Modbus/EtherNet/IP Gateway

GT200-EI-2RS485

User Manual

REV 2.3





SST Automation

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GT200-EI-2RS485

Modbus/EtherNet/IP Gateway

User Manual

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1 About the Gateway

1.1 Function

GT200-EI-2RS485 is a gateway which can exchange data between Modbus to EtherNet/IP protocol. The gateway acts as the slave at the EtherNet/IP side and the master or slave at the Modbus side.

1.2 Feature

- Redundant Power Supply
- Two independent RS-485 interfaces 1KV optoelectric isolation
- Ethernet 10/100M adaptive
- IP address conflict detection
- Modbus network debugging
- Easy to use configuration software SST-GT-CFG

1.3 Technical specification

- [1] EtherNet/IP network is independent with two Modbus subnet;
- [2] Ethernet 10/100M adaptive;
- [3] Support IP addresses conflict detection function;
- [4] Support the ODVA Standard EtherNet/IP communication protocol;
- [5] Two serial RS-485 interfaces, half-duplex, and baud rate support: 1200, 2400, 4800, 9600, 19200, 38400,
- 57600, 115200; parity mode support: none, odd, even, mark, space; 1 or 2 stop bits;
- [6] GT200-EI-2RS485 acts as master at the side of Modbus network and supports 01H, 02H, 03H, 04H, 05H, 06H,
- 0FH, 10H function codes, can be configured up to 48 Modbus commands for each RS-485 interface; Modbus

function codes 03H, 04H, 06H and 10H support "Byte Swap" function, and it can help users solve the problem of

data format between two different networks;



GT200-EI-2RS485 Modbus/EtherNet/IP Gateway User Manual

- [7] Two independent RS-485 interfaces with 1KV optical isolation;
- [8] The maximum number of input and output bytes of EtherNet/IP:

Maximum number of input bytes: 492Bytes

Maximum number of output bytes: 492Bytes

- [9] Power supply: 24VDC (11V ~ 30V), 90mA (24VDC);
- [10] Working temperature: $-4^{\circ}F \sim 140^{\circ}F(-20^{\circ}C \sim 60^{\circ}C)$, relative humidity: 5% ~ 95% (no condensation);
- [11] External dimensions (W*H*D): 1.57 in*4.92 in *4.33 in (40mm*125mm*110mm);
- [12] Installation: 35mm DIN rail;
- [13] Protection class: IP20;
- [14] Test standard: EMC test standards.

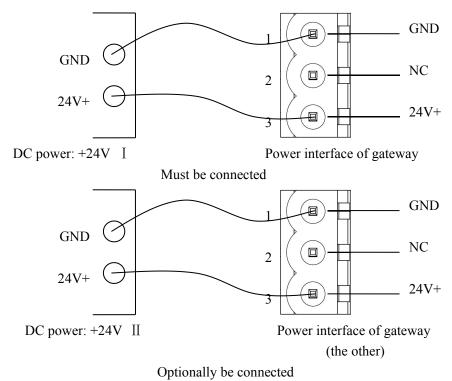
2 Quick Start Guide

2.1 Connecting the power

DC 24V power supply, dual power supply interface, a redundant function, users can use one or two power supply.

If you are using two power supply, when the way in which the power fails, the other way you can continue to supply power to ensure normal operation.

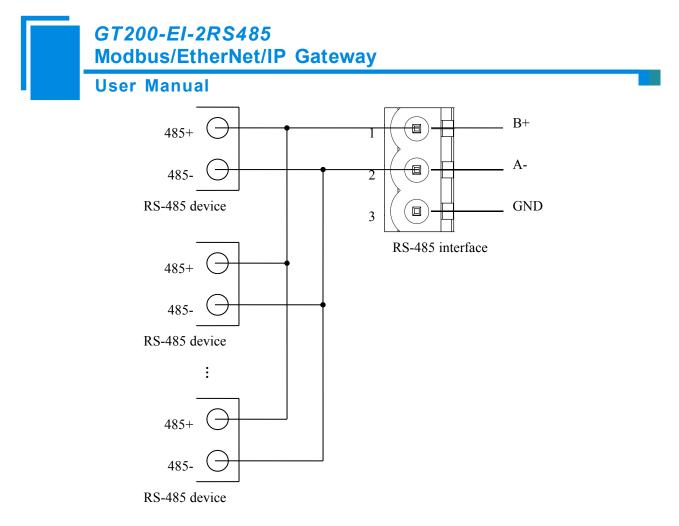
Power supply wiring as shown below:



