

1 Introduction

1.1 Overview

The purpose of the configuration software is configuring SSTCOMM fieldbus gateway GT200-MT-RS, GT200-MT-2RS. It can configure parameters of serial and Ethernet. The manual describe the use method and attentions specifically to lead user. Before using the software, please read the manual carefully.

1.2 Runtime Environment

1.2.1 Setting Screen

The best display setting is 1024*768, 32 bit color

The lowest display setting is 600*800, 16 bit color

1.2.2 Hardware Interface

Users can accord to the connection of Ethernet of PC and gateway (GT200-MT-RS, GT200-MT-2RS) to communicate, and upload and download configuration files.

1.3 Supporting Software

The format of configuration files being exported by SST-MT-CFG is .inf.

2 Use Method

2.1 Install

You can easily follow the hints to complete the installation. Double click file packet (.deb file/.exe file); and install the software. (Ubuntu: Verison 16.04 and above)

2.2 Uninstall

You can easily follow the hints to complete the installation.

Ubuntu:Double click file packet (.deb file); first install(it won't work),then remove the software.

(It is recommended to use the dpkg command for uninstallation.)

Windows:Open "My Computer", "Control Panel", and "Add or Remove Programs" to delete the software.

2.3 Notes before Configuration

SST-MT-CFG is a product based on Windows platform, and used to configure parameters of Modbus Serial/TCP series gateway.

The factory set of Modbus Serial/TCP series gateway is 192.168.0.10, mask is 255.255.255.0, and gateway address is 192.168.0.1. (When user clicks the "Advanced" item in the "Restore Factory Settings", the default IP address configuration is DHCP.)

Before running the software, please make sure users computer and the GT200-MT-RS configure in the same network.

Double-click the icon to access the main interface:

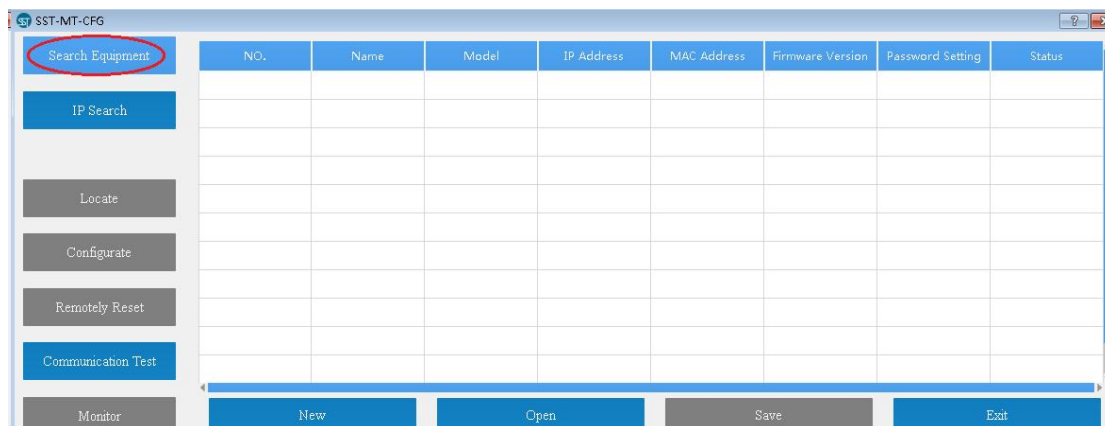


2.4 Search Equipment

Before configuring parameters of GT200-MT-RS, user needs to search the gateway using the software. The software provides two ways to search the gateway for user.

2.4.1 Search All Equipments of Ethernet

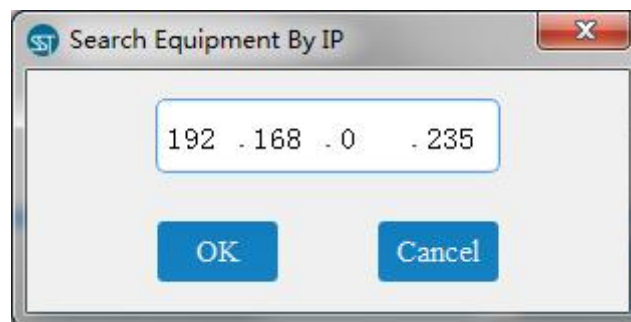
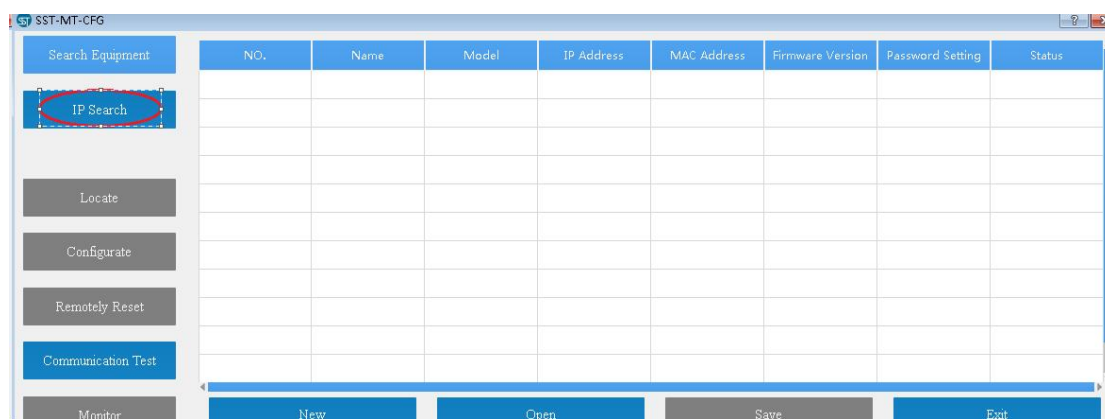
Click "Search Equipment" button of the main interface, the software will search all of the available GT200-MT-RS equipment and list them in the main interface.





