



User Manual of AI-TCPG V1.0



厦门宇电自动化科技有限公司

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Revision History

| Version | Time | Remarks |
|---------|-------------------|------------------------|
| V1.0 | November 26, 2025 | First Released Version |
| | | |
| | | |

1. Product Introduction

1.1 Overview

The AI-TCPG protocol converter is a communication converter that translates Modbus protocol into Modbus TCP protocol.

- ◆ Supports Yudian Modbus protocol temperature controllers and third-party Modbus devices.
- ◆ Supports firmware updates via USB.
- ◆ Supports configuring Yudian temperature controllers through configuration files.
- ◆ Allows RS485 to be configured as a master or slave station.

1.2 Technical Specifications

① Enables data communication between multiple Modbus devices and Modbus TCP devices.

② ModbusTCP Features

Transmission modes: "Polling", "Transparent Mode 1", "Transparent Mode 2" (selectable).

IP address assignment: "Static IP".

③ Modbus Features

Modbus baud rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200.

Supported function codes: 03H, 04H, 06H, 10H.

Data bits: "8" or "9" bits (selectable).

Parity: None, Even, Odd (selectable).

Stop bits: "1", "2" bits (selectable).

Supported communication format: RTU format.

Write command mode: Always write, Differential write.

④ Power Supply: 24VDC

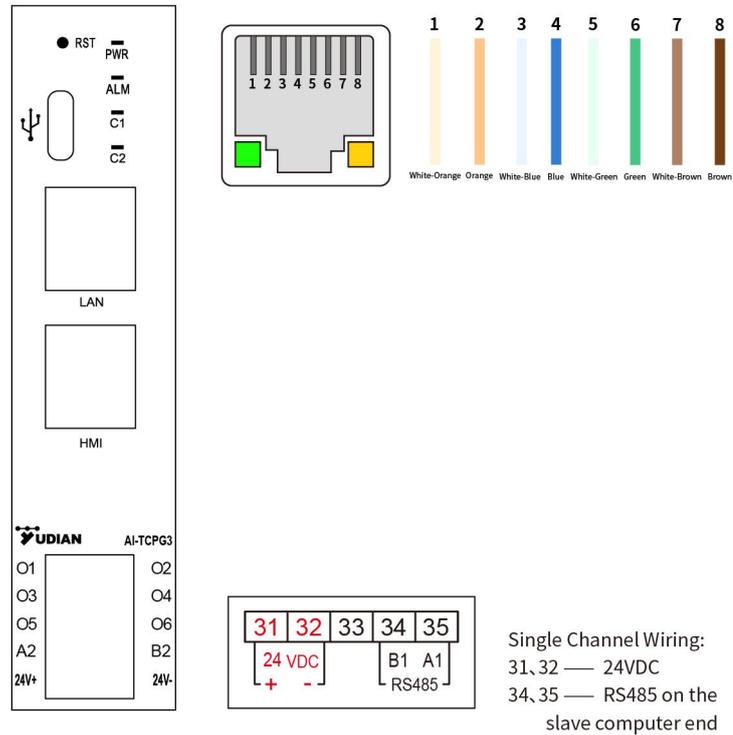
Note:

- 1) Supports up to 3 RS485 buses, subnet IDs 1-3.
- 2) The Modbus device slave address (node) supports 1~247.
- 3) Maximum configuration entries: 500.
- 4) Holding register: Mapping start address range is 0-4000.
- 5) Input register: Mapping start address range is 0-500.

1.3 Model Selection

| AI-TCPG | | Description |
|----------------|----------|---|
| Port Selection | AI-TCPG | 2 RS485 ports on the instrument end, Ethernet port on the host computer end |
| | AI-TCPG3 | 3 RS485 ports on the instrument end, Ethernet port on the host computer end |
| Dimensions | D92 | |
| Power Supply | 24VDC | 24VDC power supply |

1.4 Port Description



HMI Interface Description

| Port | Description |
|------|-------------|
| 1 | Unused |
| 2 | Unused |
| 3 | Unused |
| 4 | 24V+ |
| 5 | 24V- |
| 6 | Unused |
| 7 | A3 |
| 8 | B3 |

1.5 Indicator Light

| | |
|-----|--|
| PWR | Power Indicator Light |
| ALM | Alarm indicator light, flashes if a device times out |
| C1 | Communication indicator light for Channel 1 |
| C2 | Communication indicator light for Channel 2 |

1.6 Wiring

| | |
|---------------|---|
| A1 | RS485 Channel 1 A-line |
| B1 | RS485 Channel 1 B-line |
| A2 | RS485 Channel 2 A-line |
| B2 | RS485 Channel 2 B-line |
| A3 | RS485 Channel 3 A-line |
| B3 | RS485 Channel 3 B-line |
| 24V+ | Positive terminal of 24VDC power supply |
| 24V- | Negative terminal of 24VDC power supply |
| O1~O6 | Reserved |
| USB Interface | Connect to PC for configuration |
| LAN | Ethernet port for Modbus TCP devices |

2. Configuration Description

The configuration file contains the following worksheets:

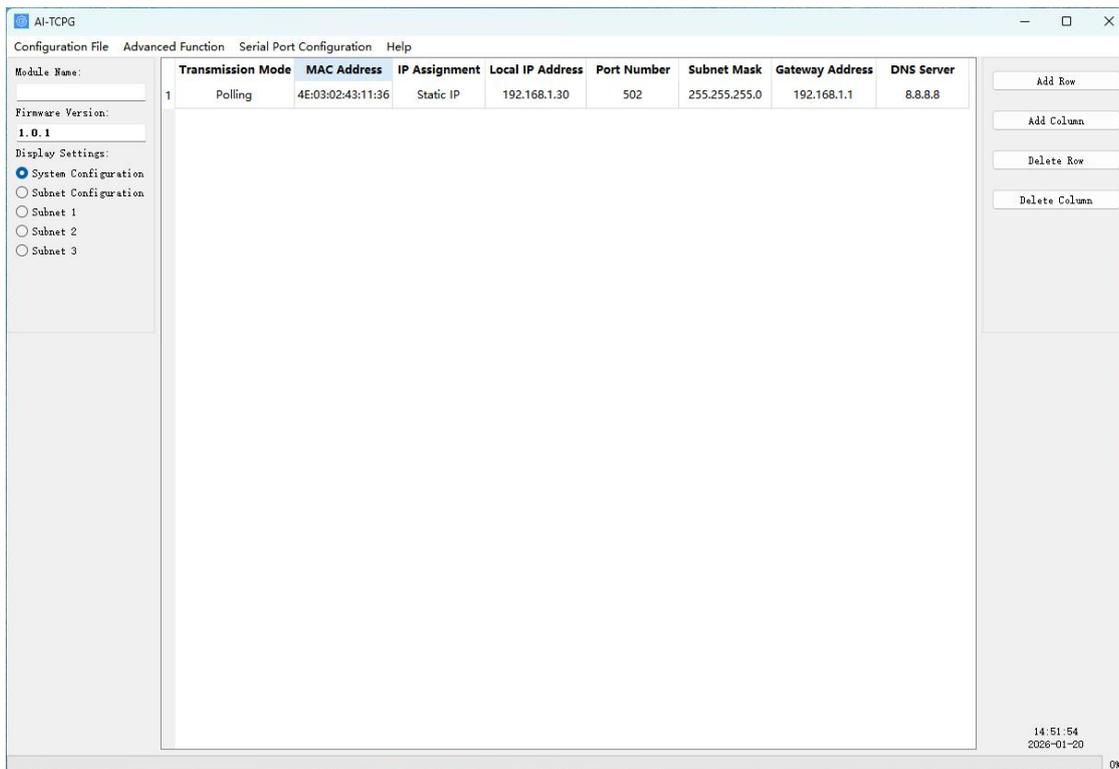
System Configuration: Configures system parameters, including IP address and transmission mode.

Subnet Configuration: Configures each RS485 bus, including serial port parameters, downgrade, timeout, etc.

Subnet: Configures all devices under each RS485 bus, including address, data count, register area, etc.

2.1 System Configuration

When the table is displayed, click the System Configuration button on the left to switch to the System Configuration worksheet.



Configurable items include: module name, firmware version, transmission mode, MAC address, IP assignment, local IP address, port number, subnet mask, gateway address, DNS server. Double-click the corresponding cell to modify the value.

The descriptions of each configurable item are as follows:

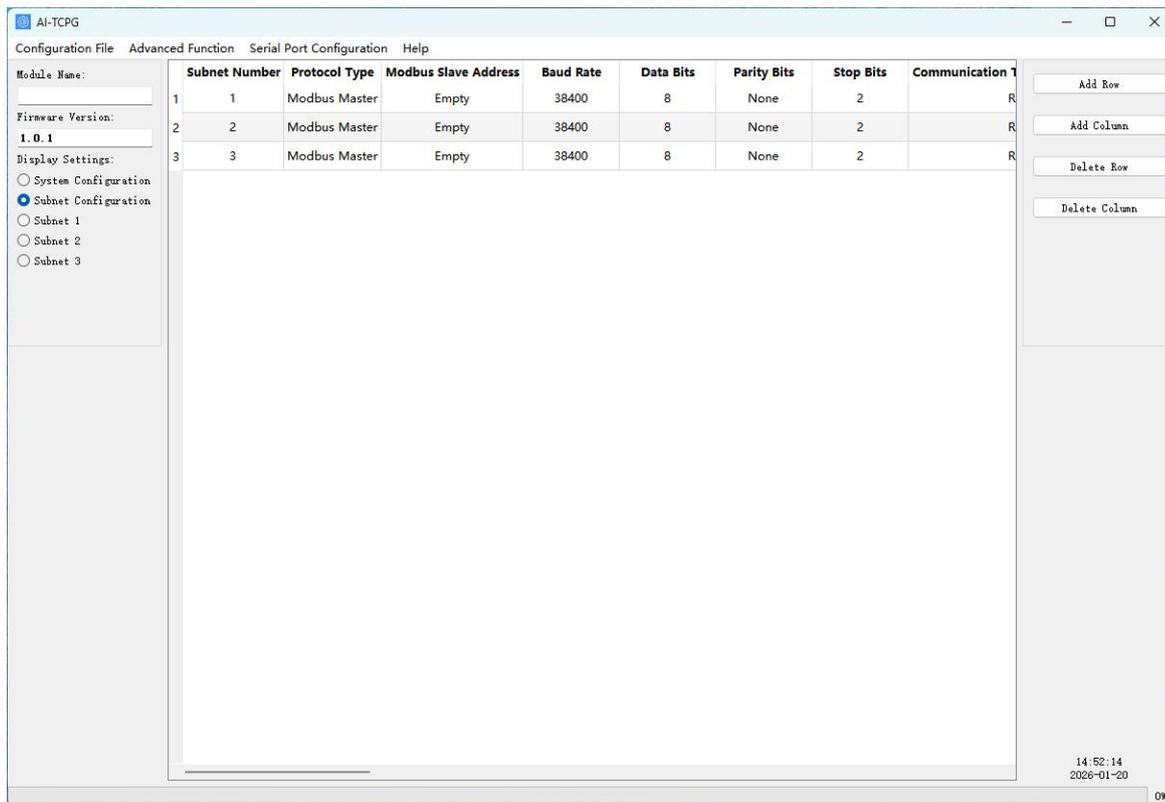
- Module Name: Name of the current converter. It will not be downloaded to the converter when downloading.
- Firmware Version: Current converter firmware version. It must be in x.x.x format. It will not be downloaded to the converter when downloading.
 - Transmission Mode: “Polling”, “Transparent Mode 1”, “Transparent Mode 2” (selectable). Polling: The converter polls devices. Transparent Mode 1: The converter converts Modbus TCP to Modbus RTU for device communication. Transparent Mode 2: The converter directly forwards data. (only the first RS485 bus supports Transparent Modes 1 & 2)
 - MAC Address: 6 hexadecimal numbers separated by colons (e.g., AA:BB:CC:DD:EE:FF). The LSB of the first byte must be 0.
 - IP Assignment: “Static IP”, “Dynamic IP” (selectable). (currently only Static IP is supported)

- Local IP Address: Valid IP address format, dotted (e.g., 192.168.1.30).
- Port Number: The port number used, ranging from 0-65535 (e.g., 502).
- Subnet Mask: Valid subnet mask format, dotted (e.g., 255.255.255.0).
- Gateway Address: Valid gateway address format, dotted (e.g., 192.168.1.1).
- DNS Server: Valid DNS server format, dotted (e.g., 8.8.8.8).