2.2 Connect Serial Devices

RS-485 connection as shown below:



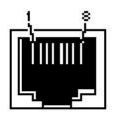


In order to prevent signal reflection and interference in RS-485 multipoint communication, adding one terminal resistor at the both farthest ends of the line is necessary, and the argument is $120\Omega \ 1/2W$.

Note: There is no internal termination resistor in the RS-485 interface of GT200-EI-2RS485.

2.3 Ethernet Connection

Ethernet interface applies RJ-45 connector, 10/100M adaptive.



RJ-45 port



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Pin	Signal Description
S1	TXD+,Tranceive Data+, Output
S2	TXD-, Tranceive Data-, Output
S3	RXD+, Receive Data+, Input
S4	Bi-directional Data+
S5	Bi-directional Data-
S6	RXD-, Receive Data-, Input
S7	Bi-directional Data+
S8	Bi-directional Data-

2.4 Configuration Switch

Configuration switches located on the bottom of the gateway, set the mode bit (bit 1) to 0 (Off), and set function bit (bit 2) to 0 (Off), power (or restart) the device to work.

Mode bit (bit 1)	Function bit (bit 2)	Description
Off	Off	run mode, allowing read and write configuration
OII	Oli	data
Off	On	run mode, read and write configuration data
On Off c		Configuration mode, IP address is fixed at
	Off or On	192.168.0.10, this mode can only read and write
		configuration data, cannot communication
		between EtherNet/IP and Modbus network

2.5 Installing Software

Double click the SST-GT-CFG software installation package and install the configuration software SST-GT-CFG, you can easily follow the prompts to complete the installation. Then open the configuration software and finish the configuration of GT200-EI-2RS485!

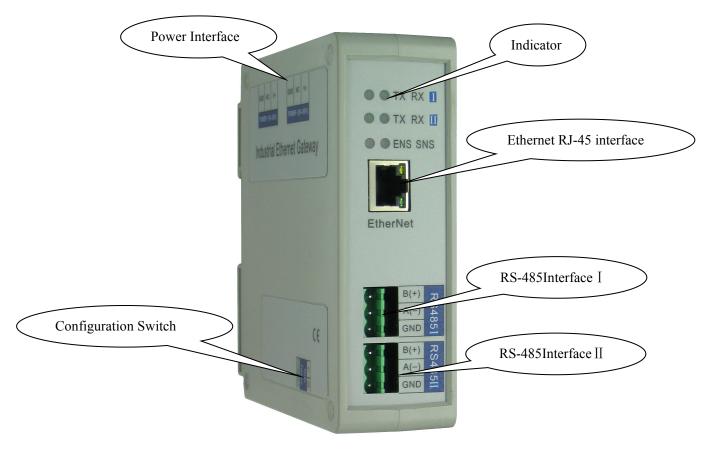
Note: The factory set of GT200-EI-2RS485 is DHCP, if the network has no DHCP Server, you can set mode bit (bit 1)to 1(On), and restart GT200-EI-2RS485 (power off and power on), then the fixed IP address of GT200-EI-2RS485 is 192.168.0.10, subnet mask is 255.255.255.0, gateway address is 192.168.0.1.





3 Hardware Description

3.1 Appearance



3.2 Indicators

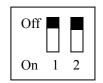
Indicator	Status	Description
	Always green	EtherNet/IP connection is established
	Green flashing	EtherNet/IP connection is not established
ENS	Always red	IP address conflict
	Red flashing	EtherNet/IP connection timed out; DHCP, BOOTP,
		IP address conflict detection
	Always green	Modbus Communication is normal
		At least one Modbus network response timeout,
SNS	Always red	exception or error
	Red and green light	At least part of one Modbus network timeout,
	flashing alternately	exception or error



	<i>GT200-EI-2RS485</i> Modbus/EtherNet/IP Gateway		
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ENS ora	ange light and SNS	Light at one time	Start up status
0	orange light		
(orange light: Red and green		Flashing alternately	Configuration mode
ligh	nt at one time)		

3.3 Configuration Switch

Configuration switch locate on the bottom, bit 1 is mode select bit, bit 2 is function set bit.