2.4.2 IP Search

Click "IP Search" button of the main interface will pop up a dialog box:



After entering the correct IP address, the software will search GT200-MT-RS with the IP address in the network, and list the information of the equipment in the main interface.



Notes:

If user selects the "IP Search", user needs to enter correct IP address or it cannot search equipment.

2.5 Configuration

2.5.1 Mode Selection

Modbus Serial/TCP series gateway provides four operating modes:

Modbus RTU slave mode----Modbus TCP master communicate with Modbus RTU slave through the gateway;

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Modbus ASCII slave mode----Modbus TCP master communicate with Modbus ASCII slave through the gateway;

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Operating mode of Modbus Serial/TCP series gateway is defined by the serial equipment. For example, when you want to achieve the communication between Modbus TCP master equipment and Modbus RTU slave equipment, user need to select "RTU/ASCII slave mode" of Modbus Serial/TCP series gateway.

2.5.2 Ethernet Parameters

Ethernet parameters include: "Name", "Assign IP Mode", "IP address", "Subnet Mask", "Default Gateway", "DNS1", and "DNS2".

Configuration

Mode Ethernet Serial #ID Mapping #Modbus #Priority Control #Advanced

Name: GT200-MT-RS

Assign IP Mode: DHCP

IP Address: 192 . 168 . 0 . 11

Subnet Mask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 0 . 1

DNS1: 0 . 0 . 0 . 0

DNS2: 0 . 0 . 0 . 0

OK Cancel Help

SSTOM

Diagram: Computer ↔ Router ↔ Server

Name----enter a name to identify the equipment in order to distinguish from other equipment;

Assign IP Mode----Set the equipment's configuration mode of IP address;

IP address----Set the equipment's IP address;

Subnet Mask----Set subnet mask of the equipment;

Default gateway----Set gateway address of the equipment;

DNS1----0.0.0.0 (currently only support 0.0.0.0)

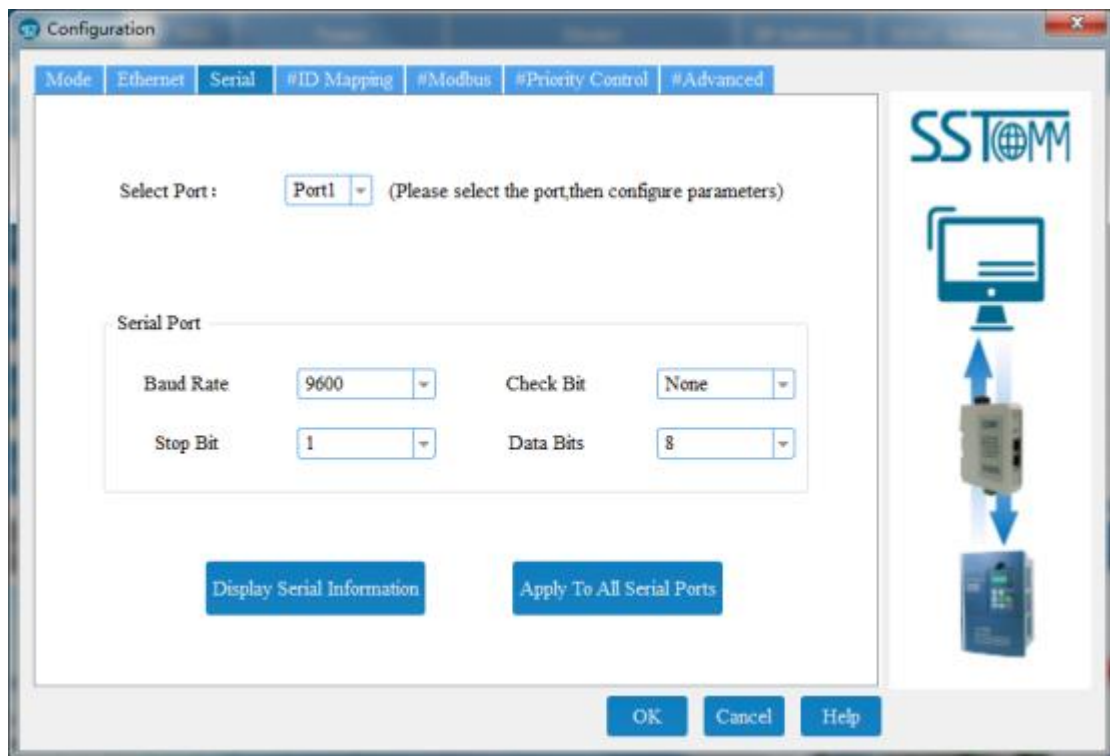
DNS2----0.0.0.0 (currently only support 0.0.0.0)

Notes:

The name cannot have space, and less than 20 characters

2.5.3 Serial Parameters

Serial parameters include: "Baud Rate", "Parity", "Stop Bits" and "Data Bits".



