna Interface	First generation IPEX connector, active antenna (only supported by E840-TTL (EC05-DGC), pads are empty for other models)
twenty one	DATA	Data indicator light	Off: No data transmission or reception on the serial port Flashing: When the serial port is sending/receiving data.
twenty two	LINK	Link indicator light	Constant light: Connection to the server is successful on any link; Off: The module failed to connect to the server;
twenty three	STATE	Network access status indicator light	Off: The module is powered on and searching for the SIM card; Flashing: The module has detected the correct SIM card and is attaching to the network; Changliang: Module successfully attached to network;
twenty four	POWER	Power indicator light	Lights up when power is on
25	SIM	SIM card slot	The NaNo SIM card slot should have the chip facing upwards and the notch facing inwards when inserting the card.
26	ANT-4G	Antenna Interface	1st generation IPEX socket

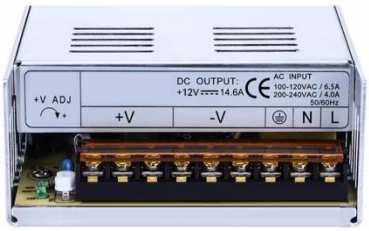
Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2. Quick Start

2.1. Hardware preparation

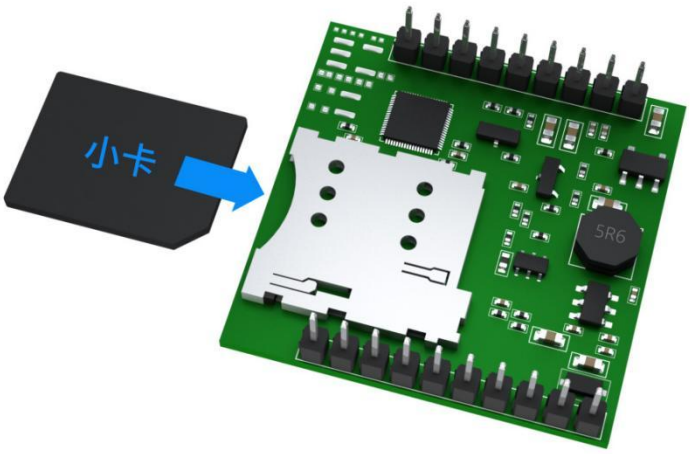
The hardware required for this test is as follows:

		
E840-TTL(EC05-xxx) Module One	12V switching power supply	NaNo SIM card (mini card)
		
USB to TTL module (3.3V level)	4G / LTE suction cup antenna and One IPEX to SMA adapter cable each	Several connecting wires

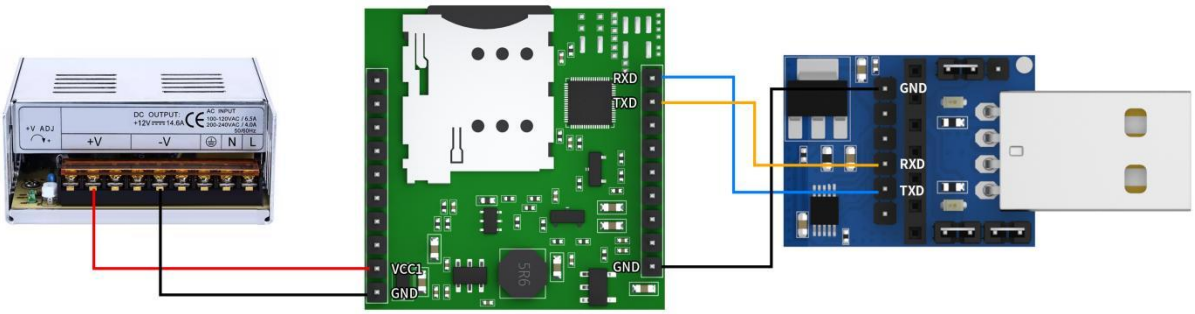
1. Insert the SIM card into the module, making sure it is a Nano SIM card (small card), with the notch facing inwards and the chip facing upwards;

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



2. Connect the IPEX adapter cable to the device at the IPEX end and the SMA end to the 4G antenna, with the antenna pointing vertically upwards.
3. Use a connecting cable to connect the TXD interface of the UDB to TTL converter to the RXD interface of the module, the RXD interface of the UDB to TTL converter to the TXD interface of the module, and the GND interface of the UDB to TTL converter to the GND interface of the module .



4. Connect the USB to the computer (CH340 driver needs to be installed).
5. Connect the positive terminal of the 12V switching power supply to module VCC1 using the connecting cable, and connect the negative terminal of the 12V switching power supply to module GND.
6. Turn on the power;
7. The STATE indicator light on the waiting module changes from off to flashing, and finally becomes constantly on.

Note: If you need to test GNSS with E840-TTL (EC05-DGC), you need to connect an external GPS active antenna and place it outdoors in an unobstructed location.

2.2. Parameter configuration

Note: Since the module is connected to the EBITT test server by default, this step can be ignored if you only need to verify communication.

To modify the module's parameter configuration and enable it to connect to the user server, you need to know the server's IP address (or domain name) and port beforehand. This example uses a TCP server connection. The parameter configuration software can be downloaded from the EBITE website. After downloading, double-click to run the software.

1、Select the corresponding COM port of the adapter (if not found, please download and install the driver from the official website of the serial adapter), and select the corresponding baud rate, data bits, stop bits, and parity bits (default is 115200, 8, N1).

2、Clicking "Open Serial Port" will then display "Close Serial Port".

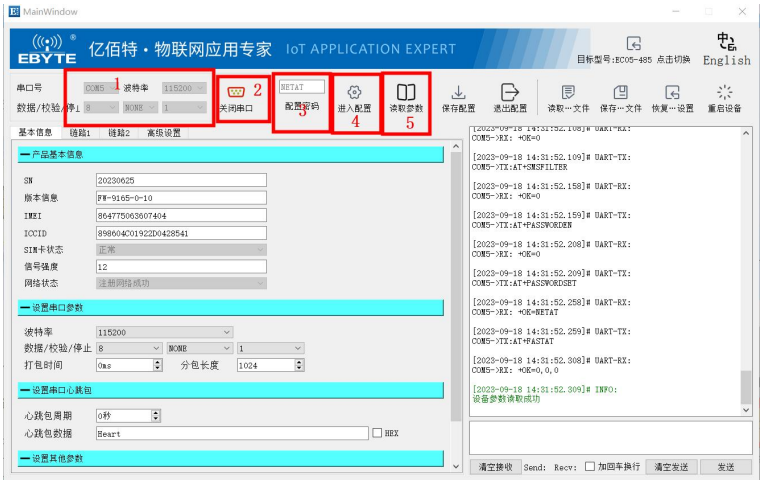
3、Enter the corresponding "configuration password". If the password has not been changed, please ignore it. If you forget the password, please pull the Reload pin low for 5 seconds to restore factory settings.

4、Click "Enter Configuration"

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

5、Click "Read Parameters"



6、Select "Link 1" and configure the link "Connection Type". Here, we take TCPC (TCP Client) as an example.

7、Set the server's "target port";

8、Set the "Server Address" (target IP or domain name, domain name can be up to 128 bytes). Here, we take a special test server as an example. Target IP: 116.62.42.192; Target Port: 8125; Function: Send any data to the server and receive any data back.

9、Once the configuration is complete, click "Save Configuration".

10、Click "Restart Device" to restart and the parameters will take effect.