Note: When downloading, the system configuration worksheet will only include the first row (from Transmission Mode to DNS Server). Any row/column additions or deletions must be performed outside the configuration area.

2.2 Subnet Configuration

When the table is displayed, click the Subnet Configuration button on the left to switch to the Subnet Configuration worksheet.



Configurable items include: subnet ID, protocol type, modbus slave address, baud rate, data bits, parity bits, stop bits, communication transmission mode, response waiting time, polling interval, write mode, write response, auto downgrade, auto downgrade after N failures, auto downgrade time, timeout fill, timeout fill value, modbus status, priority 1, priority 2, priority 3, priority 4. Double-click the corresponding cell to modify the value.

The descriptions of each configurable item are as follows:

- Subnet ID: 1-255, must be unique. Each ID corresponds to one RS485 bus and one respective configuration sheet of Subnet N, where N is the subnet ID. (currently, only subnet IDs 1–3 are supported).
- Protocol Type: "Modbus Master", "Modbus Slave" (selectable, only the third RS485 bus supports slave mode).
- Modbus Slave Address: When the protocol type of the third RS485 bus is set to Modbus Slave, this parameter sets the slave address.
- Baud Rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200.
- Data Bits: "8", "9" (selectable). When parity is set to "None", select data bits "8"; otherwise, select "9".

- Parity Bits: "None", "Even", "Odd" (selectable).
- Stop Bits: "1", "2" (selectable).
- Communication Transmission Mode: "RTU", "ASCII" (selectable, currently only RTU is supported)
- Response Waiting Time: Time allowed for the slave to respond after the Modbus master sends a command, ranging from 50 to 60000ms.
 - Polling Interval: Delay before sending the next Modbus command, after completing a Modbus command and receiving a correct response or a response timeout, ranging from 0 to 2500ms.
 - Write mode: "Always Write", "Differential Write" (selectable). Always Write: Executes write commands regardless of value changes. Difference Write: Only writes if data has changed and stops after a successful response.
 - Write Response: "Enabled", "Disabled" (selectable). Enabled: Returns failure if write fails. Disabled: Always returns success.
 - Auto Downgrade: "Enabled", "Disabled" (selectable). Downgrade applies to scenarios where the Modbus command scan mode is set to fast scan. If Auto Downgrade is configured to be Enabled, when a Modbus slave fails to respond N times, the command switches to slow scanning.
 - Auto Downgrade After N Failures: The command will downgrade to slow scanning after the Modbus slave fails to respond N times. Range: 1~255.
 - Auto Downgrade Time: Slow scan duration 100-3600000 ms.
 - Timeout Fill: "Enabled", "Disabled" (selectable).
 - Timeout Fill Value: 0-65535, the value written to registers when the device times out.
 - Modbus Status: "Enabled", "Disabled" (selectable). If any RS485 bus has Modbus Status enabled, the first 9 input registers mapping addresses will be occupied; every 3 input registers correspond to 1 RS485 bus. The first register stores the bus status, and the second and third registers store the status of 32 devices on this bus (mapped by subnet address order). 1 means normal, 0 means fault.
 - Priority 1: poll once in 1-255.
 - Priority 2: poll once in 1-255.
 - Priority 3: poll once in 1-255.
 - Priority 4: poll once in 1-255. For RS-485 bus polling priority counts, 4 configurable priority levels are available.

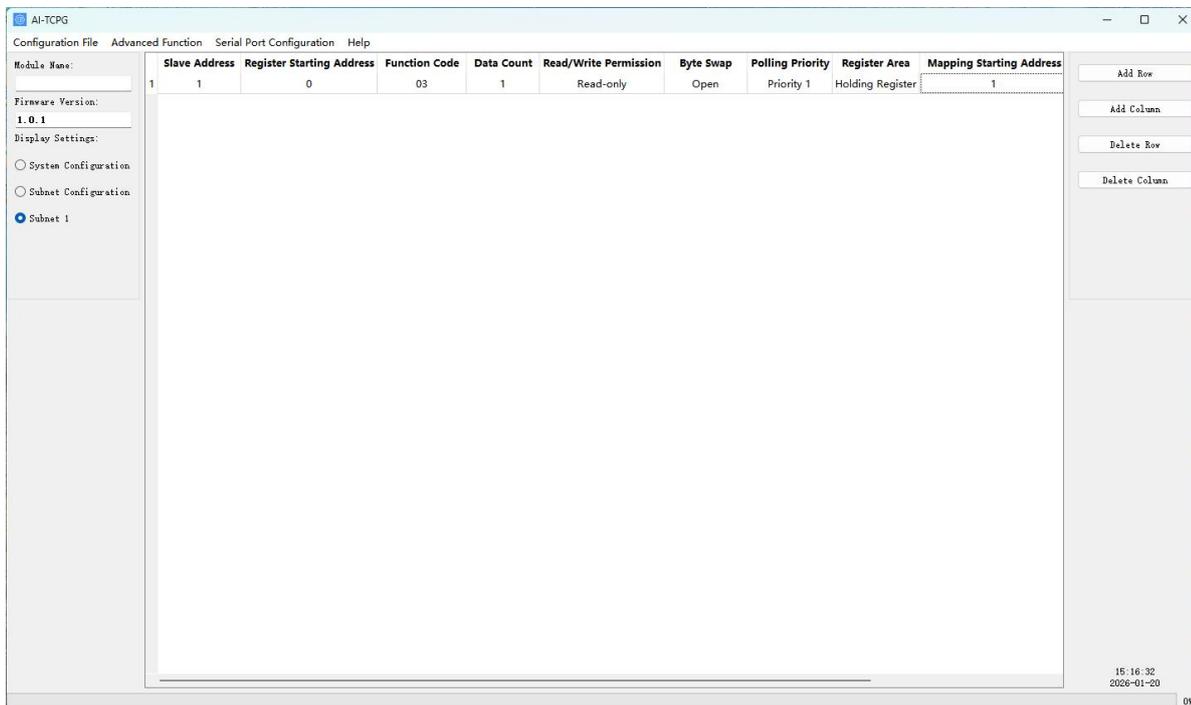
Note: Each row in the Subnet Configuration worksheet represents one RS485 bus. Adding/deleting rows will automatically create/remove the corresponding Subnet N worksheet.

When downloading, only the columns before and including the Priority 4 column are downloaded. Adding, deleting, or renaming columns (by double-clicking the header) is only allowed after the Priority 4 column.

2.3 Subnet

The name must be "Subnet" + "n" (where n is the corresponding subnet number), with a range of 1-255. Each subnet table must have a corresponding subnet configuration entry in the Subnet Configuration table.

When a table is displayed, click the Subnet Table button in the left button group to switch to the subnet table. Double-click the button to modify the subnet number.



Configurable items include: slave address, register start address, function code, data count, read/write permission, byte swap, polling priority, register area, mapping start address. Double-click the corresponding cell to modify the value.

The descriptions of each configurable item are as follows:

- Slave Address: 1~247.
- Register Starting Address: The starting address of the register in the Modbus slave device, with a range of 0 ~ 65535.
- Function Code: “03”, “04”, “06”, “10”, “03 and 06”, “03 and 10” (selectable). Select the correct function code based on the register area.
- Data Count: The number of registers to be read from the Modbus slave device, with a range of 1-120 (max depends on device support).
- Read/Write Permission: “Read-only”, “Write-only”, “Read/Write” (selectable).
- Byte Swap: “Enabled”, “Disabled” (selectable). If disabled, Modbus TCP transmits data high byte first; otherwise, low byte first.
- Polling Priority: “Priority 1”, “Priority 2”, “Priority 3”, “Priority 4” (selectable).
- Register Area: “Holding Registers”, “Input Registers” (selectable).
- Mapping Starting Address: The starting address of the data within the converter's memory buffer. Range: 0~4000.
- Note: Each row in the subnet table represents a device configuration. When downloading, only the columns before and including the Mapping Start Address column are downloaded. Adding, deleting, or renaming columns (by double-clicking the header) is only allowed after the Mapping Start Address column.

To conform to the standard Modbus RTU format, the following restrictions are applied:

- When the register area is “Input Registers”, the read/write permission must be “Read-only”.
- Holding register + Read-only: Function code must be “03”.
- Holding register + Write-only: Function code must be “06” or “10”.
- Holding register + Read/Write: Function code must be “03 and 06” or “03 and 10”.
- Input register: Mapping start address range: 0-500. Holding register: Mapping start address range: 0-4000.

- Different register types (Holding, Input) can share the same mapping address, but the same type cannot overlap.

Take an AI-8688 high-precision multi-loop controller with Instrument Address 1 connected to RS485 Bus 1 as an example. The configuration for reading/writing the preset setpoint register for Channel 1 (register start address: 0) is as follows:

| Slave Address | Register Starting Address | Function Code | Data Count | Read/Write Permission | Byte Swap | Polling Priority | Register Area | Mapping Starting Address |
|---------------|---------------------------|---------------|------------|-----------------------|-----------|------------------|------------------|--------------------------|
| 1 | 0 | 03 | 1 | Read-only | Open | Priority 1 | Holding Register | 1 |

Instrument address 1
 Use Function Code 03 for communication with the instrument
 modbus tcp side: Read-only
 Converter polling priority
 Mapped to converter address 1
 Setpoint register address of the instrument being read is 0
 Reading 1 register continuously
 modbus tcp side: Byte swap enabled
 Data stored in converter's holding register
 Connected to Subnet 1, so configuring for Subnet 1
 Row/Column operations (Add/Delete)

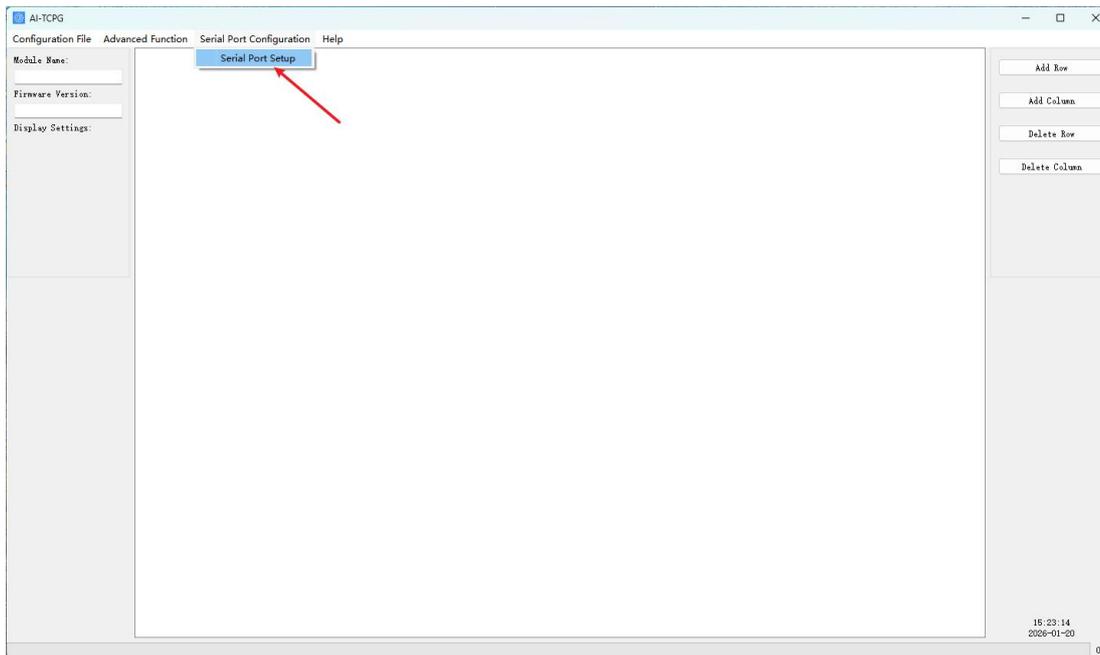
This configuration stores the setpoint value of Channel 1 (Instrument Address 1, Subnet 1) in the converter's holding register (Mapping Address 1) with read-only permission and byte swap enabled. The converter automatically polls the instrument data with Priority 1.