Baud Rate----1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400bps;

Parity----None, Odd, Even, Mark, Space; (Modbus Serial/TCP series does not support "Mark" and "Space")

Stop Bits----1, 2;

Data Bits----8 (currently only support 8 data bits)

Notes:

GT200-MT-2RS gateway: You only need to set one serial port, if all serial port parameters are consistent, and then click "Apply to All Serial Ports"; all serial port parameters can be configured to the current display serial port parameters. Click "Display Serial Information" will pop up:

Virtual slave ID range----Input an ID range, the left is minimum, the right is maximum (not more than 247);

Offset of slave ID----D-value of actual ID and virtual ID (can be null);

Range of actual slave ID----Clicking "Set" button to display: Offset of virtual ID plus actual ID;

When selecting "RTU/ASCII slave mode", user needs to specify the serial port to be mapped.

When selecting "RTU/ASCII master mode", user needs to set "IP address of target TCP slave", that is the IP address of the server to be connected.

After setting "Virtual slave ID range" and "Offset of slave ID", click "Set" button, "Actual slave ID range" value is automatically calculated.

When click "Add" button, user can add a message in "Slave ID Mapping Table".

When user wants to modify the added ID mapping information, user firstly select the information you want to modify, and then set "Virtual slave ID range" and "Offset of slave ID", and click "Modify" button.

When user wants to delete the added ID mapping information, user needs to select the information you want to delete, and click "Delete" button.

Tips:

1. "Add" and "Modify" button both have "Set" function, user does not need to click "Set" then click "Add" or "Modify".

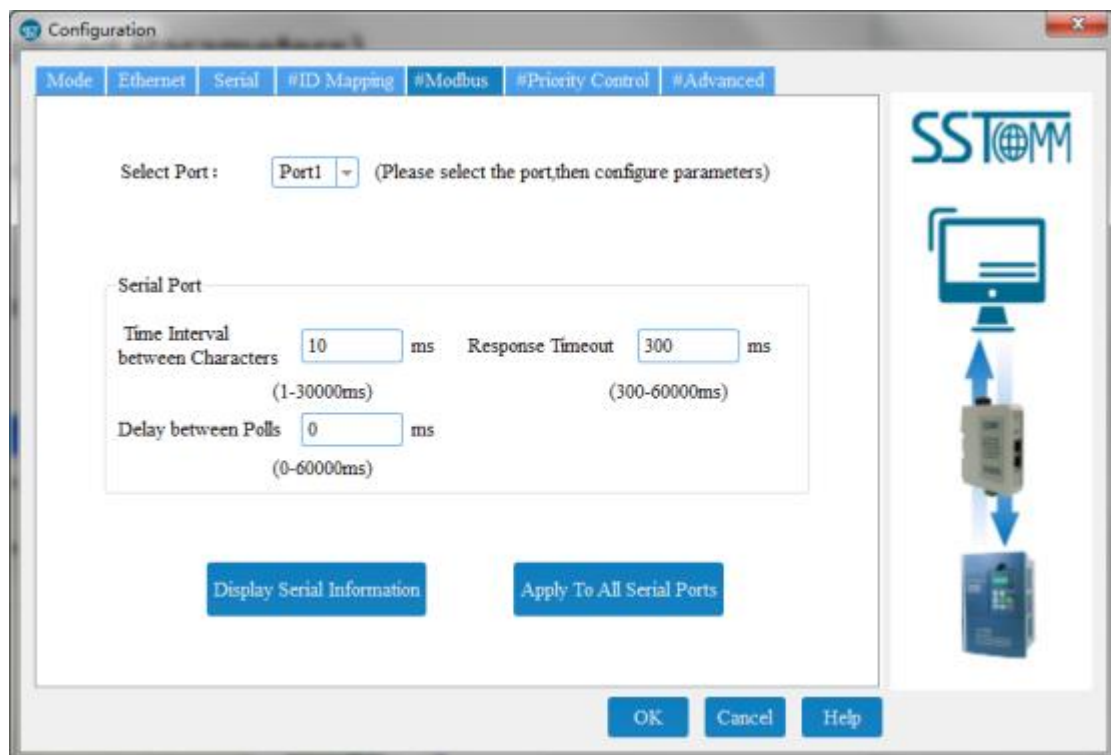
2. Support up to 4 groups ID mapping.