11、Click "Close Serial Port"

Note: Read and save the parameters first. Please strictly follow this order to prevent saving incorrect parameters into the device, which may render it unusable.

2.3. Communication testing

Note: This connection is made to the test server provided by EBITE, which provides a backhaul service. Therefore, during testing, once the LINK light is on, any data can be sent to the module, which will then forward it to the server. Subsequently, the server will return the data to the module's serial port via the original link, thus achieving bidirectional data transmission between the module and the server.

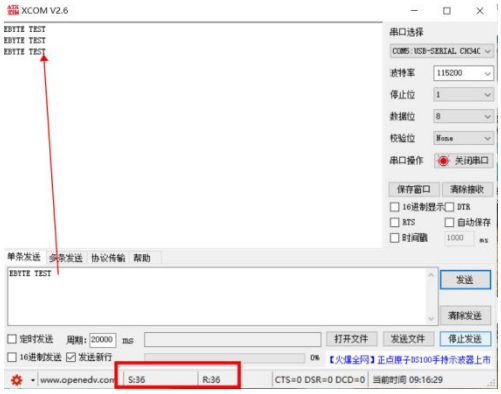
1. Double-click to run XCOM V2.6
2. Select the serial port number to which the current module is connected, and select the correct baud rate, stop bits, data bits, and parity bits (default 115200/1/8, N).
3. Open serial port



4. Send any data, and you'll see the data returned in about a second.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



5. Test completed

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3. Product Functions

3.1. Data pass-through mode

In this mode, the user's serial port device can send data to a designated server on the network through this module . The module can also receive data from the server and forward the information to the serial port device.

Supports independent configuration of 2 -way sockets .

This product supports transparent communication with TCP client (TCPC), UDP client (UDPC), TCP server (TCPS), and UDP server (UDPS) .

(TCPS and UDPS require APN card support; ordinary IoT cards cannot use server mode.)

Users do not need to worry about the data conversion process between serial port data and network data packets. They can achieve transparent data communication between serial port devices and network servers simply by setting simple parameters.

Quick operation steps:

1、Select the corresponding link

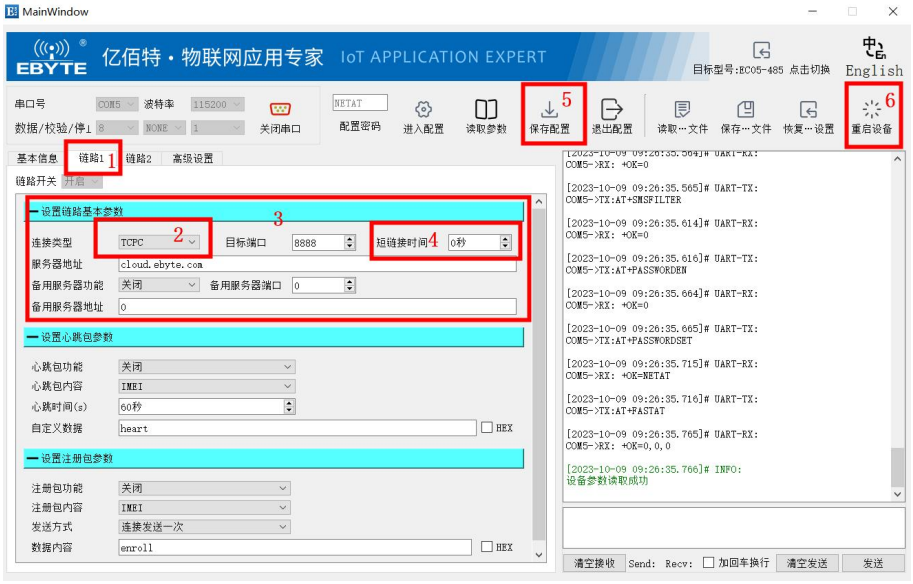
2、Configure connection type

3、Enter the target address/domain name and target port to set up a backup server.

4、If you need to set up short connections, set the short connection duration (0 indicates a long connection).

5、Click to save configuration

6、Click to restart device



the module is connected to the network, it will automatically connect to the configured server.

3.1.1. Heartbeat Pack

The heartbeat function supports two types of heartbeats: network heartbeats and serial heartbeats. Network heartbeats are sent to the server, while serial heartbeats are sent to the serial port.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Network heartbeat packet

In network pass-through mode, users can select modules to send network heartbeat packets. The main purpose of sending these packets to the network is to maintain activity with the server, ensuring that idle modules (those that do not send data to the server for extended periods) remain connected to the server.

When there is data being transmitted via the serial port, the heartbeat packet will no longer be sent. The timer will start from the idle time and the heartbeat data will be sent to the server after the heartbeat timer expires.

The heartbeat packet data can be ICCID code, IMEI code , SN, GPS , or custom registration data (HEX and ASCII configurations are supported for custom heartbeat packets; ASCII can be configured up to 64 bytes and HEX up to 32 bytes).

The heartbeat function only works in TCPC, MQTTC, and HTTPC modes; it does not work in short connection mode.

Host computer software configuration steps:

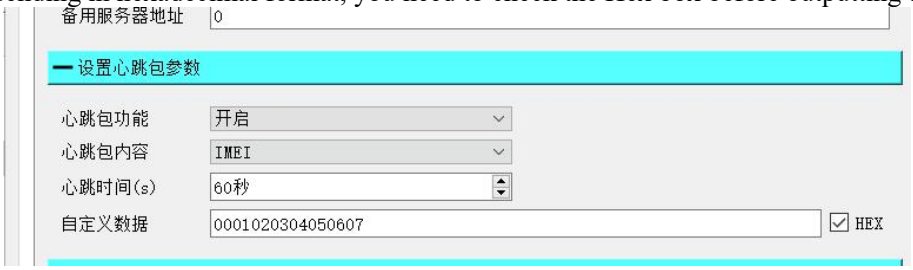
1、Select the heartbeat pack switch to turn on.

2、Choose the contents of the heartbeat package .

3、Custom heartbeat packets require writing heartbeat packet content (if not specified, omit this step; custom data will not take effect after selecting IMEI and ICCID) .

4、Set the heartbeat interval (in seconds).

5、If you are sending in hexadecimal format, you need to check the Hex box before outputting the content .



Note: Only the E840-TTL (EC05-DGC) supports GPS heartbeat packets. If other devices are configured with this option, the heartbeat function will be disabled, and no data will be sent. If the E840-TTL (EC05-DGC) fails to locate the device, it will report "0" data. Upon successful location, the reported data format will be "1, 30. 462303 N, 104. 560493 E ".

Serial heart rate packet

Users can configure serial port heartbeat packets to poll serial port data, and can customize the heartbeat data.

Host computer software configuration steps:

1、Set the heartbeat interval (unit: seconds , duration 5-300 seconds).

2、Set heartbeat data

3、If sending in hexadecimal, check the Hex checkbox (ASCII maximum configurable 64 bytes , HEX maximum configurable 32 bytes) .



3.1.2. Registration package

In network pass-through mode (TCPC/UDPC) and MQTT connection mode , users can choose to have the module send a registration packet to the server (the registration packet cannot be added before every data packet) . The registration packet is used to allow the server to identify the data source or as a password to obtain server function authorization. The registration packet can be sent when the module establishes a connection with the

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

server, or it can be appended to the beginning of each data packet as a packet header. The registration packet data can be ICCID, IMEI, or custom registration data (HEX and ASCII configurations are supported for custom registration packets; ASCII can be configured up to 64 bytes , and HEX up to 32 bytes).