Mode bit (bit 1)	Function bit (bit 2)	Description
Off	Off	Operation mode, allowing read and write
OII	OII	configuration data
Off	On	Operation mode, read and write
Oli	Oli	configuration data against
		Configuration mode, IP address is fixed at
		192.168.0.10, this mode can only read and
On	Off or On	write configuration data, can not
		communication between EtherNet / IP and
		Modbus network

Note: Restart GT200-EI-2RS485 (power off and power on) after resetting the configuration and the configuration can take effect!

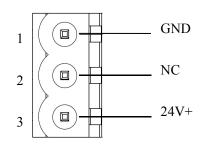
3.4 Interface

3.4.1 Power Interface

GT200-EI-2RS485 has two power interfaces, with power redundancy function, when one the way to power failure, power can continue to supply the other way.



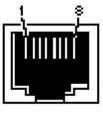
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Pin	Function
1	GND,
2	NC, no connection
3	24V+ , DC

3.4.2 Ethernet Interface

Ethernet interface apply RJ-45 connector, 10/100M adaptive.



RJ-45 port

Pin	Signal Description
S1	TXD+, Tranceive Data+, Output
S2	TXD-, Tranceive Data-, Output
S3	RXD+, Receive Data+, Input
S4	Bi-directional Data+
S5	Bi-directional Data-
S6	RXD-, Receive Data-, Input
S7	Bi-directional Data+
S8	Bi-directional Data-

3.4.3 RS-485 Interface

The RS-485 interface of GT200-EI-2RS485 is standard, and the RS-485 characteristics of the product are shown as follows:



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1. The basic characteristics of RS-485 transmission technology

- ① Network topology: Linear bus, there are active bus termination resistors at both sides.
- 2 Transfer rate: 300 bps~115.2Kbps.

③ Media: Shielded twisted-pair cable and also can cancel the shielding, depending on environmental conditions (EMC).

(4)Site number: 32 stations per subsection (without repeater), and can up to 127 stations (with RS-485 repeater).

⁽⁵⁾Plug connection: 3-pin pluggable terminal.

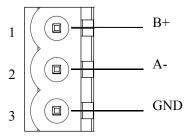
2. The main points on RS-485 transmission equipments installation

①All the equipments be connected with RS-485 bus;

②Subsection can be connected up to 32 sites;

③The farthest end of bus has a termination resistor— $120\Omega \ 1/2W$ to ensure reliable operation of the network.

Serial interface uses 3-pin pluggable terminal and users can wire it according to the wiring instructions on the panel.



Pin	Function
1	B+, RS-485
2	A-, RS-485
3	GND



4 Instructions of Configuration Software

4.1 Notes before Configurating

SST-GT-CFG is a product based on Windows platform, and used to configure GT200-EI-2RS485. It can set

related parameters and commands of Modbus and other bus.

The document mainly introduces the use method of GT200-EI-2RS485.

Double-click the icon to enter the main interface of the software:

😂 🖬 🗑 🍯 🖀 🖌 📥			
	Configuration		
themet	Type of Protocol	EtherNet/IP	
ubnet 1	Assign IP Mode	Manual Assign	
ubnet 2	IP Address	192.168.0.110	
ubriet 2	Subnet Mask	255.255.255.0	
	Gateway Address	192.168.0.1	
	DNS1	0.0.0.0	
	DNS2	0.0.0.0	
	DIV32	0.0.0.0	
	· · · · · · · · · · · · · · · · · · ·		

4.2 User Interface

SST-GT-CFG interface include: title bar, menu bar, toolbar, status bar, equipment section, configuration section and notes section.



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Note: All the gray part in the software can not be changed.