3. Operation Example

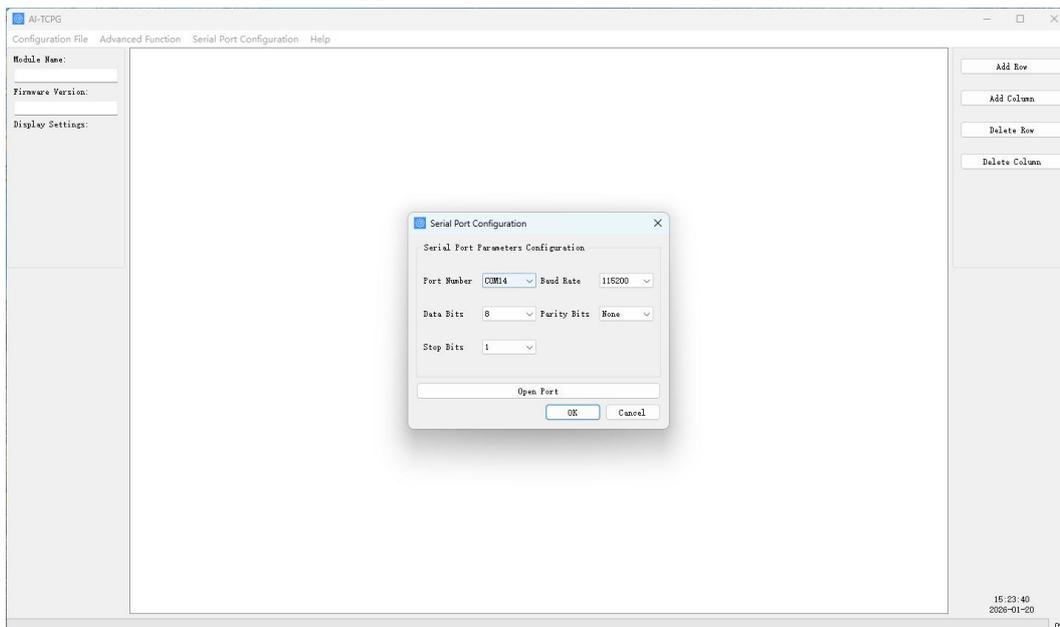
3.1 Serial Port Setup

After correctly connecting the converter power supply, Ethernet port, and USB, install and open the configuration host software AI-TCPG.exe.

The host computer interface will appear as shown below. Click Serial Port Configuration under Serial Port Setup to open the Serial Port Configuration dialog.



Set the port number, baud rate (115200), 8 data bits, no parity, 1 stop bit, then click Open Port and click OK to complete the serial port connection.



If the serial port connection fails, please check if the power supply and USB are properly connected. Without a serial

connection, functions like download, upload, IAP upgrade, and module monitoring will not work.

3.2 Download

The download function can only be used after completing 3.1 Serial Port Setup. The download process includes Import, Modify, and Download.

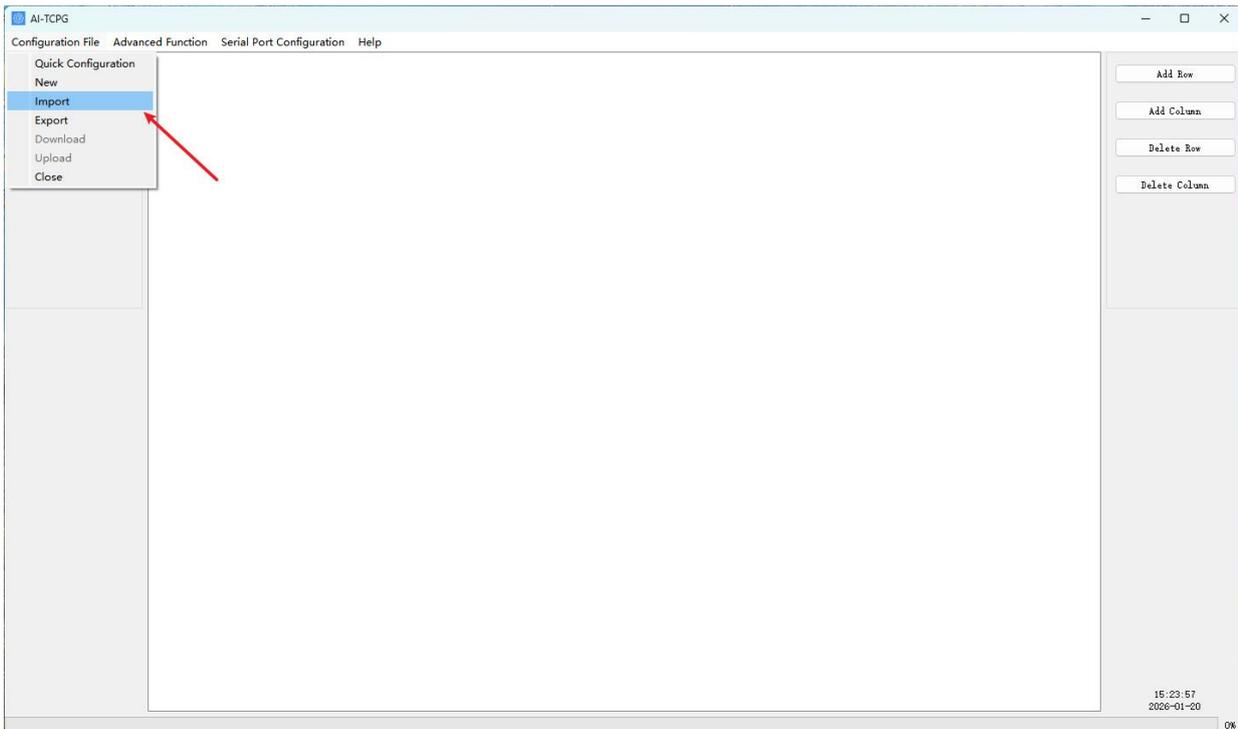
3.2.1 File Import

Before downloading, a configuration file must be imported. There are four methods:

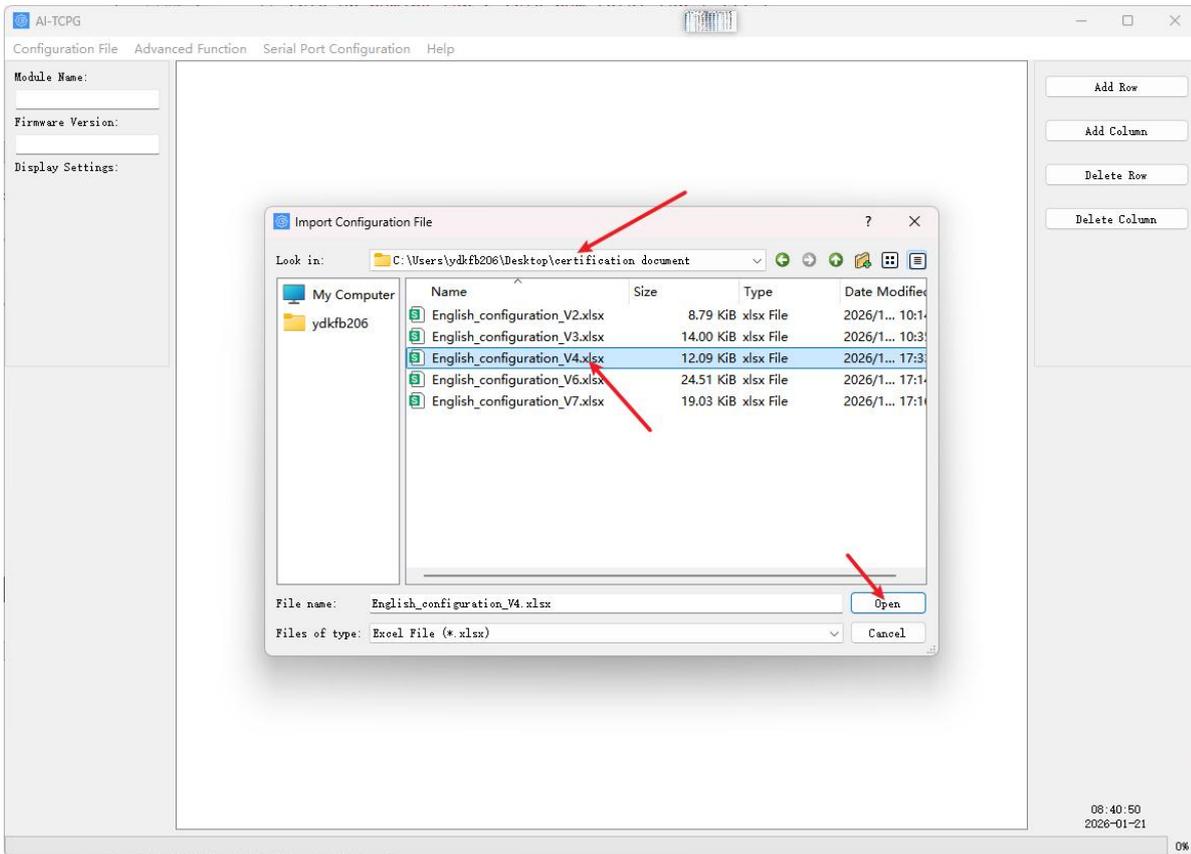
- Import local configuration file.
- Quick configuration.
- Create a new configuration file.
- Upload converter configuration file.