Host computer software configuration steps:

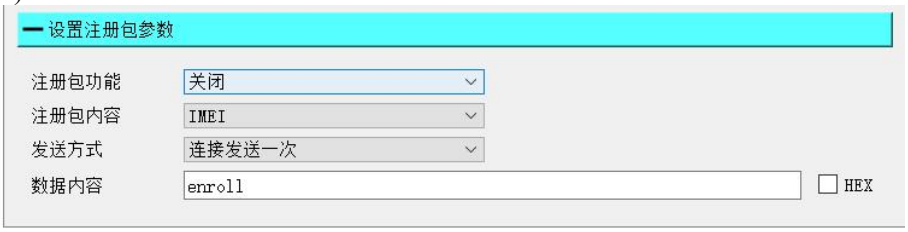
1、Select the registration package switch to turn on.

2、Select the registration package contents (ICCID, IMEI, or custom registration data) .

3、Configure the method of sending the registration packet (as a header or as a connection).

4、If you are sending in hexadecimal, check the Hex checkbox .

5、Customize the registration package by writing the registration package content (if HEX is selected, you need to fill it in again) .



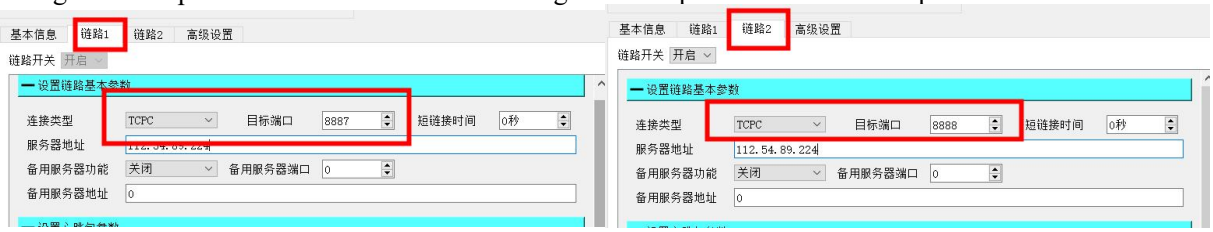
3.1.3. Multi-link protocol distribution

It supports socket distribution protocols, allowing data to be sent to different sockets via specific protocols, and also distinguishing data received by different sockets by adding packet headers and footers.

Host computer software configuration steps:



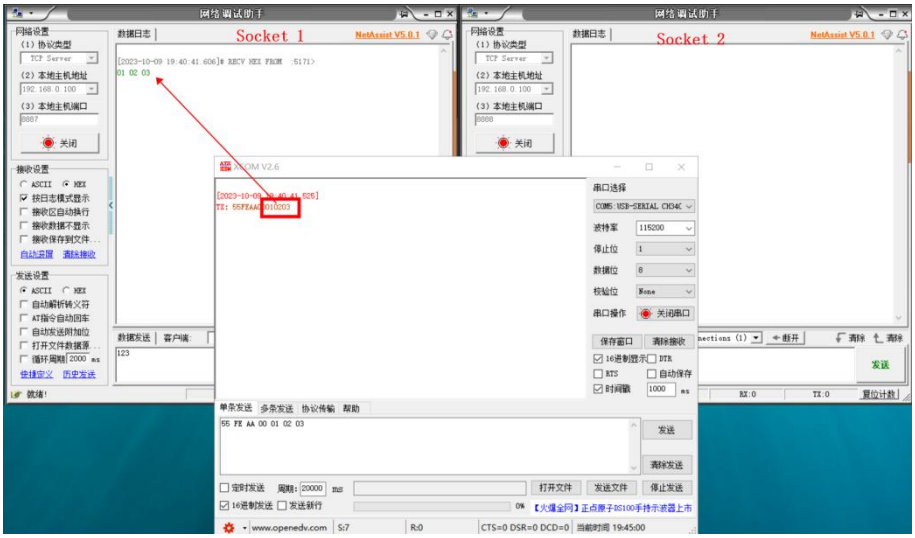
After enabling multi-link protocol distribution mode, the following possibilities exist. Here, we take Socke t1 connecting to server port 8887 and Socke t2 connecting to server port 8888 as an example:



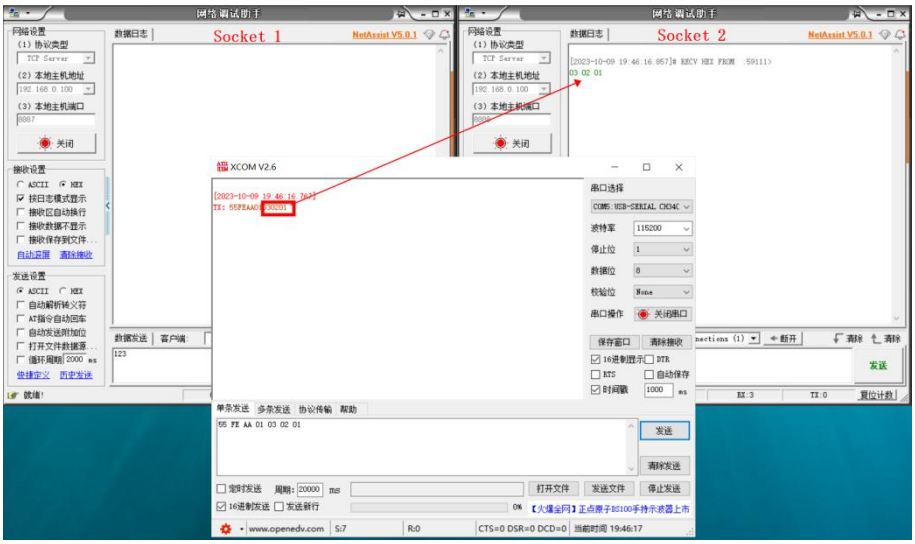
1. If the serial port sends data with a header of 55 FE AA 00, which meets the requirements (i.e., 55 FE AA 00 + data), then the data will only be transmitted to Socket 1, and the received content will only contain the data and not the header.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

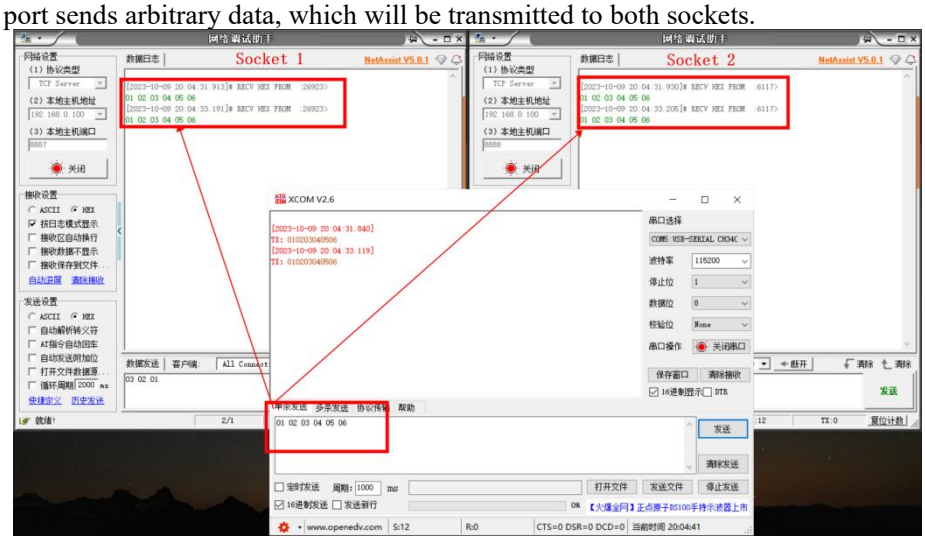
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



2. If the serial port sends data with a header of 55 FE AA 01, which meets the requirement of 55 FE AA 01 + data, then the data will only be transmitted to Socket 2, and the received content will only contain the data and not the header.