💥 Gateway Configuration Software SSI-GI-CFG	
File(F) Edit(E) Tools(T) Help(H)	
	u bar Title bar
Device Conternet Subnet 1 Subnet 2 Conternet Subnet 2 Conternet Subnet 1 Subnet 2 Conternet Subnet 1 Subnet 2 Conternet Subnet 2 Conternet Subnet 2 Conternet Subnet 2 Conternet Subnet 3 Subnet 2 Conternet Subnet 3 Subnet 4 Subnet 2 Conternet Subnet 3 Subnet 3	u bar Title bar EtherNet IP Manual Assign 192.168.0.110 255.255.0 192.168.0.1 figuration section: input figuration parameters, gray can not be modified, while the part can be modified. Notes section: The specific explanation to the nouns appearing in the configuration and devices to help users to understand and operate.

Toolbar is shown as below:



Functions separately from left to right are: new, open, save, add nodes, delete nodes, add commands, delete commands, upload configuration, download configuration, conflict detect, output Excel configuration document and debug.

DNew: Create a new configuration project

Gen: Open a configuration project

Save: Save the current configuration

Add nodes: Add a Modbus slave node



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Delete nodes: Delete a Modbus slave node

Add commands: Add a Modbus command

X Delete commands: Delete a Modbus command

Lupload configuration: Read the configuration from the module and show it in the software

E Download configuration: Download the configuration from the software to the module

Conflict Detect: Detect whether there is conflict in memory data buffer of the gateway

Calculate Mapping Address: Used to automatically calculate the mapped memory address without conflict by each command

Dutput Excel document: Output the current configuration to local hard disk and save it as .xls file

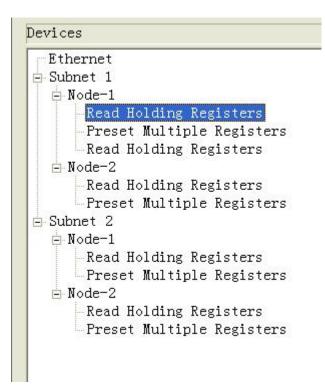
Debug: For debugging Modbus communications, and defining the network fault.





4.3 Operation of Devices view

4.3.1 Devices View Interface



4.3.2 Operation Mode

The equipment view supports three types of operation: Edit Menu, Edit Toolbar and Right click edit Menu.

ay configurati	St.	ubn e+
dit(E) Tools(I)		Add Node
Add Node(N)		Del Node
Del Node(D)		Add Order
Add Order (I)	📷 태 😫 🔚 😂 (Del Order
Del Order (E)		Copy Node
bnet Node-1	evice Add Node	Paste Node

4.3.3 Operation types

1 Add nodes: Right click on subnet or existing nodes, and then perform the operation of adding a new node. Then there is a new node named "new node" under subnet.



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2 Delete nodes: Right click on the node to be deleted, and then perform the operation of deleting the node.

The node and its all commands will be deleted.

3 Add commands: Right click on the node, and then perform the operation of adding command to add a command for the node. The dialog box will be shown as follow:

Currently, it supports the commands: 01, 02, 03, 04, 05, 06, 15 and 16.

Select the command: Double click the command

,	
	Read Coil Status
	Read Input Status
03	Read Holding Register
	Read Input Register
05	Force Single Coil
06	Preset Single Register
07	Read Exception Status
08	Diagnostics
11	Fetch Comm Event Ctr
12	Fetch Comm Event Log
13	Program Controller
14	Poll Controller
15	Force Multiple Coils
16	Preset Multiple Registers

4 Delete commands: Right-click on the command and then perform the operation of deleting the command.

5 Rename nodes: Left click on the node to be renamed, and then the edit status will be shown and you can rename it.

4.4 Operation of Configuration View

4.4.1 Ethernet Configuration

In the interface of device view, click Ethernet, and then the configuration view is shown as follows:

Configurable items include: IP setting method, IP address, subnet mask, gateway address, DNS1, DNS2.

IP setting method: static configuration, BOOTP, DHCP can be selected.

IP Address: Set the device IP address.

Subnet Mask: Set subnet mask of the device.





Gateway Address: Set gateway address.

DNS1: Set the device DNS1 address.