3. Configure at least one ID mapping when selecting master mode.

2.5.5 Modbus Parameters (Advanced Parameters)

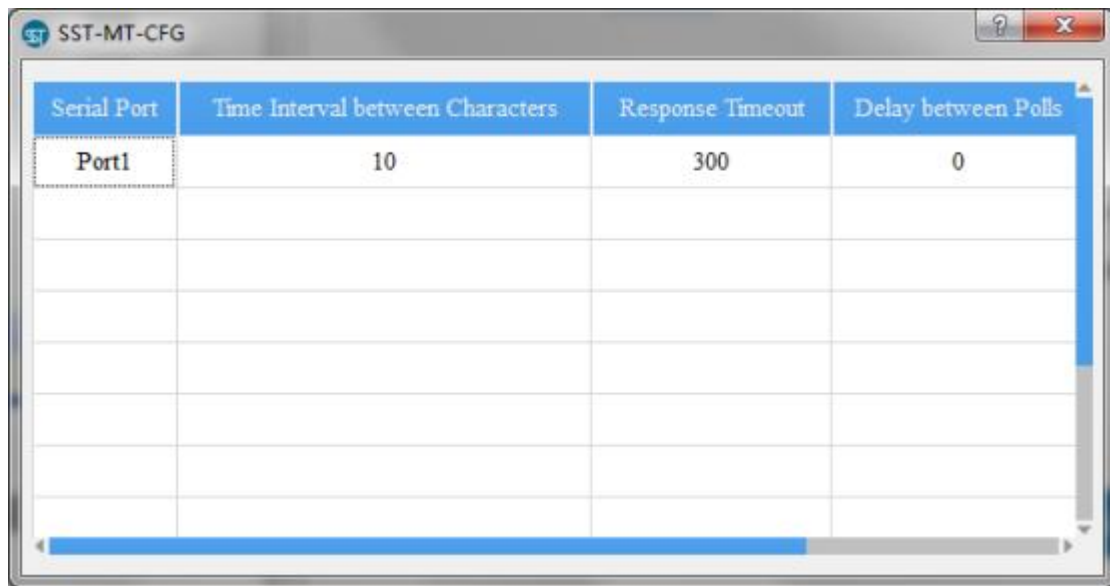
When you select RTU slave or ASCII slave mode, and only configure the basic parameters, the item does not need to be configured.

Set "Time Interval between Characters", "Response Timeout" and "Delay between Polls" of Modbus RTU/ASCII in the follow interface:



Notes:

GT200-MT-2RS gateway: You only need to set one serial port, if all serial port parameters are consistent, and then click "Apply to All Serial Ports", all serial port parameters can be configured to the current display serial port parameters. Click "Display Serial Information" will pop up:



2.5.6 Priority Control (Advanced Parameters)

When you select RTU slave or ASCII slave mode, and only configure the basic parameters, the item does not need to be configured. (Modbus Serial/TCP series gateway does not support this function temporarily.)

Ethernet speed is faster than serial port, and it will cause the queuing of frame, then you can set priority of frames. After enabling "Priority control", user can set the parameters you want and only "RTU/ASCII slave mode" supports this function.

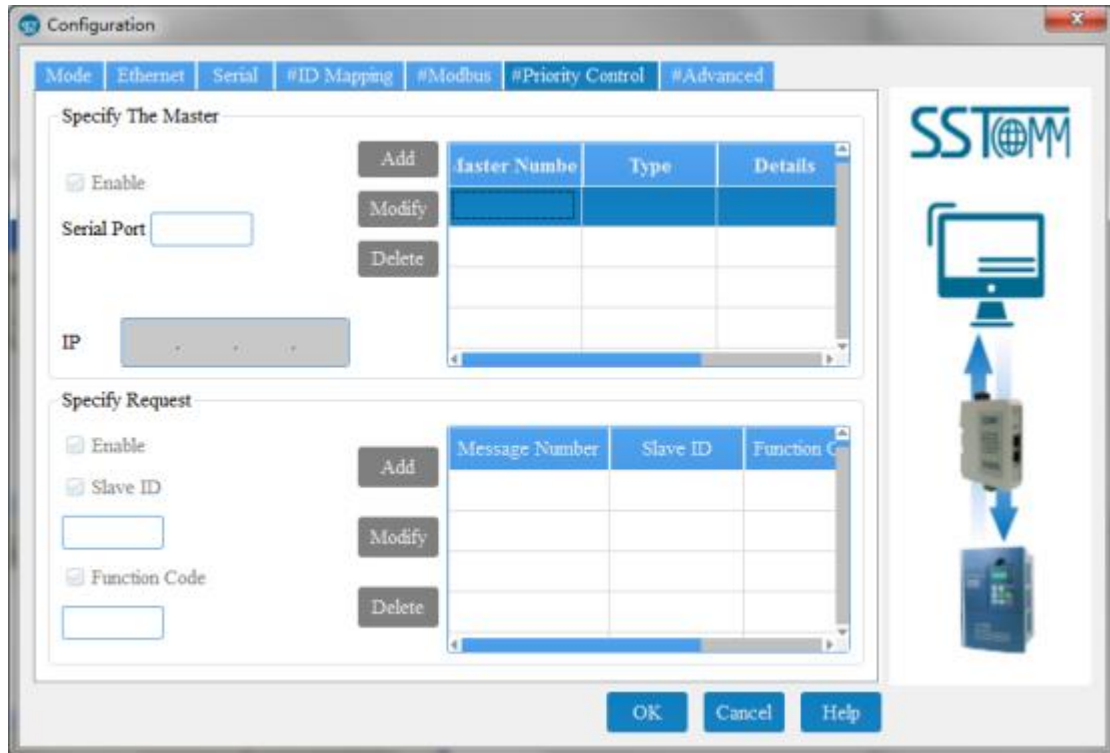
Specify the master----the requests of specified master are prior to transmit.