3.2.1.1 Import Local Configuration

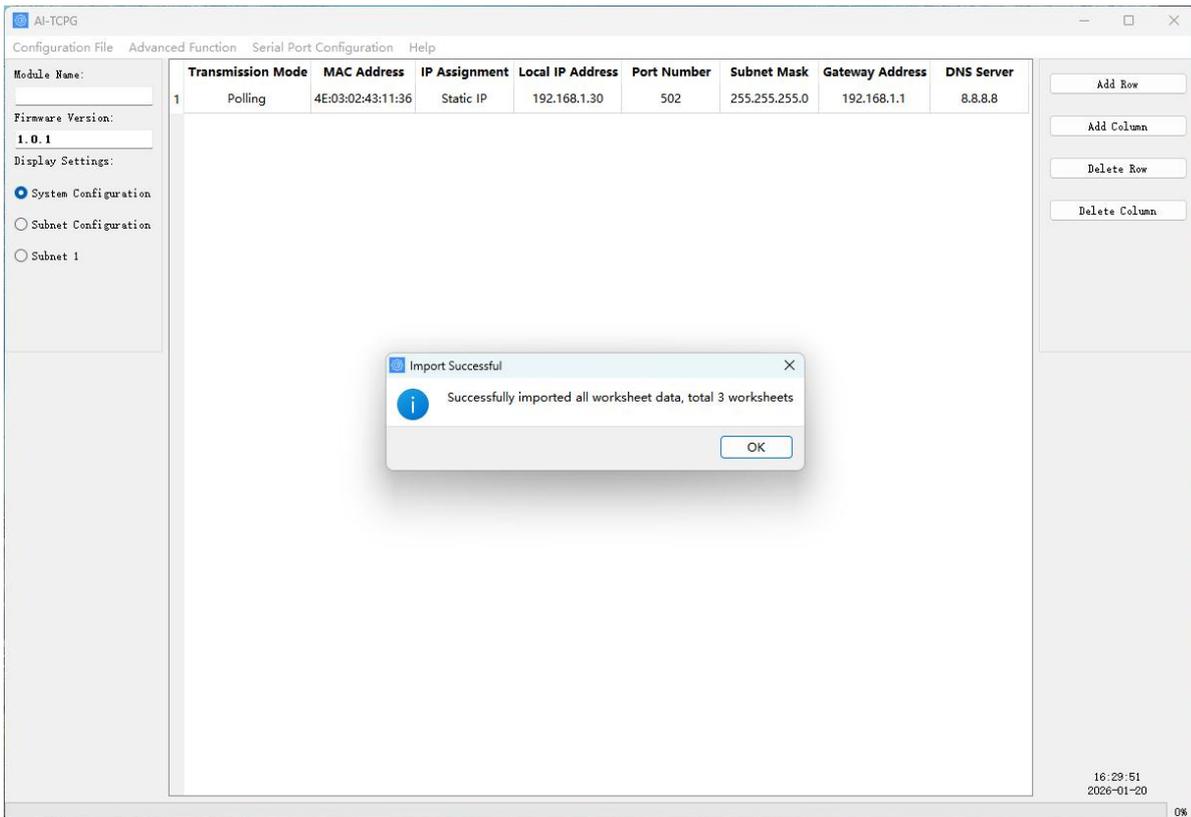
Click Import under the Configuration File menu. If there is existing data in the table, a prompt will ask whether to export the current configuration.



A file selection dialog will then appear. Choose the desired configuration file (e.g., "Default Config 1.xlsx"). Select the file, click Open to complete the import.



After importing, the interface will display as follows:

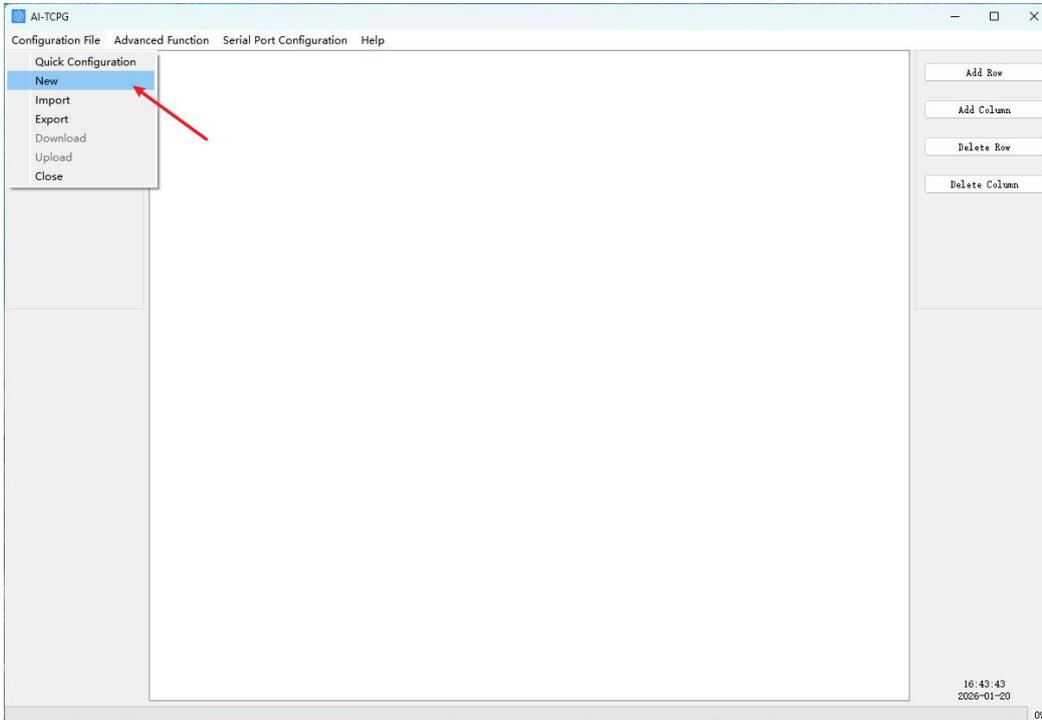


3.2.1.2 Quick Configuration

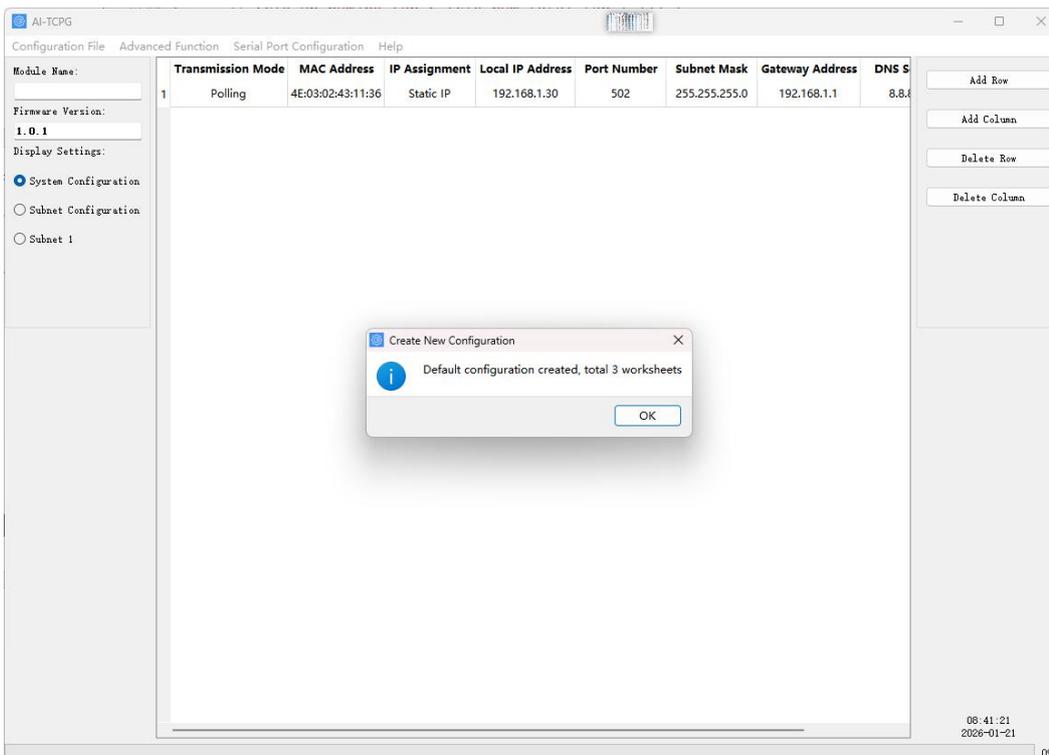
Refer to 3.6 Quick Configuration.

3.2.1.3 Create New Configuration

Click New under the Configuration File menu. If there is existing data in the table, a prompt will ask whether to export the current configuration.



After creating a new configuration, the interface will display as follows:

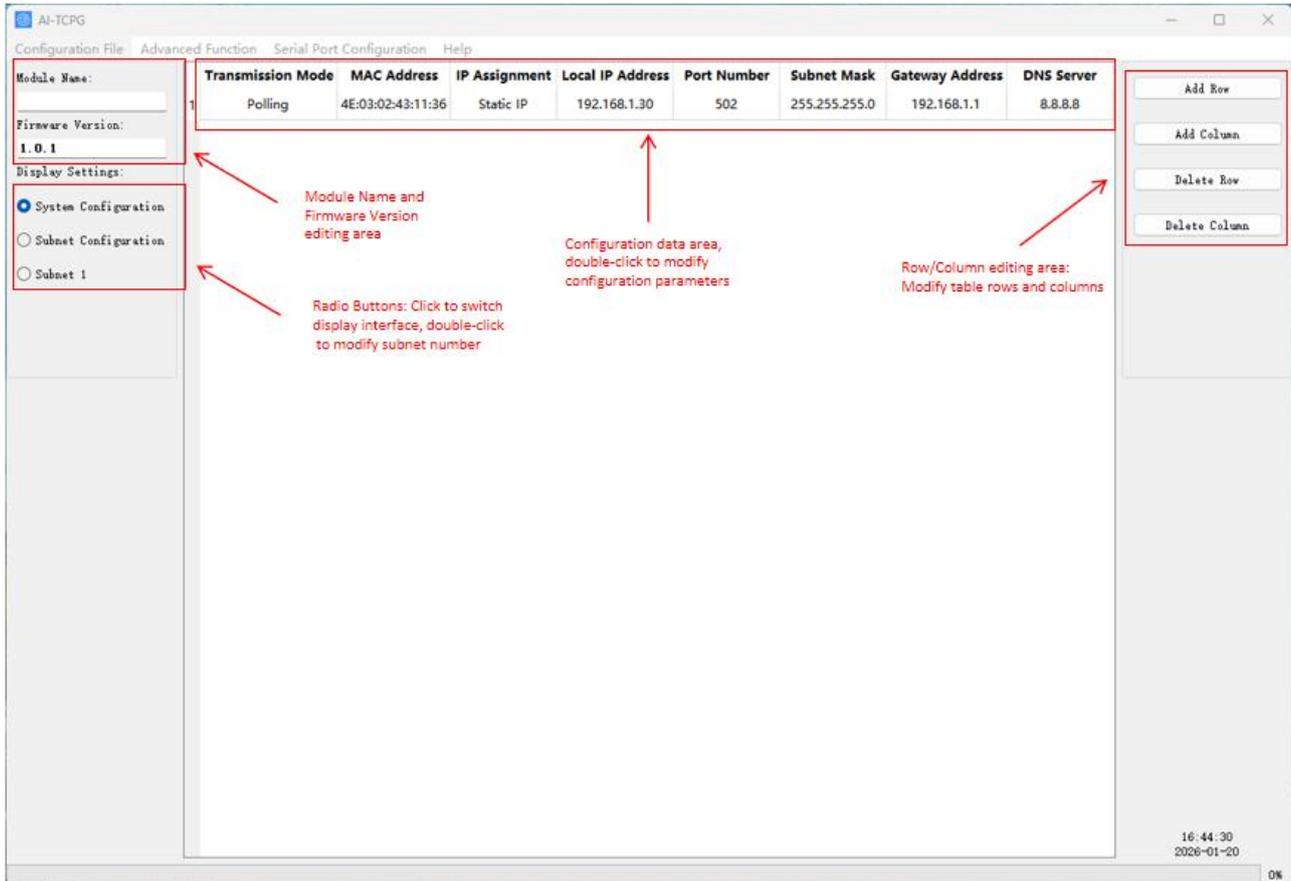


3.2.1.4 Upload Configuration

Refer to 3.3 Upload.