DNS2: Set the device DNS2 address.

e	🛃 💐 🛅 🕞 🖵		
hernet	Type of Protocol	EtherNet/IP	
bnet 1	Assign IP Mode	Manual Assign	
bnet 2	IP Address	192.168.0.110	
	Subnet Mask	255.255.255.0	
	Gateway Address	192.168.0.1	
	DNS1	0.0.0.0	
	DNS2	0.0.0.0	
		4000000000	
	-		

4.4.2 Subnet Configuration

Protocol is Modbus master

Configurable parameters are shown as follows:

Modbus communication baud rate, Data bits, Parity check mode, Stop bit, Transmission mode, Response timeout, Delay between polls, Polling mode of outputting commands, Time between two continuous pluses (the polling mode of outputting commands is pulse output), Scanning ratio

Interface of configuration view is shown as follow:



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Piak (Q) Teals (Q) Teals (Q) Modbus Master Device Configuration Cthernet Bauk Rate 19200 Bud Rate 19200 Data Bits 8 Preset Mubple Register Parity None Preset Mubple Register Stop Bits 1 Subnet 2 Stare Address Incomparison Stare Address Incomparison Incomparison Output Mode Change of Value Output Pulse (200~2500ms) Output Pulse (200~2500ms) Incomparison Incomparison Sca Rate (1-255) Incomparison Incomparison Incomparison Incomparison </th <th></th> <th></th> <th></th>			
Subnet 1 Type of Protocol Modbus Master Subnet 1 Baud Rate 19200 Read Holding Register Parity None Preset Multiple Registers Stop Bits 1 Subnet 2 Slave Address RTU Resone Timeout (10~60000ms) 300 Delay between Polis (0~2500ms) Output Pulse (200~2500ms) Output Pulse (200~2500ms) Change of Value			
Ethernet Type of Protocol Modbus Master Subnet 1 Baud Rate 19200 Read Holding Register Data Bits 8 Preset Multiple Registers Stop Bits 1 Subnet 2 Stop Bits 1 Slave Address Transmission Mode RTU Response Timeout (10~60000ms) 300 0 Delay between Polls (0~2500ms) 0 0 Output Mode Change of Value Output Pulse (200~2500ms)			
Subnet 1 Baud Rate 19200 Node-1 Data Bits 8 Preset Multiple Registers Parity None Subnet 2 Storp Bits 1 Subnet 2 Stave Address Transmission Mode Response Timeout (10~60000ms) 300 Delay between Polls (0~2500ms) Output Mode Change of Value Output Pulse (200~2500ms) Change of Value	Ethernet		Modbus Master
B Node-1 Data Bits 8 Read Holding Register Parity None Preset Multiple Registers Stop Bits 1 Subnet 2 Slave Address Transmission Mode Response Timeout (10~60000ms) 300 Delay between Polls (0~2500ms) 0 Output Mode Change of Value Output Pulse (200~2500ms) 0			
Read Holding Register Parity None Preset Multiple Registers Stop Bits 1 Subnet 2 Slave Address 1 Response Timeout (10~6000ms) 300 Delay between Polls (0~2500ms) 0 Output Pulse (200~2500ms) Change of Value		Data Bits	
Preset Multiple Registers Stop Bits 1 Subnet 2 Slave Address Transmission Mode Response Timeout (10~6000ms) 300 Delay between Polls (0~2500ms) 0 Output Mode Change of Value Output Pulse (200~2500ms) 0		Parity	None
-Subnet 2 Slave Address Transmission Mode Response Timeout (10-60000ms) Delay between Polls (0~2500ms) Output Mode Output Pulse (200~2500ms) Change of Value			1
Response Timeout (10~60000ms) 300 Delay between Polls (0~2500ms) 0 Output Mode Change of Value Output Pulse (200~2500ms)			
Delay between Polls (0~2500ms) 0 Output Mode Change of Value Output Pulse (200~2500ms) 0		Transmission Mode	RTU
Delay between Polls (0~2500ms) 0 Output Mode Change of Value Output Pulse (200~2500ms) 0		Response Timeout (10~60000ms)	300
Output Mode Change of Value Output Pulse (200~2500ms)			0
Output Pulse (200~2500ms)			Change of Value
Scan Rate (1~255)			
			10

Modbus communication baud rate: There are 300, 600, 1200, 2400, 9600, 19200, 38400, 57600 and 115200bps to be selected.

Data bits: 8 bits

Parity check mode: There are none, odd, even, mark and space to be selected.

Stop bits: There are 1 and 2 to be selected.