Specify the request----the requests of specified slave ID (virtual ID) or function codes are prior to transmit.

Priority of requests:

Conditions	Priority
Comply with specified main master, and comply with specified request	High
Comply with specified main master, or comply with specified request	Medium
Not comply with priority conditions	Low

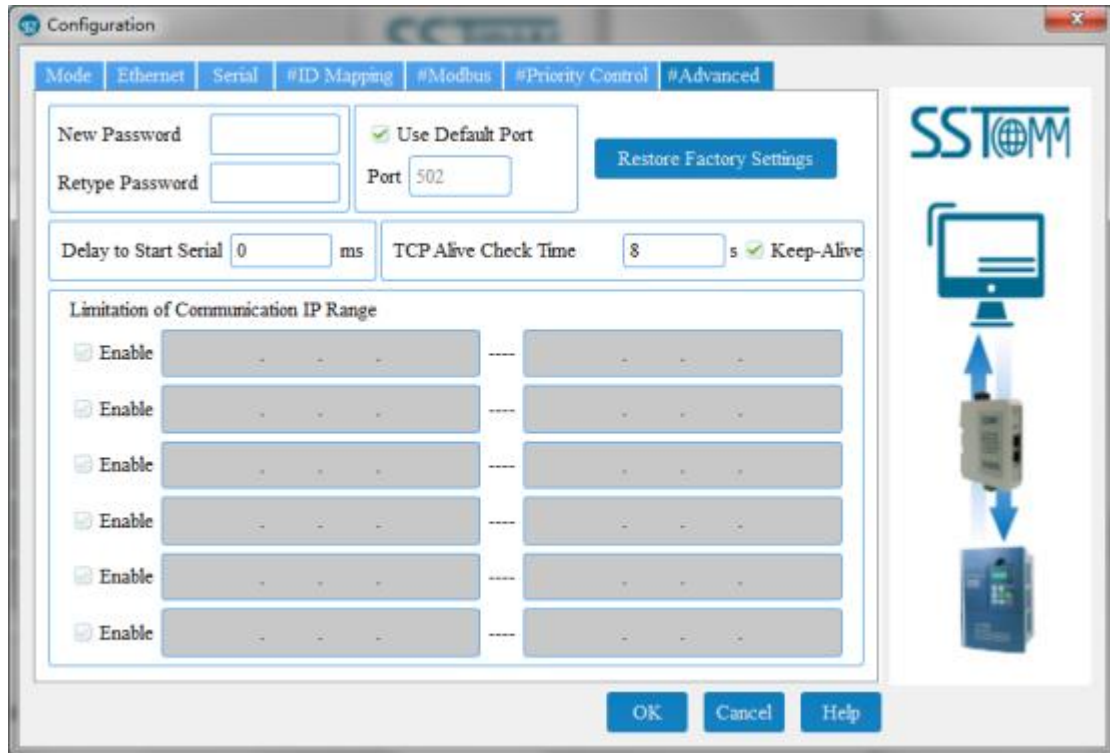
Use method of "Add", "Modify" and "Delete" is the same with "ID mapping".



2.5.7 Advanced Parameters

When you select RTU slave or ASCII slave mode, and only configure the basic parameters, the item cannot be configured.

Advanced parameters include: "Password", "Confirm Password", "Use Default Port", "Port Number", "Start-up Delay of Start Serial", "Restore Factory Settings", "TCP Connect Idle Time", and "Limitation of Communication IP Range".



Password----after setting the password, users need to enter the password when configuring parameters again. If users want to delete the password, just put your password is set to empty.

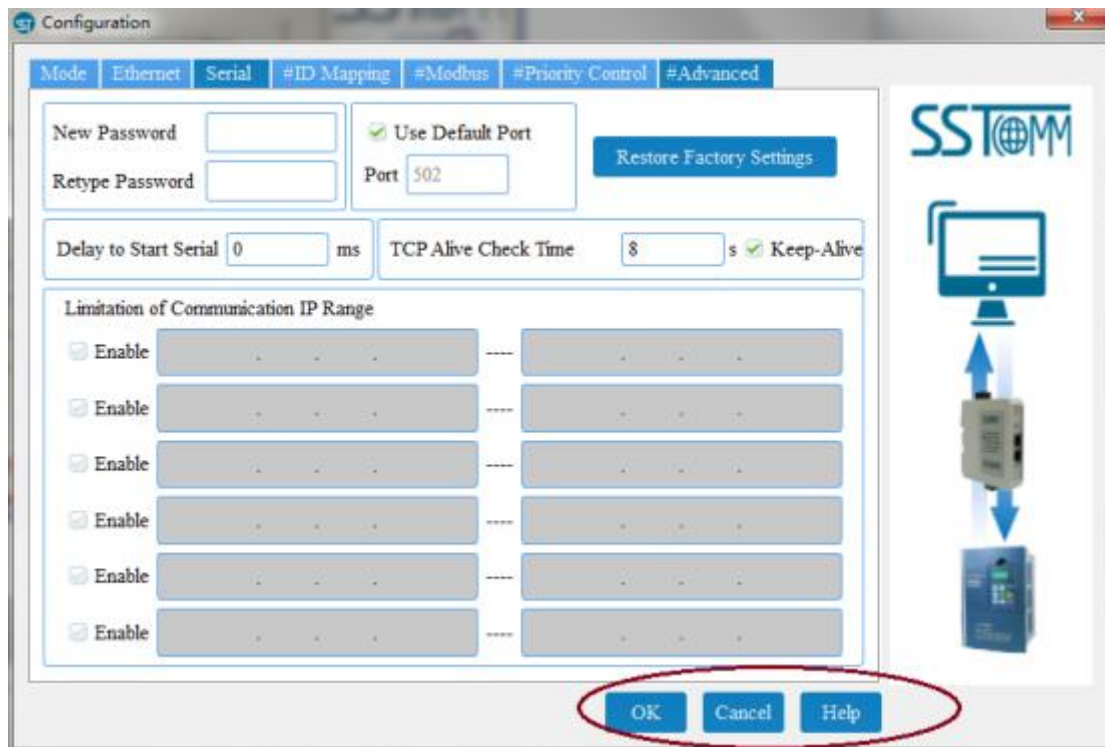
Restore Factory Settings----when user clicks the button, the previous configuration information will be lost.