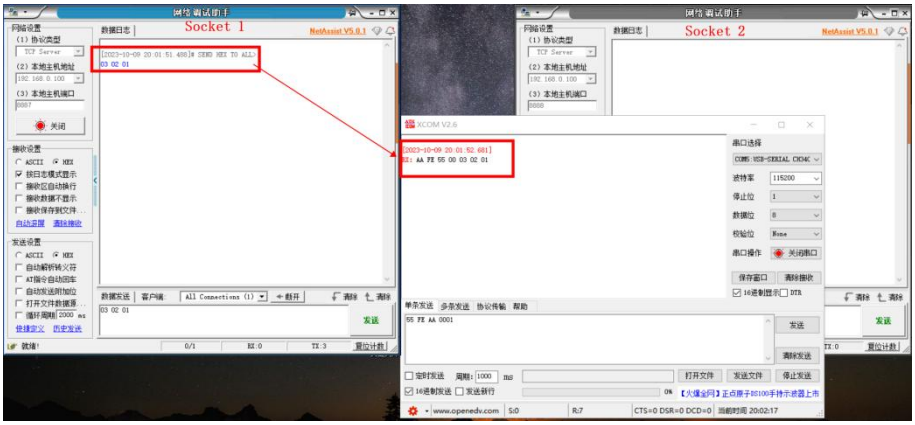
3. The serial port sends arbitrary data, which will be transmitted to both sockets.



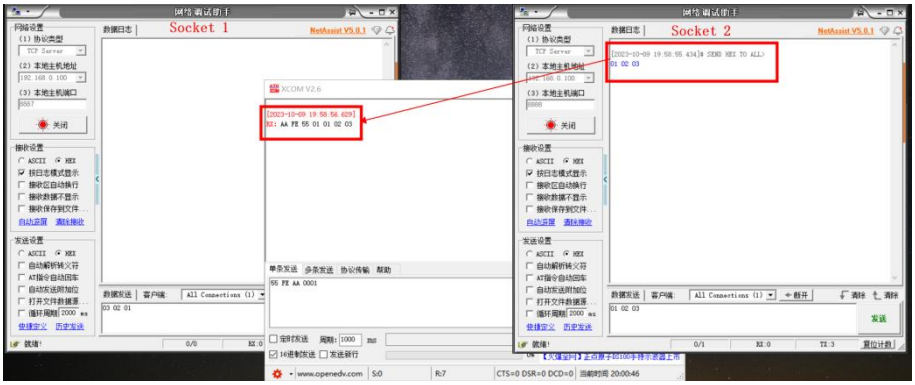
4. When Socket 1 sends arbitrary data, the serial port will add a header "AA FE 55 00" before the data after receiving it.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



5. When Socket 2 sends arbitrary data, the serial port will add a header "AA FE 55 01" before the data after receiving it.



3.1.4. short connection

When set to short connection, a connection is established with the server only when data is being sent. When there is no data transmission, a timer starts, and the connection with the server is disconnected after the set time is exceeded. The maximum short connection time can be configured to 6,5535 seconds . This setting is only effective in TCPC mode.

Host computer software configuration steps:



3.2. MQTT mode

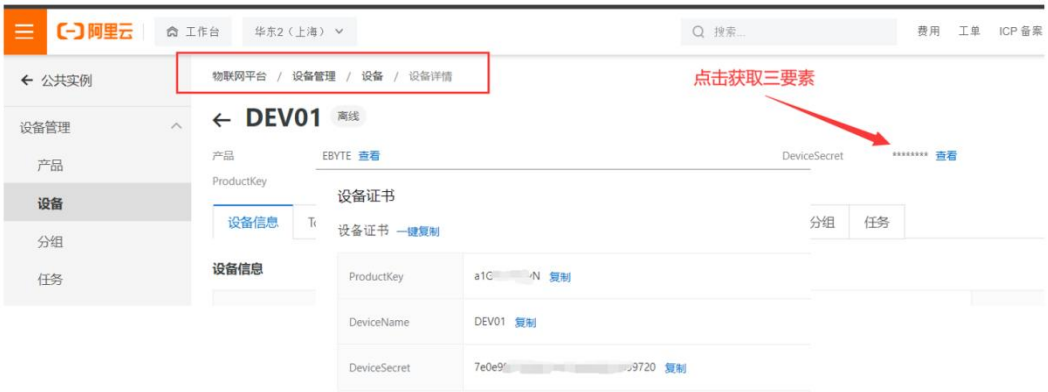
Note: The new version supports 3 groups of subscription and publishing topics, and offers flexible topic selection. See the AT command manual for details.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

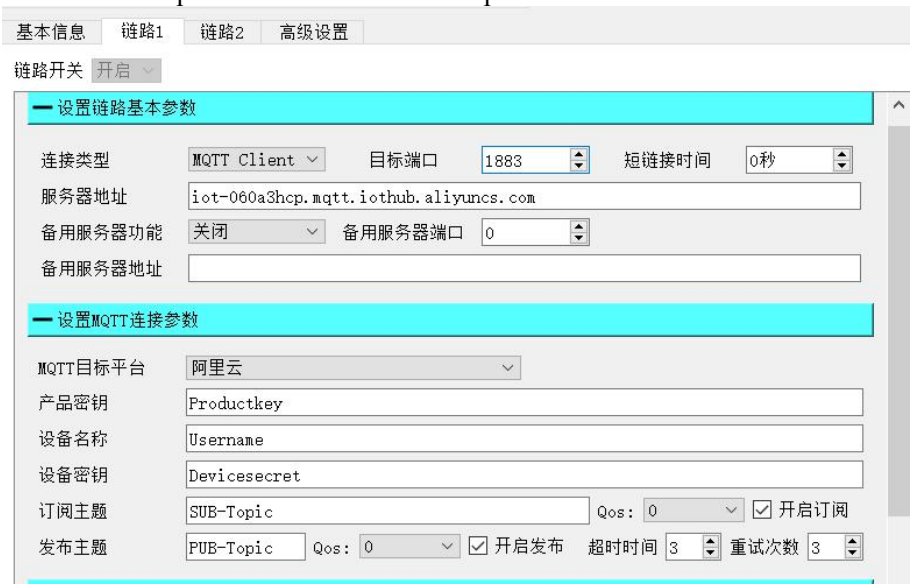
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3.2.1. Alibaba Cloud MQTT connection

You can directly connect to the server using Alibaba Cloud's "three elements" to obtain the three elements required for connecting to Alibaba Cloud (for detailed instructions on obtaining Alibaba Cloud's three elements, please refer to "Instructions for Obtaining Alibaba Cloud MQTT Three Elements"), as shown in the figure:



Configure module connection parameters on the host computer:



3.2.2. Baidu Cloud MQTT connection

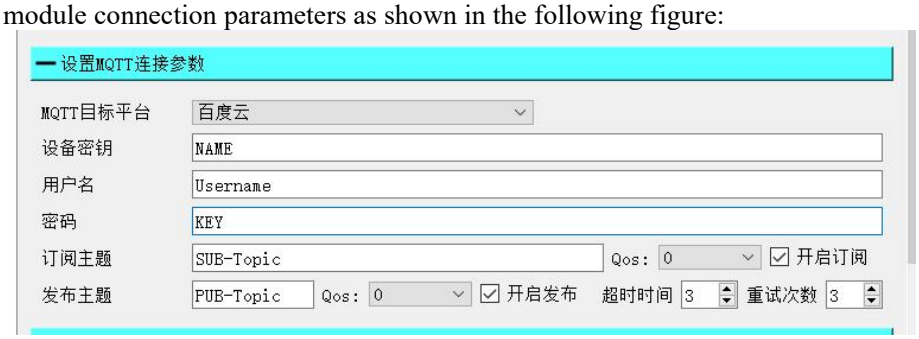
It supports directly connecting to the server using Baidu Cloud's "three essential elements," as shown in the image:

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



Configure the module connection parameters as shown in the following figure:



Subscription and publishing require a rules engine to enable data feedback. First, a message template needs to be created, as shown below:



A rules engine is created for data backhaul, as shown in the following figure:



After enabling the rule engine and restarting the device (resubscribing and publishing), the communication test

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

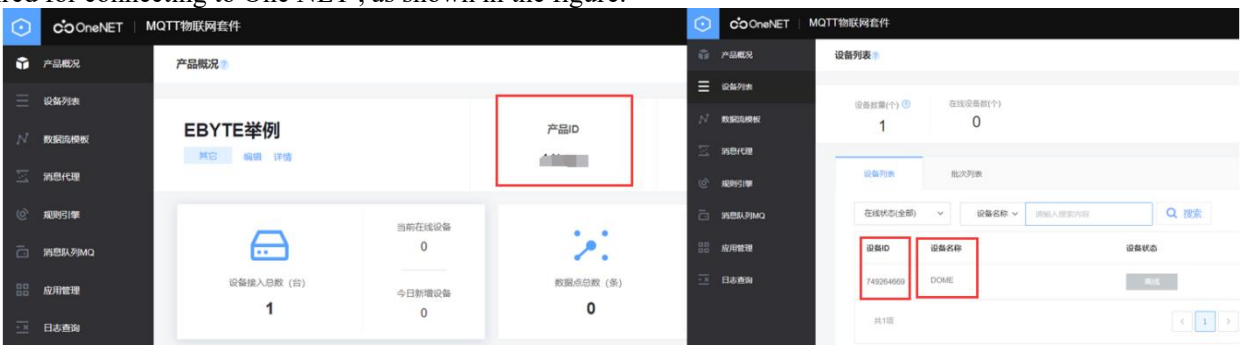
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

is shown in the following figure:

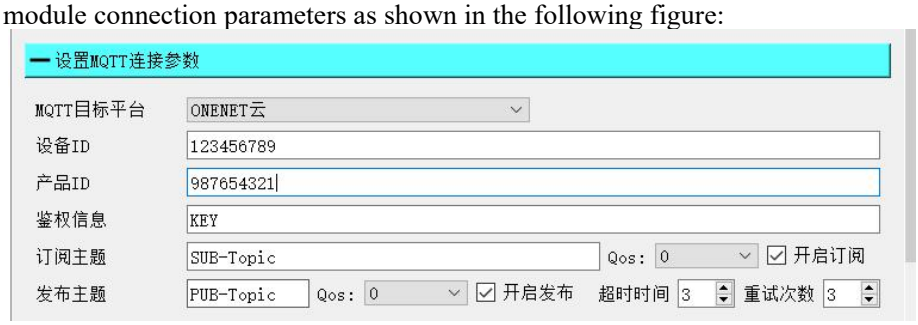


3.2.3. OneNET Cloud MQTT Connection

It supports direct connection to the server using the One NET "three elements" to obtain the "three elements" required for connecting to One NET , as shown in the figure:



Configure the module connection parameters as shown in the following figure:



OneNET supports automatically generating To pics with publish/subscribe attributes . Data return can be achieved simply by subscribing to and publishing to the same address. Communication test:



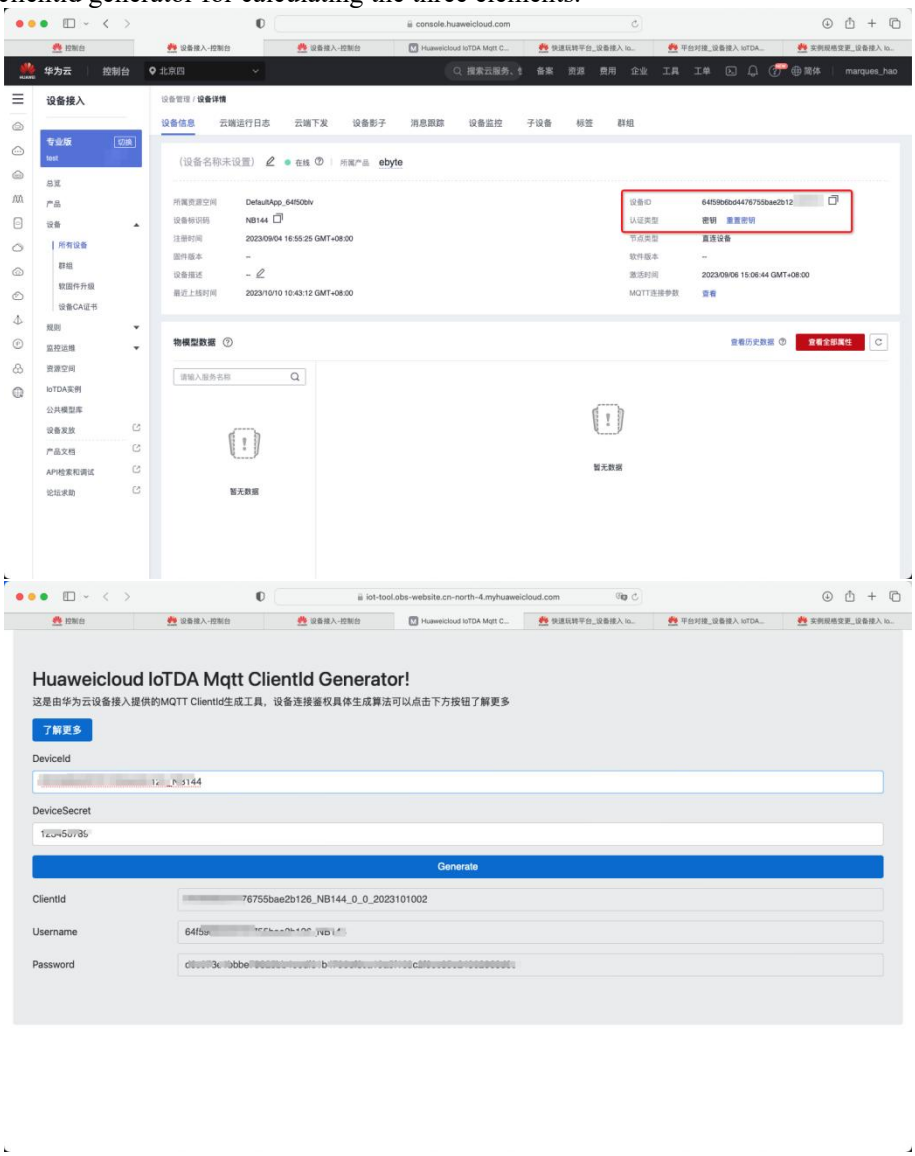
3.2.4. Huawei Cloud MQTT connection

After registering products and devices on Huawei Cloud, record the device ID and authentication key, and