3.2.2 Modify Configuration

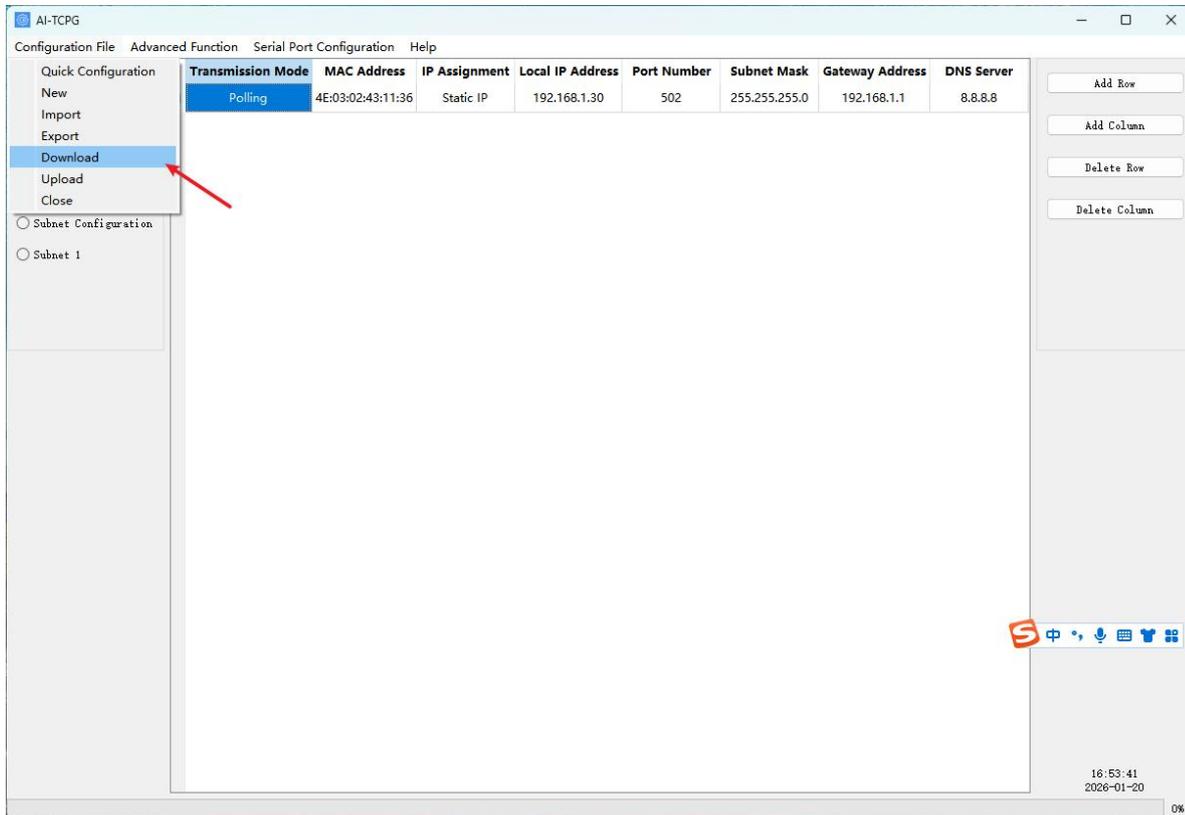
Taking “Default Config 1” as an example, modify the configuration according to actual needs (refer to Section II: Configuration Description). The editable items in the configuration software are shown below:



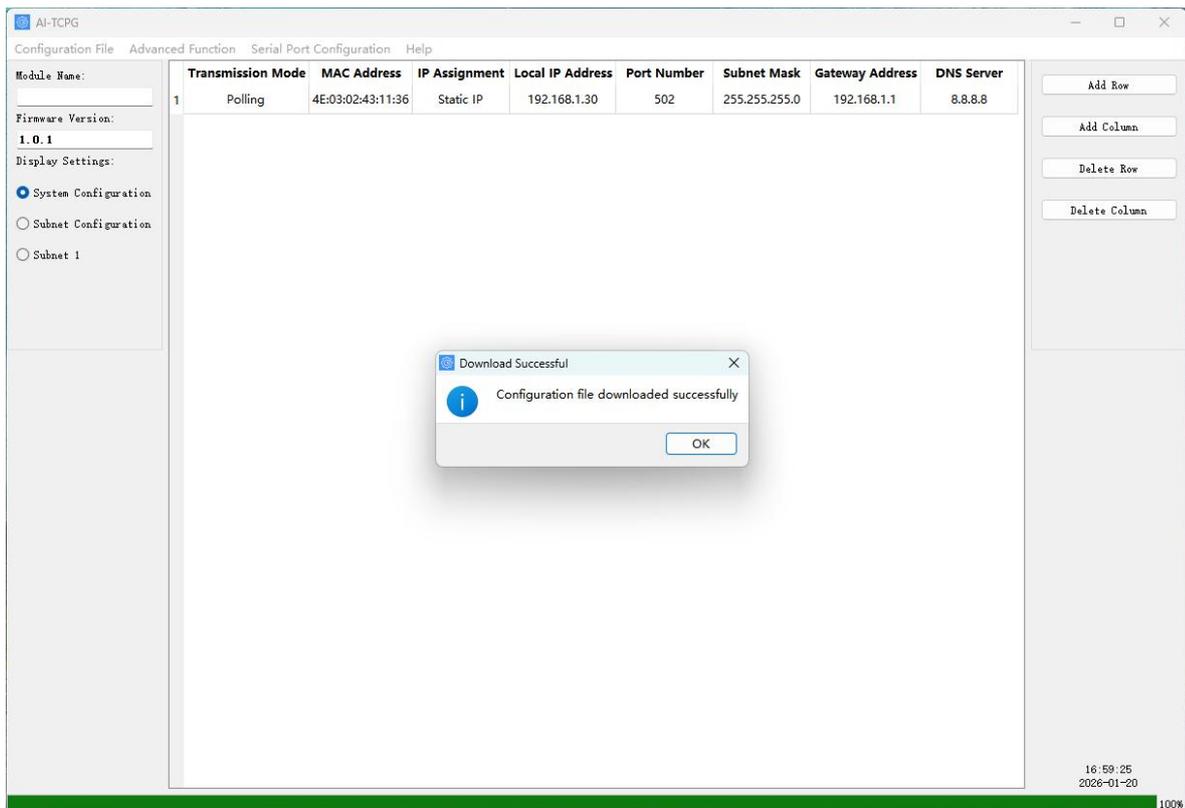
- Module name and version number can be modified.
- Click radio buttons to switch display interfaces. Double-click to modify the subnet number.
- Double-click table entries to edit configuration parameters.
- Modify table rows and columns as needed.
- Supports Ctrl+C (Copy) and Ctrl+V (Paste).

3.2.3 Download Configuration

Click Download under Configuration File menu. If a Format Error or Unsupported Version prompt appears, follow the instructions to correct the issue. If a Download Failed or No Response prompt appears, follow the instructions to check the power supply, USB connection, and serial port parameters settings.



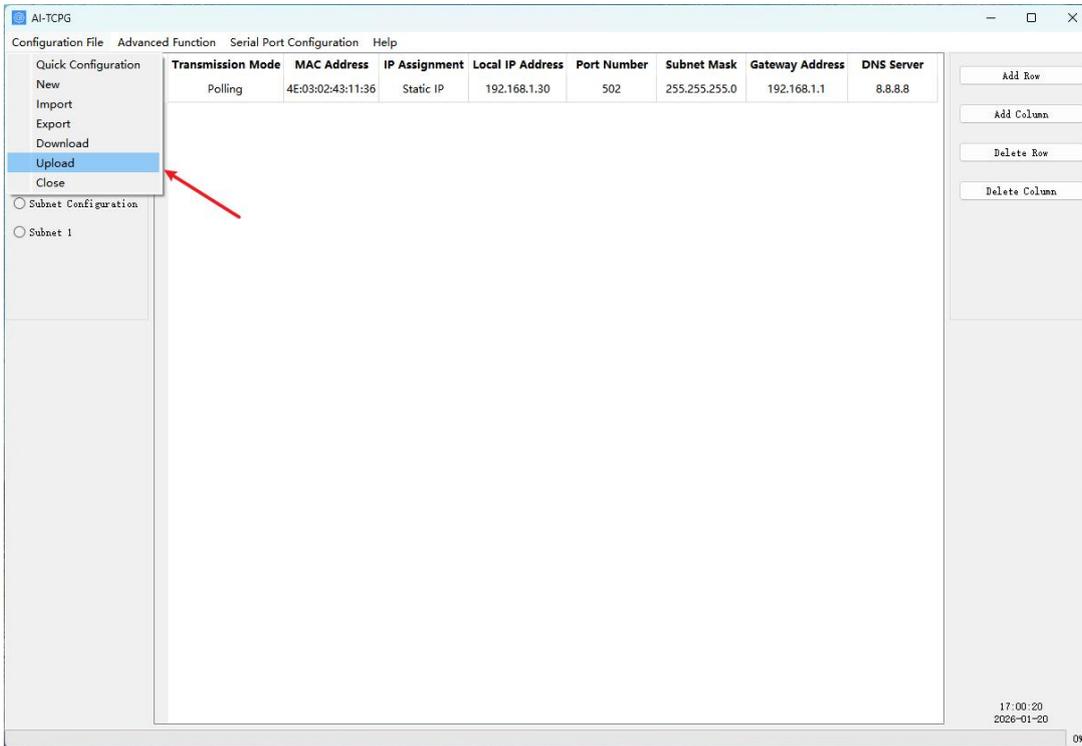
The progress bar updates during the download process. After completion, the converter automatically resets and reconnects to the serial port. The download completion screen is shown below:



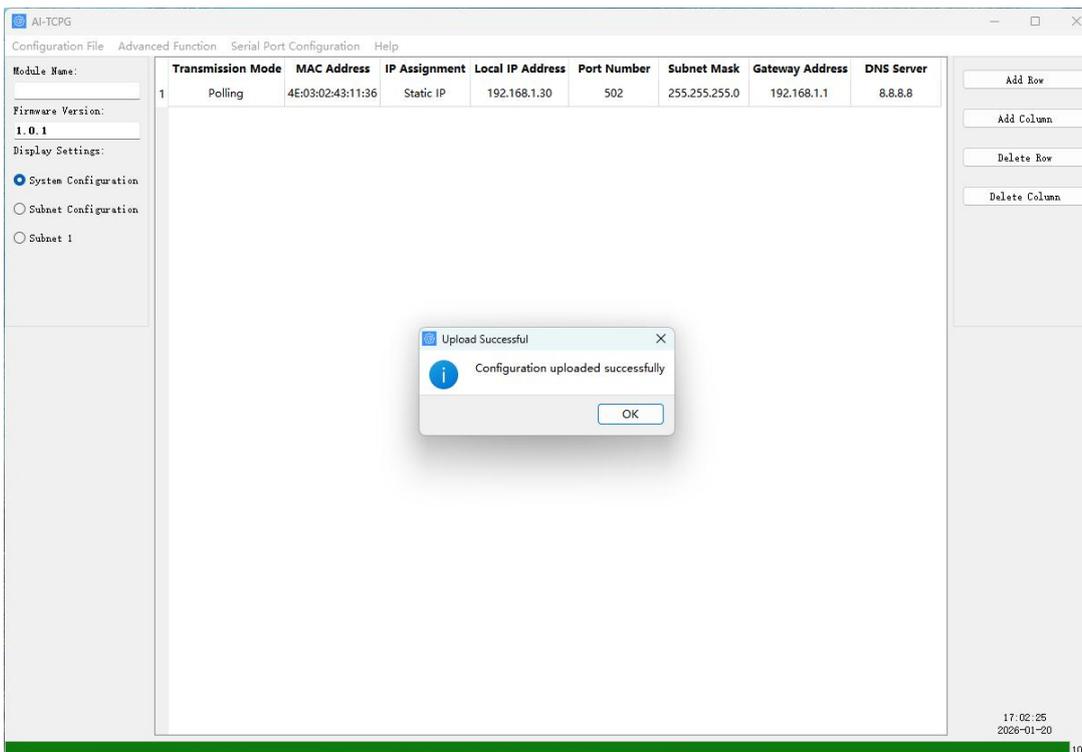
3.3 Upload Configuration

The upload function requires serial port setup (Section 3.1).