TCP Connect Idle Time----When a TCP connect idle time reaches the set value, if select "Keep-Alive", then transmit keep-alive message; if not, then disconnect the TCP connection. The default value is 8 seconds.

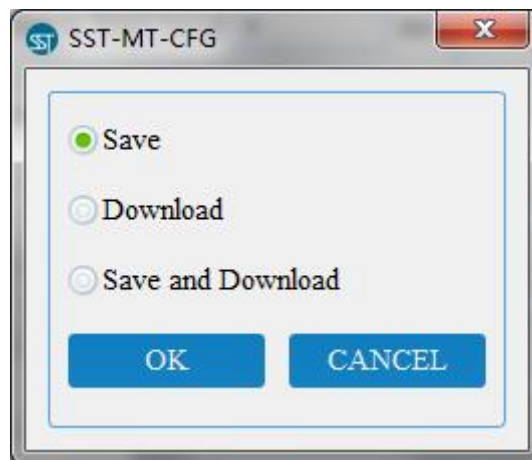
Limitation of Communication IP range----Set the range of communication IP to limit connecting IP of Modbus TCP master.

2.6 OK, Cancel and Help

After configuring parameters, user needs to click "OK" button to download the configuration to the equipment. If you do not want to download to the configuration, click "Cancel" button.



(1) OK:



Save: Save the configuration as ".inf" format to a local disk;

Download: Download the configuration to the equipment;

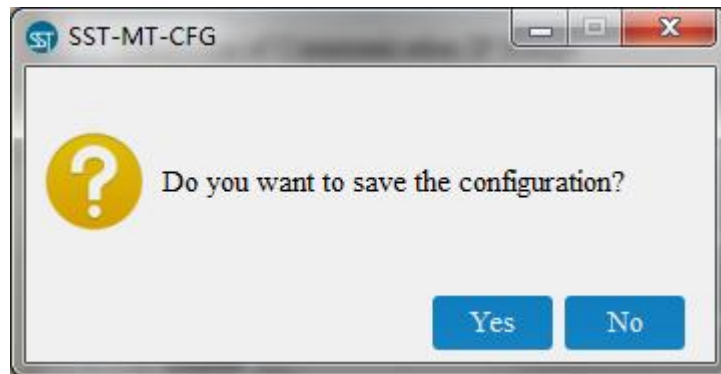
Save and Download: Save to the hard disk and download to the equipment.

Note:

1. When saving and downloading are done; the configuration interface will be closed;

2. When no equipment is selected, only "Save" is available.

(2) Cancel: When configuration changes, click "CANCEL"



Yes: Save to local disk and close;

No: No save but direct close.

(3) Help:

Open the software manual.

2.7 Locate

When user manages multiple Modbus Serial/TCP series gateway, they can use "Locate" function to determine equipment that you want to configure.

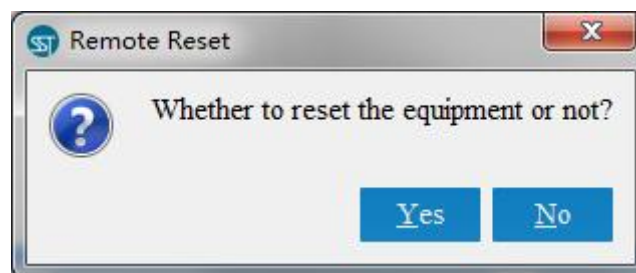
User clicks on the "Locate" button, the ENS and SNS indicators of the equipment in Ethernet will flash alternately several seconds then user can find it.