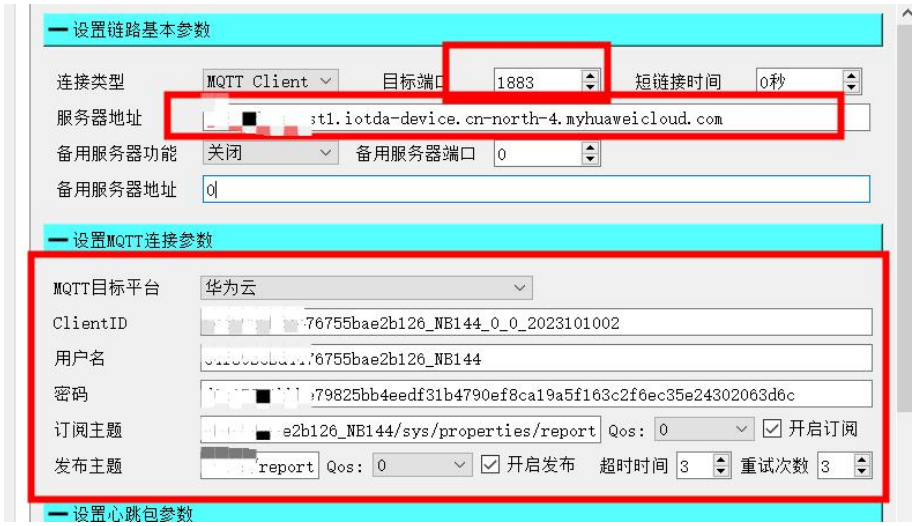
Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

copy them into the clientid generator for calculating the three elements.



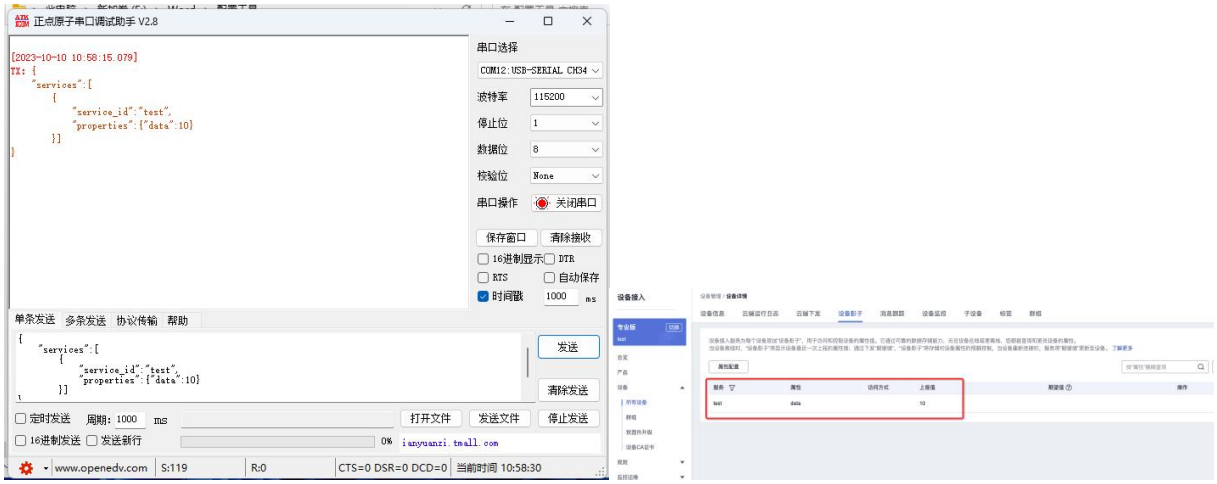
After adding the subscription, fill in the parameters into the module (remember to replace wildcards), save, and restart the device.



The data can then be viewed on the server.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

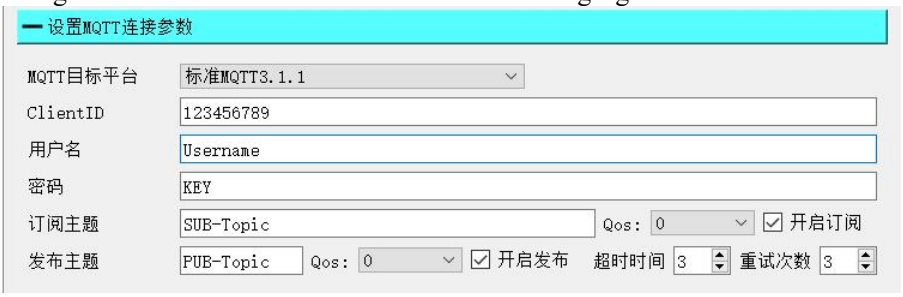


3.2.5. Standard MQTT 3.1.1 connection

This example uses Tencent's standard MQTT 3.1.1 server to demonstrate a standard MQTT 3.1.1 connection . The three key elements described in the standard can be obtained from Tencent's server, as shown in the following diagram:



The parameter configuration instructions are shown in the following figure:



Configure the corresponding publish/subscribe address and use the platform's online debugging function to send data for communication testing:



On the host computer, select MQTT group publishing and enable it. Then, on the platform, add the prefix $share/group name/ before the subscribed topic.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



SSL certificates can be burned via AT commands or via host computer software.
Note: The domestic version does not support SSL certificate burning.

3.3. HTTP mode

The module supports accessing the HTTP server as an HTTP client and supports data exchange in POST and GET formats.

3.3.1. GET request

Use an HTTP server to test HTTP-GET requests, as shown in the configuration parameters below.



Parameters returned after sending a request via serial port

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



3.3.2. POST request

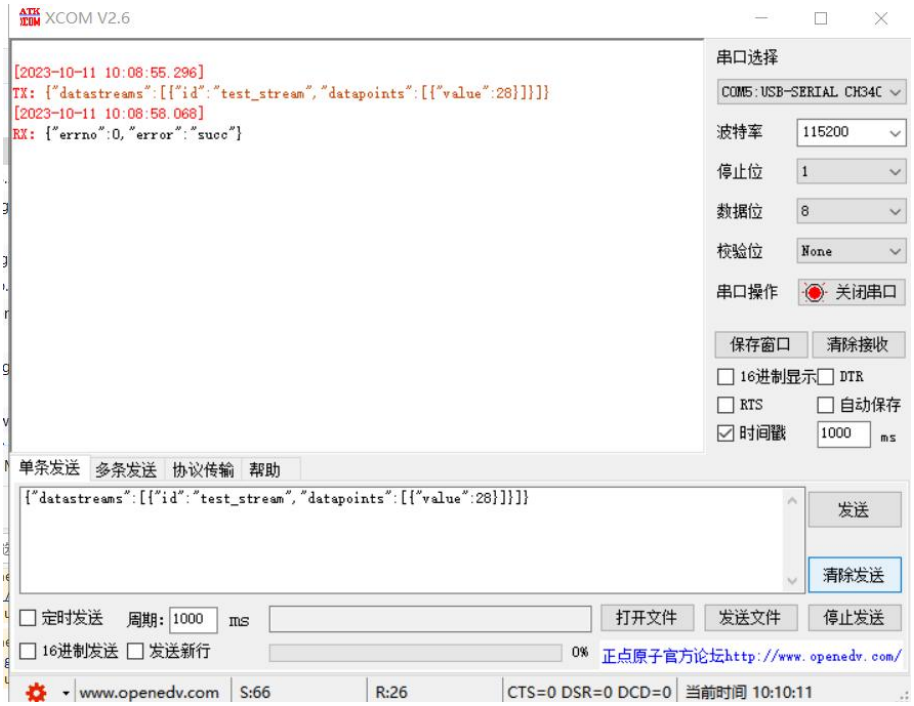
Use an HTTP server to test HTTP- POST requests, as shown in the configuration parameters below.