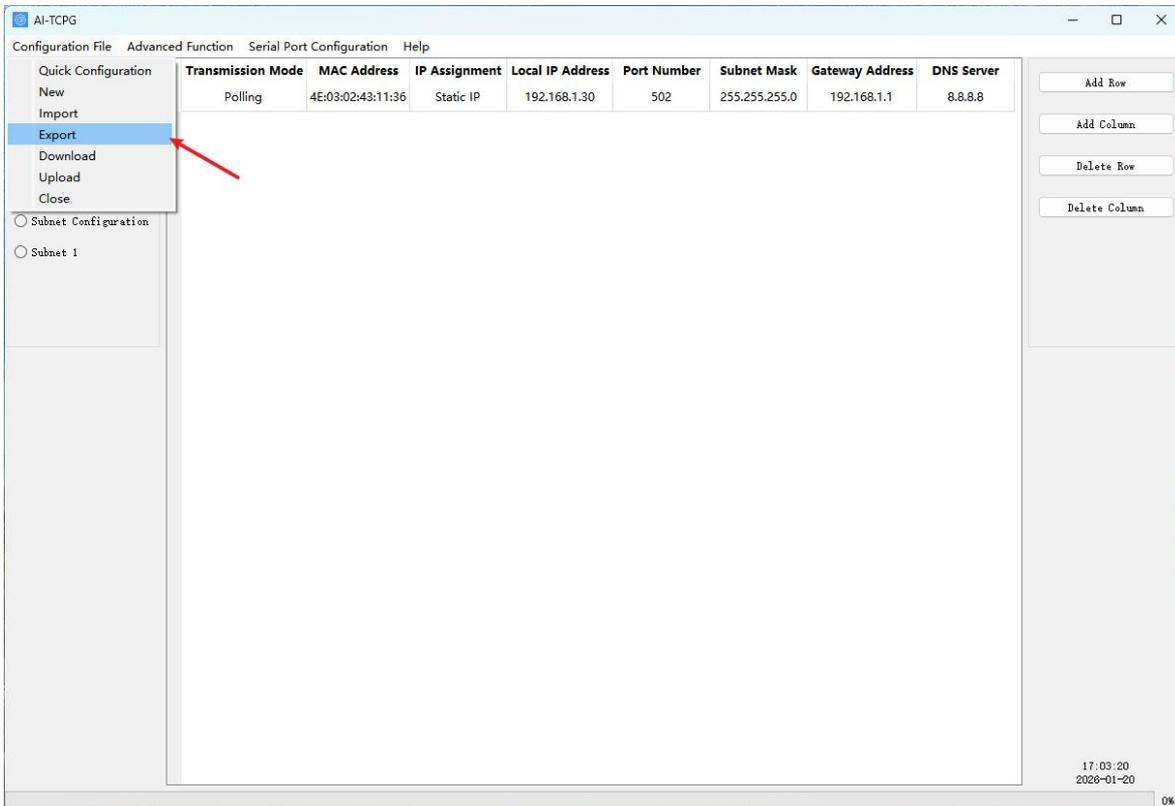
Click Upload under Configuration File menu to start uploading the configuration. If the table contains data, a prompt will ask whether to save it. The software then reads the converter's current configuration data.



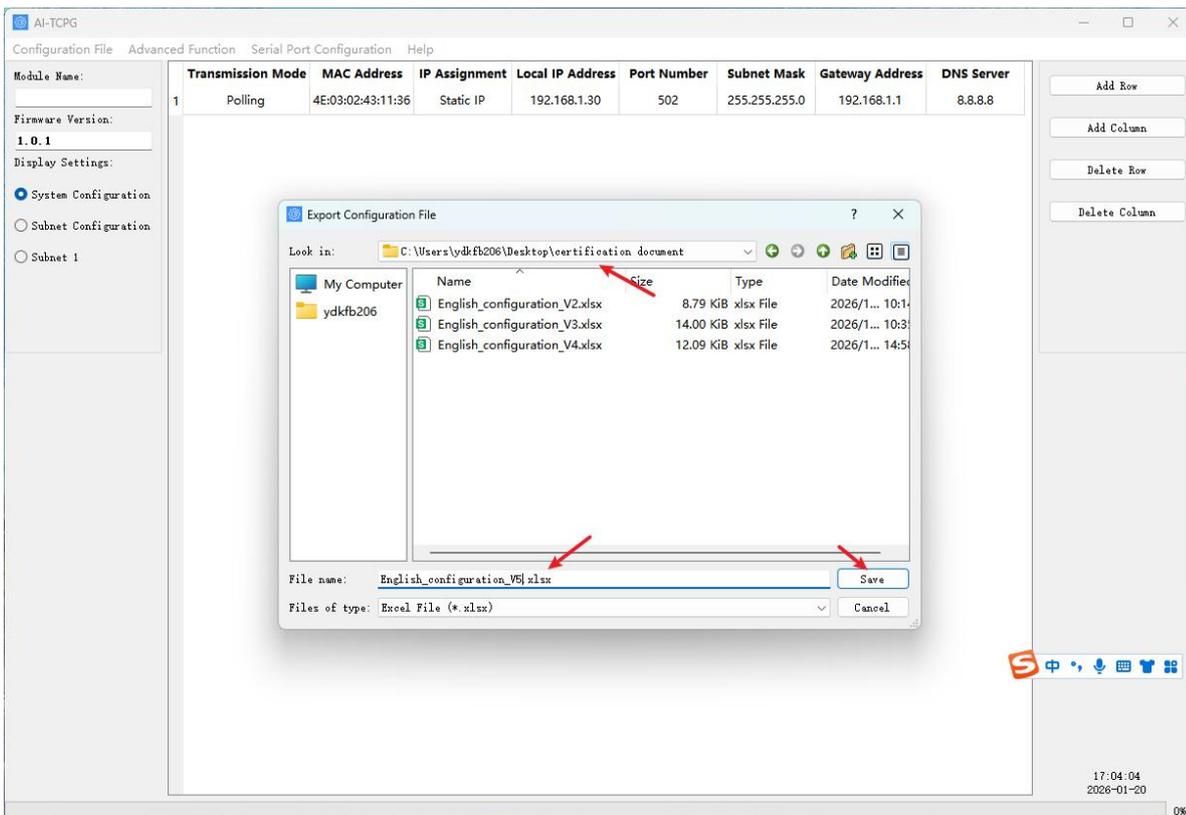
Wait for the progress bar to complete. When the configuration upload completes, the interface appears as shown below. Click OK to confirm.



Modify the configuration according to actual use, then either re-download to the converter or export the configuration file. Click Export under Configuration File menu to start exporting the configuration file, as shown below:



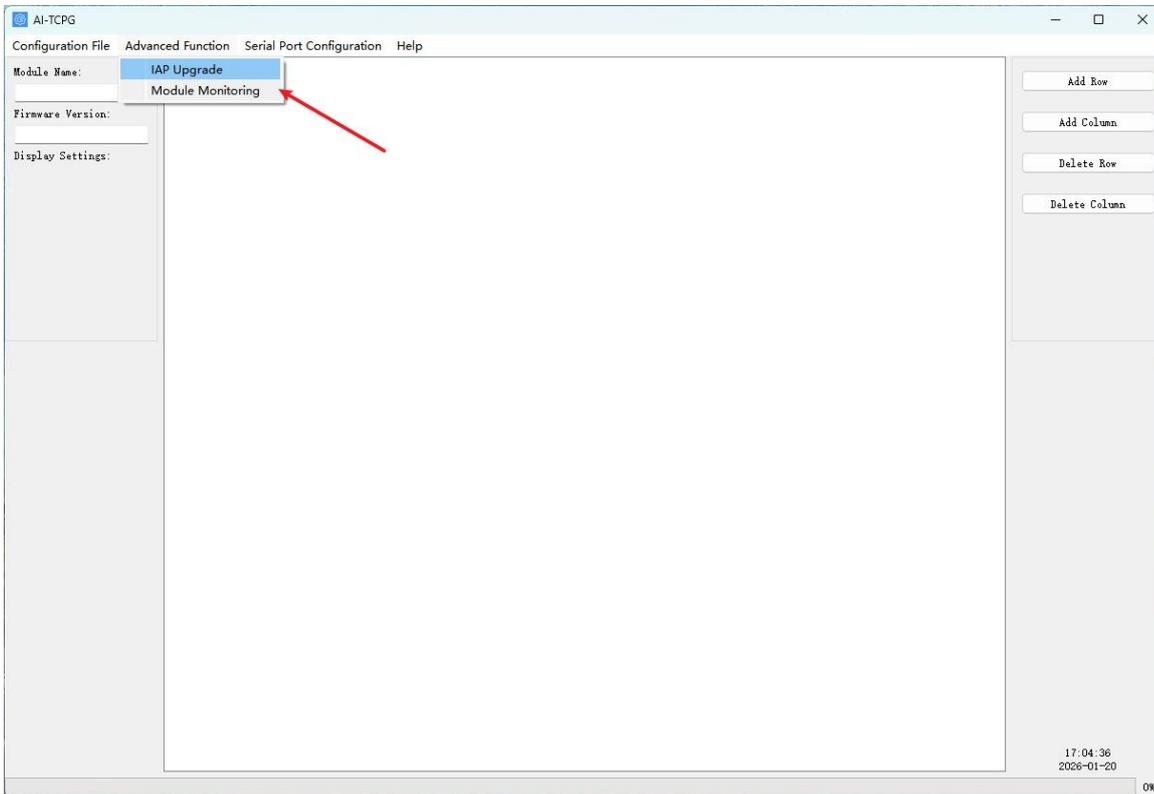
Select a save path and filename, then click Save to complete the export.



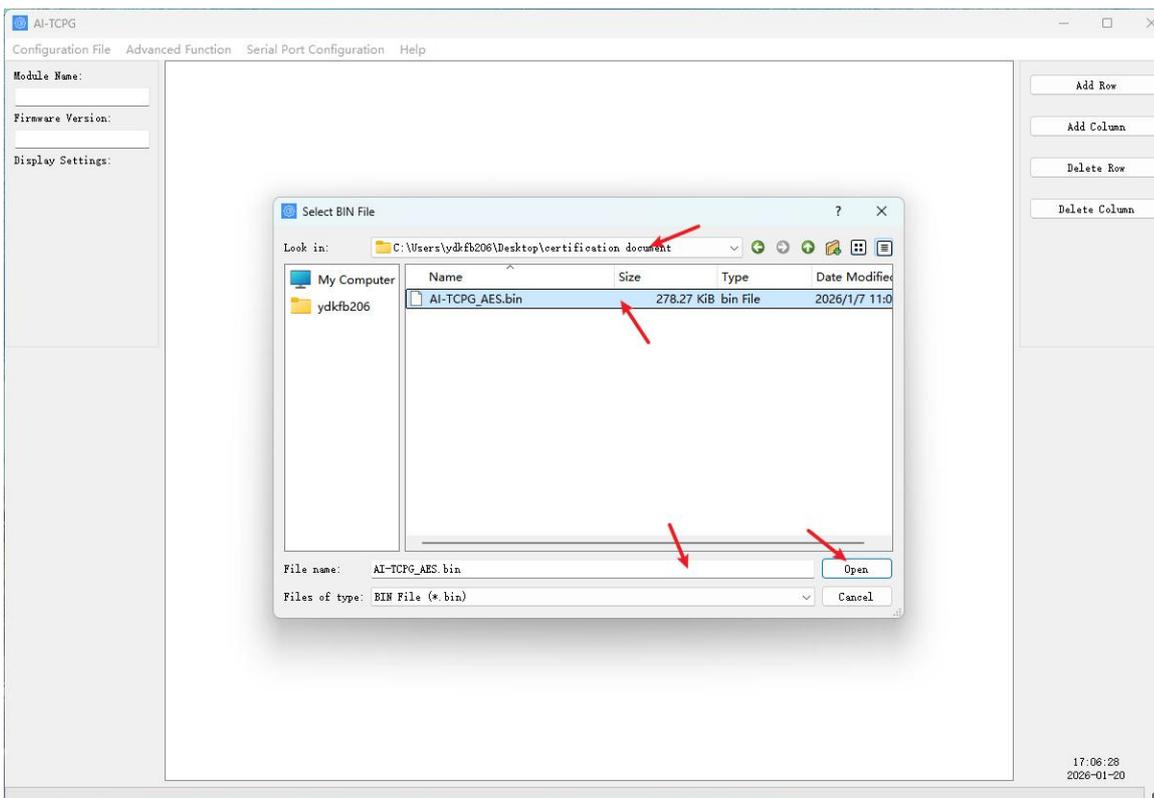
3.4 IAP Upgrade

The IAP upgrade function requires serial port setup (Section 3.1).