2.8 Remote Reset

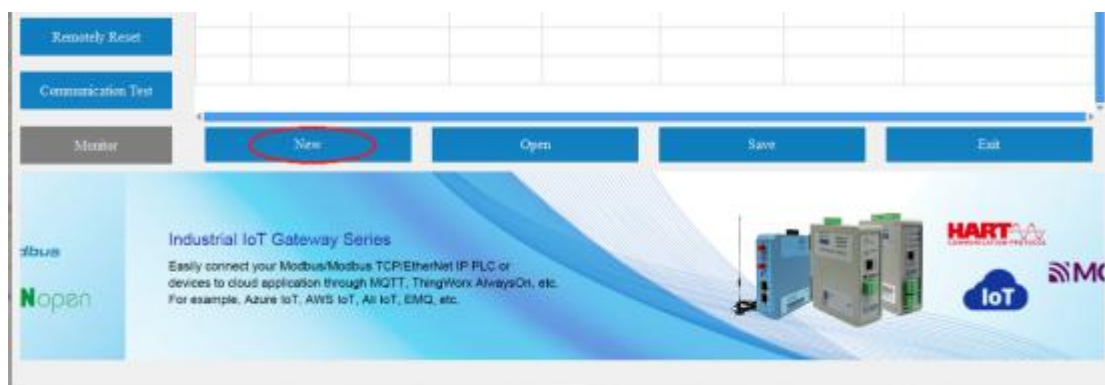
The function of "Remote Reset" is restarting the selected equipment. Click remote reset, ENS and SNS indicators will be on at the same time.

Select the equipment in the list first, click "Remote Reset" button, it will pop up a confirmation dialog, then click "OK" to complete the operation.



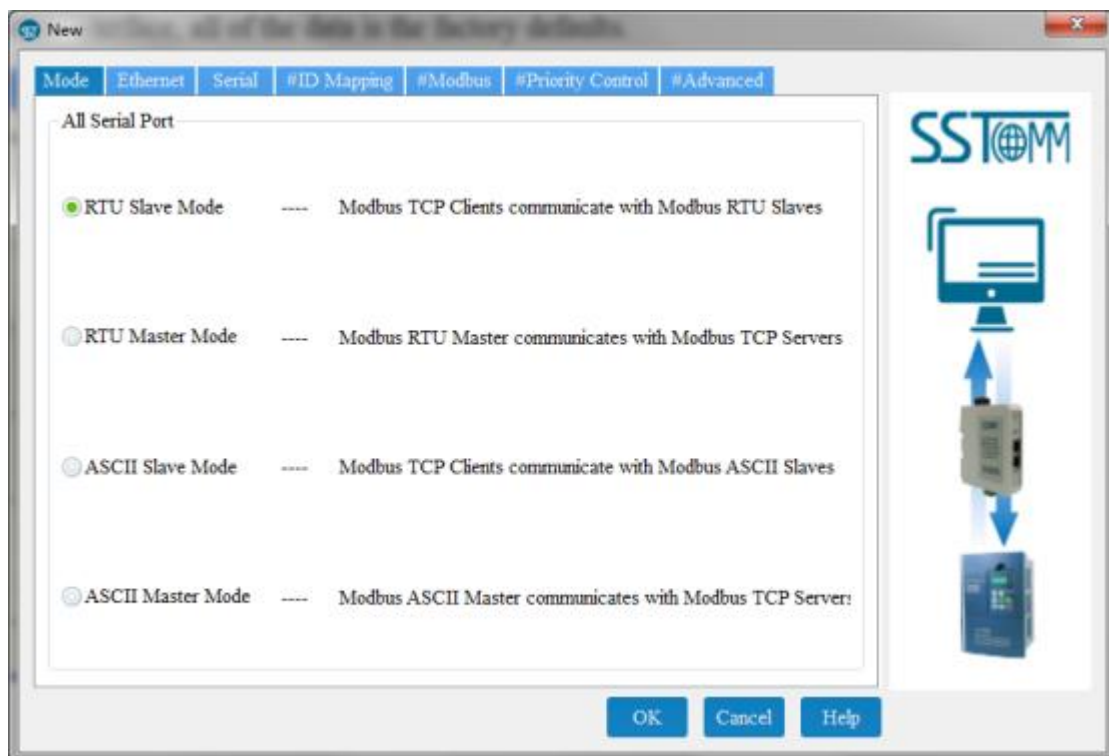
2.9 New (Offline Configuration)

Click "New" and select an equipment message dialog box:





Into the new configuration interface, all of the data is the factory defaults.