Parameters returned after serial port transmission settings

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



3.4. SMS pass-through mode

In this mode, data received via serial port will be sent to the target mobile phone number via SMS, and the content of the SMS sent to the module's phone number will be transparently transmitted to the serial port output.

Host computer software configuration steps:

1、Enable SMS pass-through .

2、Set the target phone number for SMS messages (no need to set this if you only need to receive SMS messages) .

3、Check the "Filter Message Receiving Numbers" option (to select this option if you want to receive only data from the target phone number) .

Note: This function is not supported for products that have had their 4G chip replaced with EC801E.



3.5. Security Configuration

Users can set a security password to enter the configuration or parameter reading state. Password verification is required; parameter configuration can only proceed after a successful password match. If no login password is sent within 30 seconds or an incorrect password is sent, the module will automatically exit the configuration state.

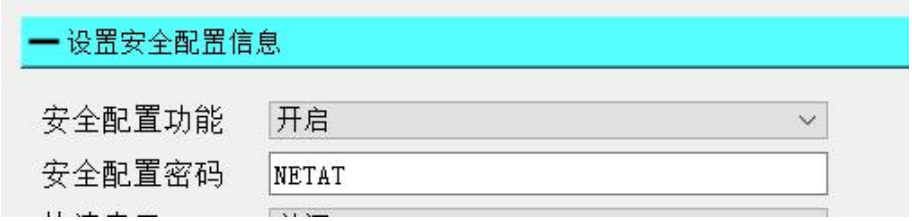
Host computer software configuration steps:

1、Select the command mode security verification option .

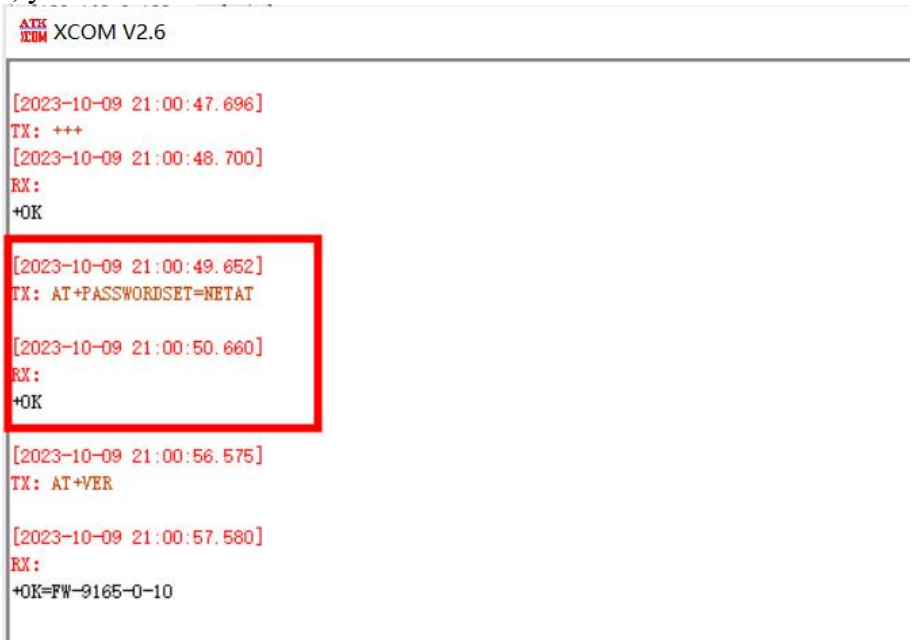
Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2、Set a secure password (0-32 bytes)
3、Save configuration
4、Restart the device



When entering the configuration, send +++, then send AT+PASSWORDSET=NETAT . After receiving OK, you can continue to send other commands.



3.6. Quick AT commands

Quick AT commands allow users to modify device configurations with a single data message via serial port, network, or SMS, without needing to switch to command mode using "+++", making it convenient and fast.

Host computer software configuration steps:

1、Enable Fast AT commands; you can choose to enable Fast Serial AT, Fast Network AT, or Fast SMS AT .
2、Save configuration
3、Restart the device
4、When sending AT commands via serial port, network, or SMS, you need to add the security password and keywords before the AT command (for example, if the security password is "NETAT*", when sending the AT+VER command, you need to send NETAT*AT+VER). See the AT command manual for details.

Note: A newline character is required at the end of the AT command here .

Note: Some models are supported.

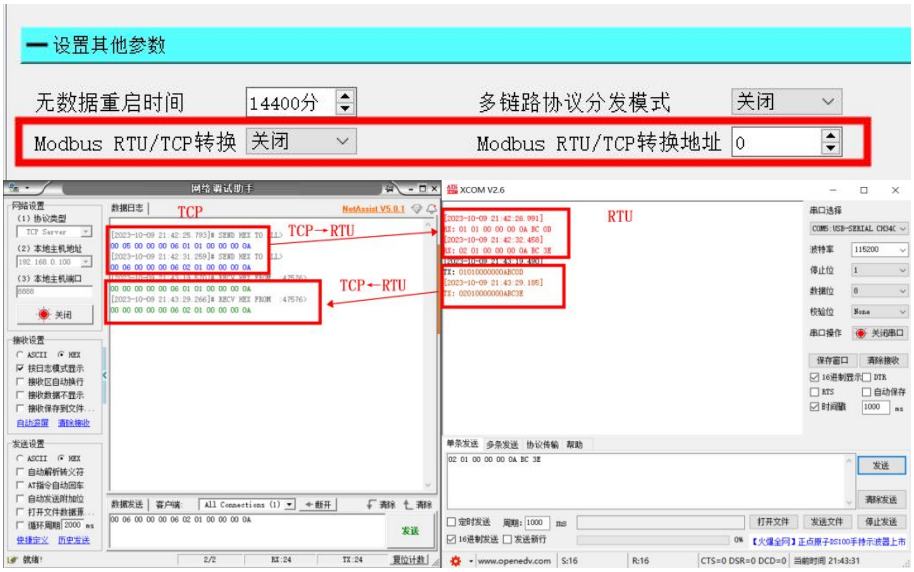
3.7. ModBus TCP to RTU

This function can be enabled by checking the TCP Modbus option. This function enables the mutual

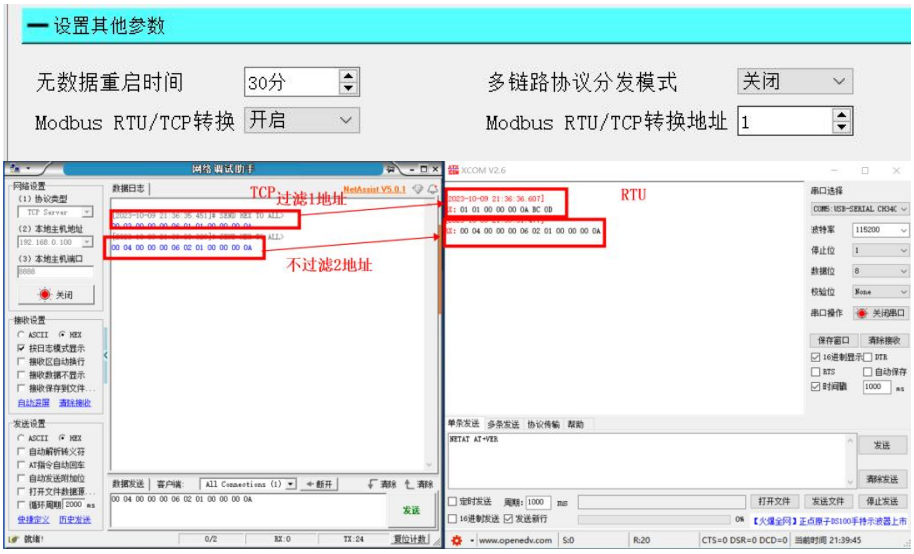
Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

conversion between Modbus RTU data transmitted and received via serial port and Modbus TCP data transmitted and received via 4G. Setting the conversion address allows you to specify the corresponding device address for conversion. 0 converts all addresses. For example, setting it to 1 will only convert address 1, and will not process instructions for address 2.