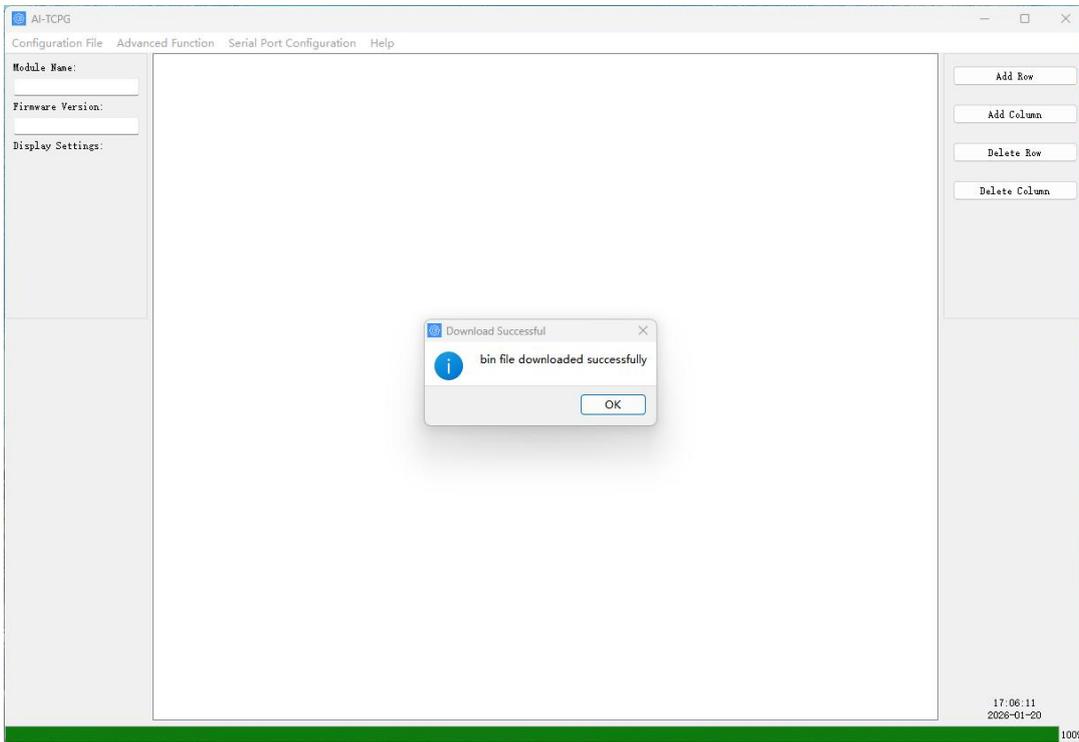
Click IAP Upgrade under Advanced Functions menu to start the IAP upgrade process, as shown below:



A file selection dialog will appear. Choose the .bin upgrade file and click Open to start the IAP upgrade.



If a No Response prompt appears, check the power supply, USB connection, and serial port parameters settings. Wait for the progress bar to complete. After a successful upgrade, the following prompt will appear. Click OK to finish.

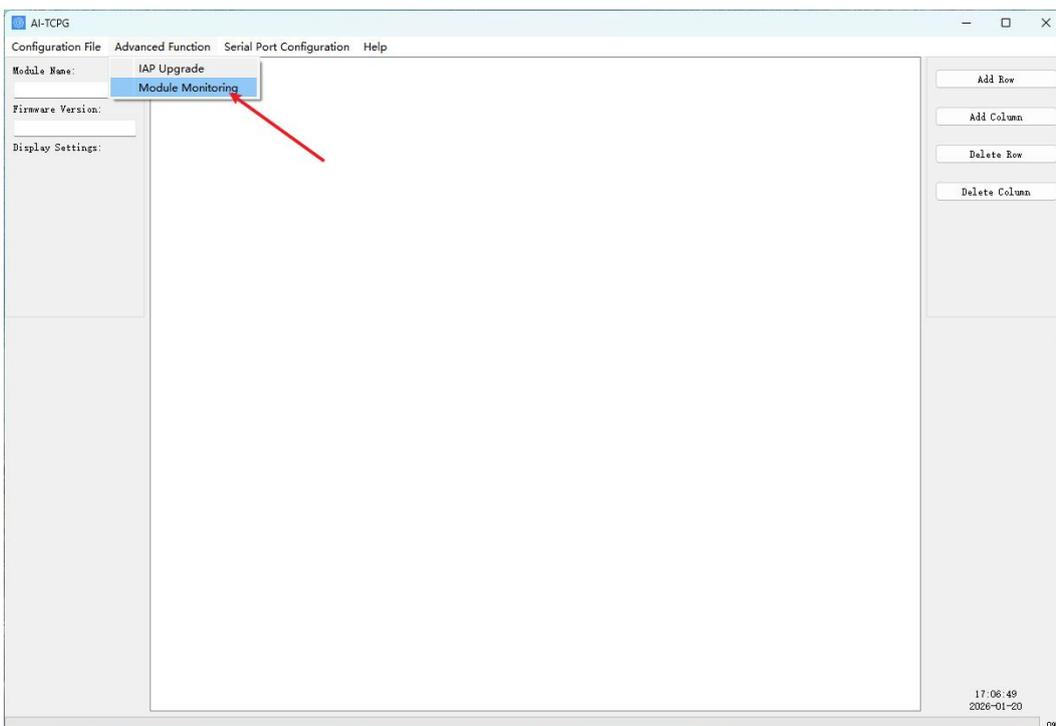


The converter will restart automatically and reconnect to the serial port.

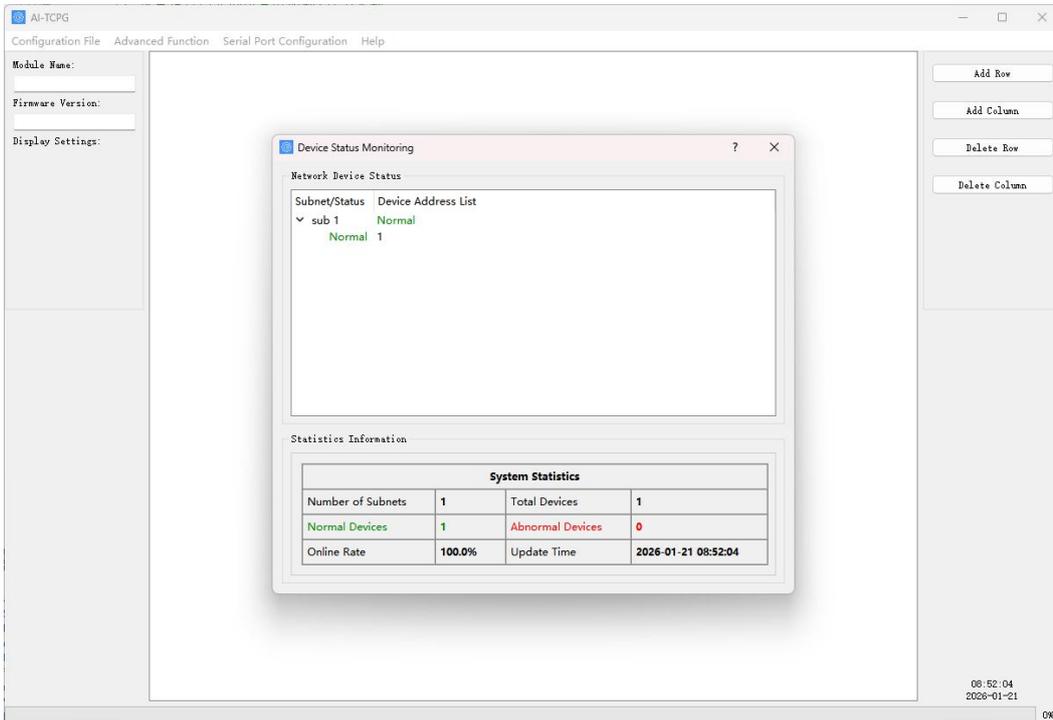
3.5 Module Monitoring

The module monitoring function requires serial port setup (Section 3.1).

Module Monitoring can upload real-time status of connected devices to the converter and display normal/abnormal device addresses. Click Module Monitoring under Advanced Functions menu to start status reading, as shown below:



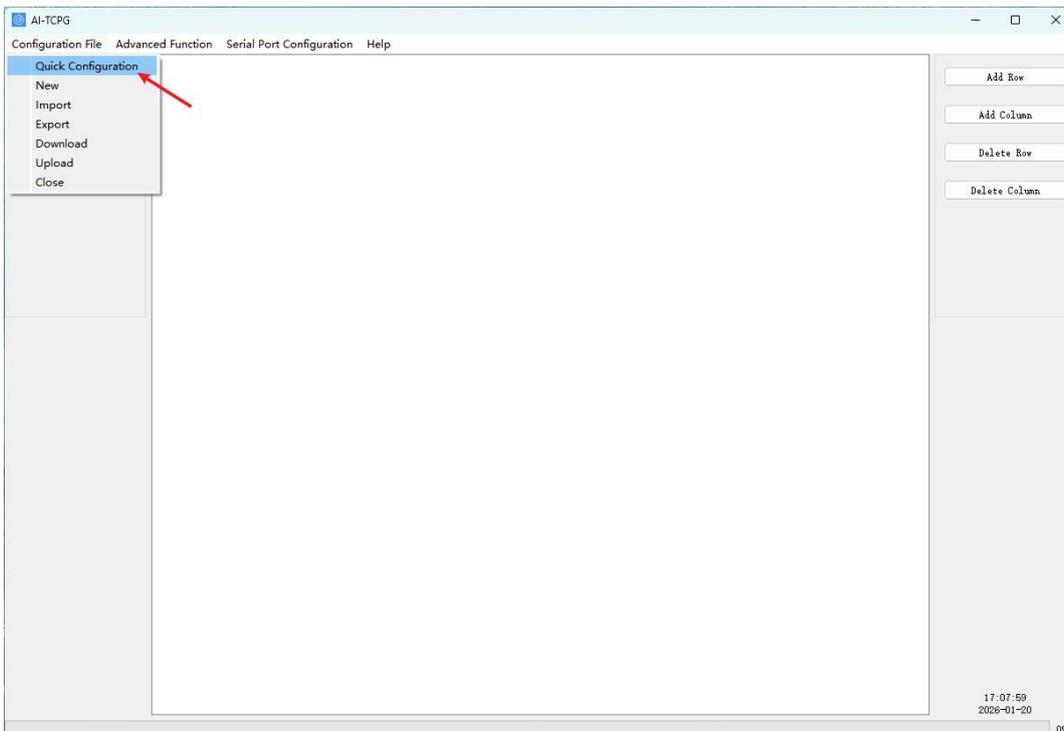
If No Response prompt appears, check the power supply, USB connection, and serial port parameters settings, then retry. When status information is received, the Device Status Monitoring dialog will appear, showing statistical information, as shown below:



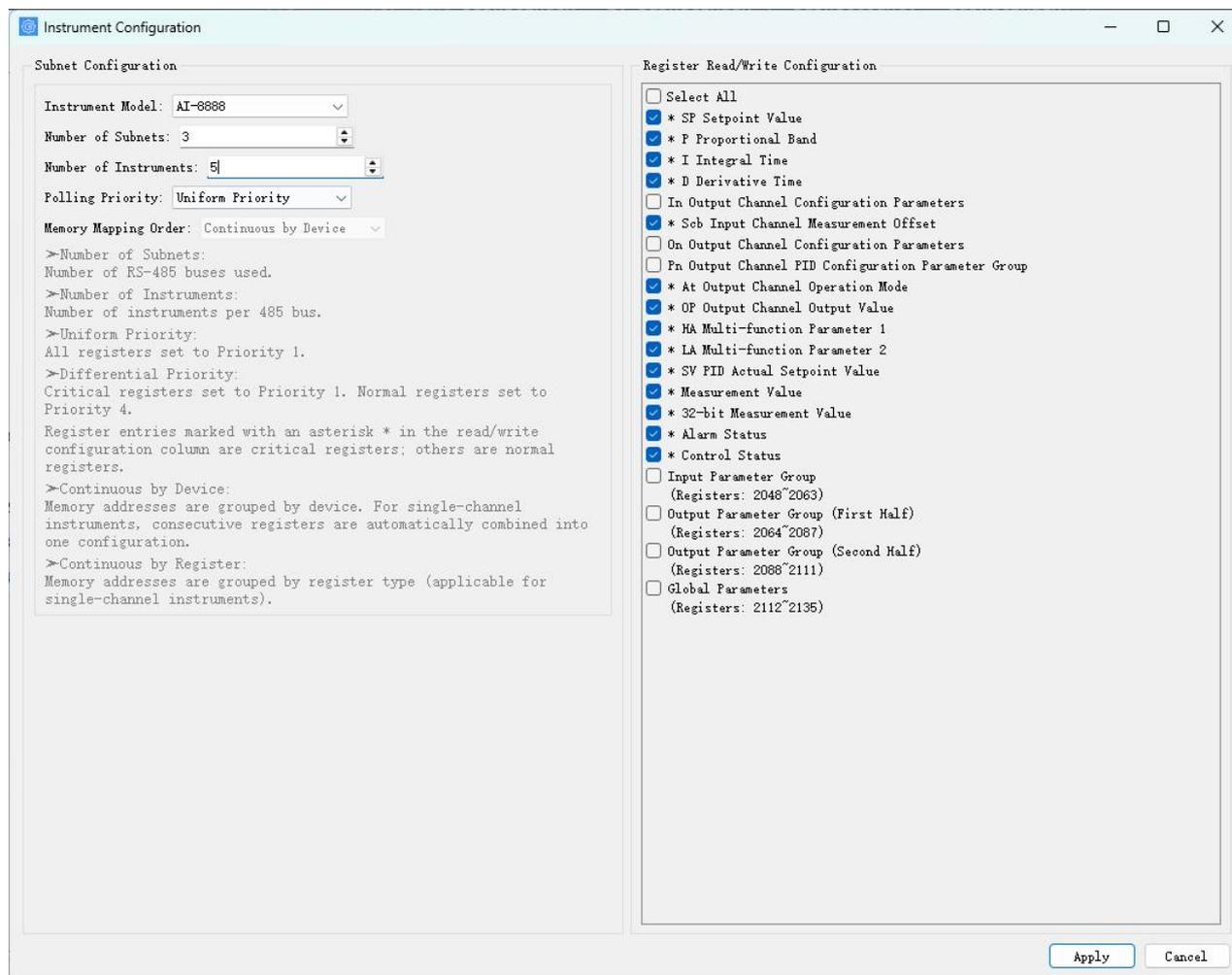
Data updates every 5 seconds. A device is marked as Abnormal after N timeout responses. To exit, click the top-right close button to stop monitoring.

3.6 Quick Configuration

Click Quick Configuration under Configuration File menu to generate a configuration file rapidly, as shown below:



In the Quick Configuration dialog, set the following parameters: instrument model, number of subnets, number of instruments, polling priority, memory mapping order, read/write registers. The interface is shown below:



Parameter Descriptions:

- Instrument Model: Supports multi-channel and single-channel instruments.
- Number of Subnets: Number of 485 buses used (1-3).
- Number of Instruments: Devices per 485 bus (1-247).
- Polling Priority: Uniform Priority, Differentiated Priority (selectable).

Uniform Priority: All registers set to Priority 1.

Differential Priority: Critical registers set to Priority 1. Normal registers set to Priority 4. (Register entries marked with an asterisk * in the read/write configuration column are critical registers; others are normal registers).

- Memory Mapping Order: Continuous by Device, Continuous by Register (selectable).

Continuous by Device: Memory addresses are grouped by device. For single-channel instruments, consecutive registers are automatically combined into one configuration.

Continuous by Register: Memory addresses are grouped by register type (applicable for single-channel instruments).

After configuration, click Apply to automatically generate the configuration file, as shown below:

AI-TCPG Configuration File Advanced Function Serial Port Configuration Help

Module Name:

Firmware Version: 1.0.1

Display Settings:
 System Configuration
 Subnet Configuration
 Subnet 1
 Subnet 2
 Subnet 3

| | Slave Address | Register Starting Address | Function Code | Data Count | Read/Write Permission | Byte Swap | Polling Priority | Register Area | Mapping Starting Address |
|----|---------------|---------------------------|---------------|------------|-----------------------|-----------|------------------|------------------|--------------------------|
| 1 | 1 | 0 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 0 |
| 2 | 1 | 96 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 8 |
| 3 | 1 | 192 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 16 |
| 4 | 1 | 288 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 24 |
| 5 | 1 | 480 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 32 |
| 6 | 1 | 768 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 40 |
| 7 | 1 | 864 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 48 |
| 8 | 1 | 960 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 56 |
| 9 | 1 | 1056 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 64 |
| 10 | 1 | 1152 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 72 |
| 11 | 1 | 1536 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 80 |
| 12 | 1 | 1632 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 88 |
| 13 | 1 | 1664 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 96 |
| 14 | 1 | 1728 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 100 |
| 15 | 2 | 0 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 104 |
| 16 | 2 | 96 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 112 |
| 17 | 2 | 192 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 120 |
| 18 | 2 | 288 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 128 |
| 19 | 2 | 480 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 136 |
| 20 | 2 | 768 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 144 |
| 21 | 2 | 864 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 152 |
| 22 | 2 | 960 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 160 |
| 23 | 2 | 1056 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 168 |
| 24 | 2 | 1152 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 176 |

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Export the configuration file, save it locally, and name it (e.g., AI-8888_Config1.xlsx), as shown below:

AI-TCPG Configuration File Advanced Function Serial Port Configuration Help

Module Name:

Firmware Version: 1.0.1

Display Settings:
 System Configuration
 Subnet Configuration
 Subnet 1
 Subnet 2
 Subnet 3

| | Slave Address | Register Starting Address | Function Code | Data Count | Read/Write Permission | Byte Swap | Polling Priority | Register Area | Mapping Starting Address |
|----|---------------|---------------------------|---------------|------------|-----------------------|-----------|------------------|------------------|--------------------------|
| 1 | 1 | 0 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 0 |
| 2 | 1 | 96 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 8 |
| 3 | 1 | 192 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 16 |
| 4 | 1 | 288 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 24 |
| 5 | 1 | 480 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 32 |
| 6 | 1 | 768 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 40 |
| 7 | 1 | 864 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 48 |
| 8 | 1 | 960 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 56 |
| 9 | 1 | 1056 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 64 |
| 10 | 1 | 1152 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 72 |
| 11 | 1 | 1536 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 80 |
| 12 | 1 | 1632 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 88 |
| 13 | 1 | 1664 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 96 |
| 14 | 1 | 1728 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 100 |
| 15 | 2 | 0 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 104 |
| 16 | 2 | 96 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 112 |
| 17 | 2 | 192 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 120 |
| 18 | 2 | 288 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 128 |
| 19 | 2 | 480 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 136 |
| 20 | 2 | 768 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 144 |
| 21 | 2 | 864 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 152 |
| 22 | 2 | 960 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 160 |
| 23 | 2 | 1056 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 168 |
| 24 | 2 | 1152 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 176 |

Export Configuration File

Look in: C:\Users\ydkfb206\Desktop\certification document

| Name | Size | Type | Date Modified |
|-------------------------------|-----------|-----------|----------------|
| English_configuration_V2.xlsx | 8.79 KIB | xlsx File | 2026/1... 10:1 |
| English_configuration_V3.xlsx | 14.00 KIB | xlsx File | 2026/1... 10:3 |
| English_configuration_V4.xlsx | 12.09 KIB | xlsx File | 2026/1... 14:5 |
| English_configuration_V6.xlsx | 24.51 KIB | xlsx File | 2026/1... 17:1 |

File name: English_configuration_V7.xlsx

Files of type: Excel File (*.xlsx)

Save Cancel

17:16:04 2026-01-20

Open AI-8888_Config1.xlsx. configuration file. The functions of each worksheet are shown below:

| Slave Address | Register Starting Address | Function Code | Data Count | Read/Write Permission | Byte Swap | Polling Priority | Register Area | Mapping Starting Address | Register Name |
|---------------|---------------------------|---------------|------------|-----------------------|-----------|------------------|------------------|--------------------------|--------------------------------------|
| 1 | 0 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 0 | SP Setpoint Value |
| 1 | 8 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 8 | Proportional Band |
| 1 | 16 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 16 | Integral Time |
| 1 | 24 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 24 | D Derivative Time |
| 1 | 32 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 32 | Scb Input Channel Measurement Offset |
| 1 | 40 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 40 | AI Output Channel Operation Mode |
| 1 | 48 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 48 | OP Output Channel Output Value |
| 1 | 56 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 56 | HA Multi-function Parameter 1 |
| 1 | 64 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 64 | LA Multi-function Parameter 2 |
| 1 | 72 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 72 | SV PID Actual Setpoint Value |
| 1 | 80 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 80 | Measurement Value |
| 1 | 88 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 88 | 32-bit Measurement Value |
| 1 | 96 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 96 | Alarm Status |
| 1 | 100 | 03 and 10 | 4 | Read/Write | Close | Priority 1 | Holding Register | 100 | Control Status |
| 1 | 104 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 104 | SP Setpoint Value |
| 1 | 112 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 112 | P Proportional Band |
| 2 | 120 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 120 | I Integral Time |
| 2 | 128 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 128 | D Derivative Time |
| 2 | 136 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 136 | Scb Input Channel Measurement Offset |
| 2 | 144 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 144 | AI Output Channel Operation Mode |
| 2 | 152 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 152 | OP Output Channel Output Value |
| 2 | 160 | 03 and 10 | 8 | Read/Write | Close | Priority 1 | Holding Register | 160 | HA Multi-function Parameter 1 |

System Configuration Table (default generated)

Subnet Configuration Table (default generated)

Subnet Table (generated based on configured subnet count)