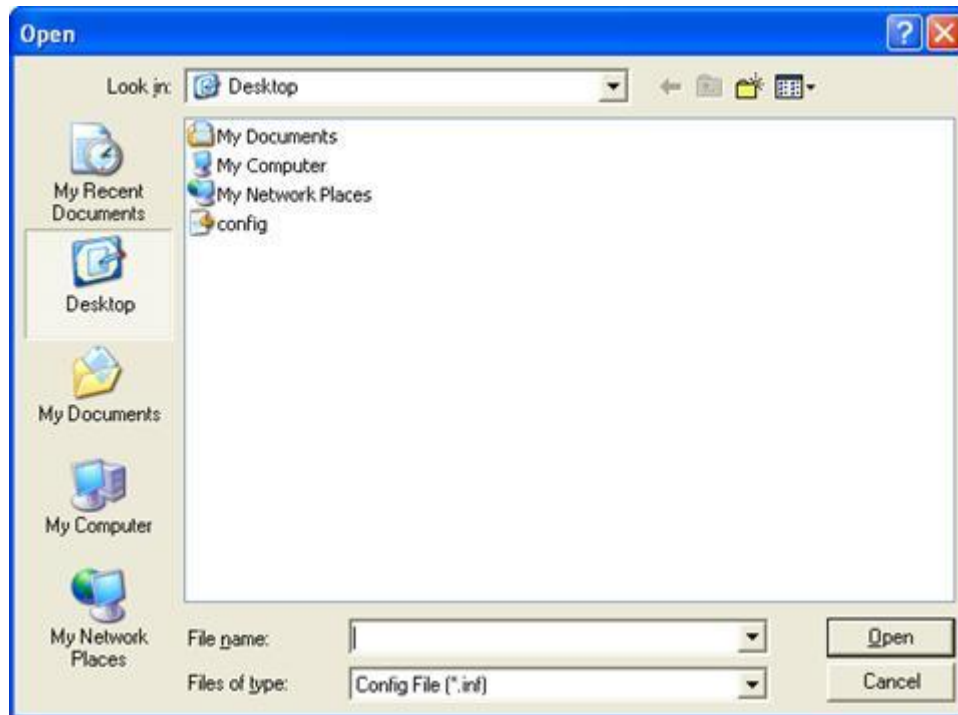


2.10 Open

Open: Including open online and open offline;

Open online (shown as below) : be equivalent with "import", select the equipment from the list, click "Open", if the equipment type of the gateway is the same with the opened configuration

file type , and the equipment allows remote configuration , open successfully ; otherwise, given the appropriate error message.



Open offline: Open directly without choosing the equipment.

2.11 Save

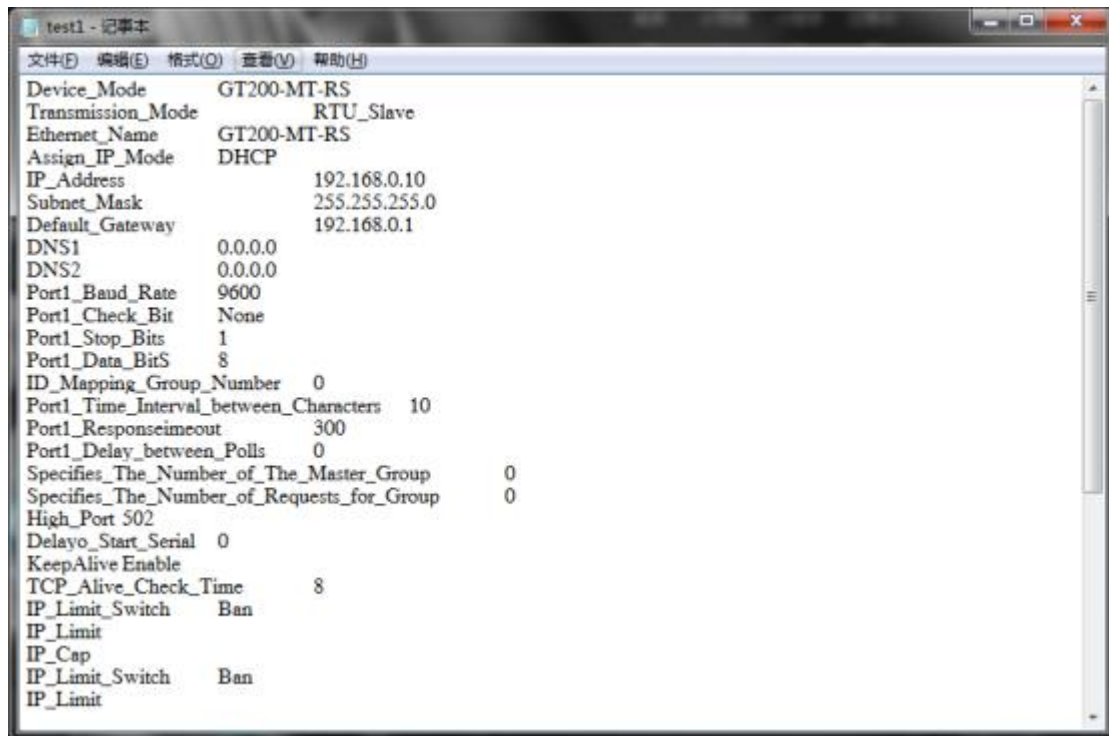
Save: Select equipment; click "Save", save the parameters of the equipment as ".inf" format on the hard disk.



Notes:

The configuration file can be open with notepad, you can modify the data inside, make sure the accuracy of the modified data;

Please do not modify keywords, do not add a space.



2.12 Communication Test

"Communication Test" can send Modbus TCP request manually, it is convenient for user's debugging serial equipment, click "Communication Test" to enter:

The screenshot shows a software window titled "Communications Test". It contains a section for sending a Modbus communication frame with the following fields: IP Address (empty), Port (502), Function Code (1), Slave ID (1), Start Address (0), and Number (1). There is a "Send" button. Below this is a "Data" field. The "Results" section includes a "State" field and a large "Data" text area for displaying the response.

IP Address: the IP address of equipment needs to be connected;

Port: the port number of equipment needs to be connected; the default value is 502;

Function: support function code: 1, 2, 3, 4, 5, 6, 15, 16;

Slave ID: the slave address (virtual ID);

Start Address: the start address of registers or coils;

Number: the number of registers or coils;

Data (up): the data needs to be sent;

State: the response state, "No response", "Right response", "Wrong response";

Data (down): show the content of response message.

Note: the input data is HEX data, it must comply with "32 A2 03" format. The data format is this one too.