Convert all addresses



Translate only 1 address

3.8. APN access point

The module's APN access point can be modified via AT commands . Requires APN card support .



Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

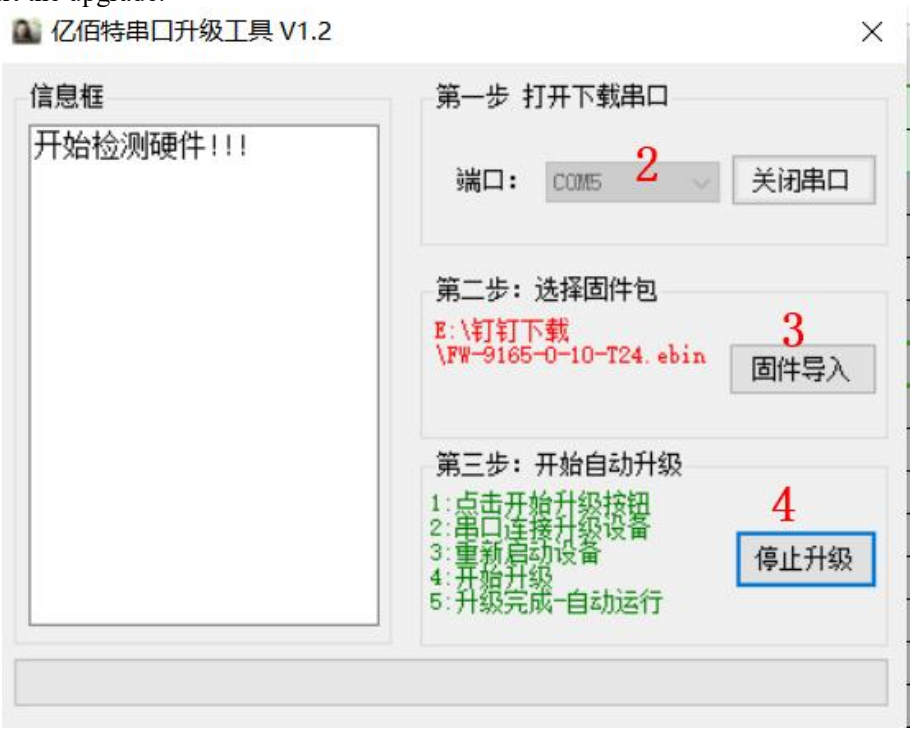
3.9. Serial port upgrade function

Firmware upgrades are performed via serial port to switch firmware .
The upgrade steps are as follows:

1. Double-click to run the Ebyte firmware flashing tool



2. Select the download serial port and open the serial port.
3. Import firmware package
4. Click to start the upgrade.



5. Pulling the module's Reload pin low and then powering it on causes all LEDs except PWR to flash, indicating the upgrade has begun.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

6. Once the progress bar at the bottom of the software is complete, you can close the software, indicating that the upgrade is finished.



3.10. Hardware factory reset

To restore factory default parameters, after powering on, pull the RELOAD pin low for 5~6 seconds until all LEDs light up, then release it. This will restore the module parameters to factory default parameters, and the module will automatically restart.

3.11. Serial port parameter settings

Serial port baud rates supported: 1200/2400/4800/9600/19200/38400/57600/115200/230400
Data bits support 8 bits
Stop bits support 1/2 bits
Packaging time supports 0-1024 (unit: ms, 0 for automatic).
Packet length supports 50-1024 bytes (default 1024).



There are two scenarios for serial port frame generation: the first is time-triggered frame generation, and the second is length-triggered frame generation.

Time-triggered framing: When receiving data from the UART, the interval between two adjacent bytes is continuously checked. If the interval is greater than or equal to a certain "time threshold," a frame is considered complete; otherwise, data is continuously received until the packet length is

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

greater than or equal to the set packet length in bytes. This frame of data is then sent to the network as a TCP or UDP packet. The "time threshold" here is the packet interval. The configurable range is 0 ms to 1024 ms. The factory default is 0 ms , which is automatically recognized .

Length-triggered framing: In length-triggered mode, when receiving data from the UART, the system continuously checks the number of bytes received. If the number of received bytes equals a certain "length threshold," a frame is considered complete; otherwise, it waits until the packetization time ends. This frame of data is then sent to the network as a TCP or UDP packet. The "length threshold" is the packet length, which can be set from 50 to 1024 bytes . The factory default is 1024 bytes .

3.12. NTP time acquisition

The module supports NTP time acquisition, which can be obtained via a host computer or AT commands. The acquisition command is AT+NTP, and the return value is, for example, 2022.12.31,12:25:35.



3.13. IP address acquisition

The module supports IP address lookup, which can be obtained via AT commands. The command to obtain the IP address is AT+IP, and the return value is, for example, 10.100.123.456. See the AT command manual for details.

3.14. No data restart

To prevent the module from malfunctioning due to prolonged operation, a no-data restart time can be set. When the module does not receive downlink data from the server, it will automatically restart after the no-data restart time has elapsed , ensuring stable operation. The time can be set from 0 to 65535 minutes. Setting it to 0 disables this function, which is off by default .



Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4. Important Announcement

- Ebitech reserves the right to the final interpretation and modification of all contents in this manual.
- As the hardware and software of the product continue to improve, this instruction manual may be subject to change without notice. The latest version of the instruction manual shall prevail.
- Users of this product should visit the official website to follow product updates so that they can get the latest information about the product in a timely manner.
- This product is strictly prohibited from use in military and life-safety related scenarios. The user shall be solely responsible for any consequences arising from unauthorized use.

5. Revision History

Version	Revision Date	Revision Notes	maintainer
1.0	2023-12-14	Initial version	LYL
1.1	2024-06-06	Modify pin definition	LYL
1.2	2024-10-18	New features	LYL
1.3	2025-04-14	Modify default parameters	LYL
1.4	2026-03-11	New Models	ZYD
1.5	2026-06-12	Software firmware upgrade	ZT

6. Contact Us

Technical support: support@cdebyte.com
Documents and RF Setting download link: www.cdebyte.com
Thank you for using Ebyte products! Please contact us with any questions or suggestions: info@cdebyte.com
Address: B2 Mould Industrial Park, 199# Xiqu Ave, High tech Zone, Chengdu, Sichuan, China

Chengdu Ebyte Electronic Technology Co.,Ltd.

Copyright ©2012 – 2026 , Chengdu Ebyte Electronic Technology Co., Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000