Transmission mode: There are RTU and ASCII to be selected.

Response timeout: When the Modbus master send commands, the time waiting for response from the slave, the range is 300~60000ms.

Delay between polls: After an command of Modbus having been sent and having received correct response, the time before next command being sent, the range is: $0 \sim 2500$ ms.

Polling mode of outputting command:

Modbus writing command (output command) has 4 kinds of outputting modes: Continuous output, 0utput disable,

Change-of-state output, Pulse output, Communication port



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Continuous output: The same with Modbus read command, and output according to the scanning ratio.

Output disable: Prohibit outputting Modbus write command.

Change of state output: When the output data has changed, it output the write command and stop outputting

after receiving correct response.

Pulse output: Output the write command according to the pulse period.

Scan ratio: Ratio of slow-scan and quick-scan. If the quick-scan command sends 10 times, slow-scan command sends 1 time.

4.4.3 Node Configuration

In the interface of device view, left click a node and then configuration interface is shown as follow:

💥 Gateway Configuration Software SSI-G	T-CFG	
File(F) Edit(E) Tools(T) Help(H)		
🖸 🖬 📽 📽 🛣 🕹 😹 📓	Q	
Device	Configuration	
	Configuration Slave Address (0~247)	
Ready	L.	Num





4.4.4 Command Configuration

In the interface of device view, left click a command and then configuration interface is shown as follow:

🕉 Gateway Configuration Software SST-G	T-CFG	
File(F) Edit(E) Tools(I) Help(H)		
🗋 🖬 🗱 🗑 🛣 🗙 吉 吉 💐 🛅 🖻	Q	
Device	Configuration	
Ethernet	Slave Address (0~247)	1
🖻 Subnet 1	Function Code	3
🖻 Node-1	Starting Address	0
- Read Holding Register	Number of Data	8
Preset Multiple Registers	Mapping Address (HEX)	OH
Subnet 2	Mapping Bit (0~7)	
	Number of Bytes	16
	Byte Swap	Disable
	Type of Check	CRC
	Type of Scan	Fast Scan
	Byte swap: Enable or Disable	
Ready		Num //

The starting address of Modbus register: The starting address of register or switching value or loop and so on in Modbus slave and the range is 0~65535.

Data number: The length of data. Two bytes are one data length.

The starting address of memory mapping (hexadecimal): The starting address of data in memory buffer of the module.

The address range of data mapping in the module memory:

Read command: 0x0000~ 0x01FF

Write command: 0x4000 ~ 0x41FF

When write command is used exchanging locally, it also can use: $0x0000 \sim 0x01FF$

Bit offset of memory mapping $(0 \sim 7)$: For the bit operation commands, the position range of start-bit byte is





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0~7.

Bytes swap: There are three kinds of type, No swapping, two bytes swapping, four bytes swapping. The byte display order of Modbus and Profibus-DP is MSB being preferential; the byte display order of DeviceNet is LSB being preferential. Users can exchange the byte display order to get correct value.

Scanning mode: There are two kinds of scanning mode: quick-scan and slow-scan. It is fit for requests of user about quick-scan or slow-scan of different commands. Slow-scan is equal to quick-scan being multiplied by scan ratio. (Configure it in the interface of subnet configuration interface)

4.4.5 Notes View

Notes view displays the explanation of configuration. The notes that show how to configurate the starting address of memory mapping is shown as follow:

🔀 Gateway Configuration Software	SST-GT-CFG	
File(F) Edit(E) Tools(T) Help(H)		
🗋 🖼 🗑 🗑 🗑 🖉 🗙 古 古 🚜 🗎		
Device	Configuration	
Ethernet	Slave Address (0~247)	1
🖻 Subnet 1	Function Code	3
- Node-1	Starting Address	0
- Read Holding Register	Number of Data	8
Preset Multiple Registers	Mapping Address (HEX)	OH
Subnet 2	Mapping Bit (0~7)	
	Number of Bytes	16
	Byte Swap	Disable
	Type of Check	CRC
	Type of Scan	Fast Scan
	Every Modbus command can be set to according to the "Scan Rate". Scan Ra) fast scan or slow scan. The gateway will send Modbus command te is ratio of fast scan to slow scan.
Ready		Rum

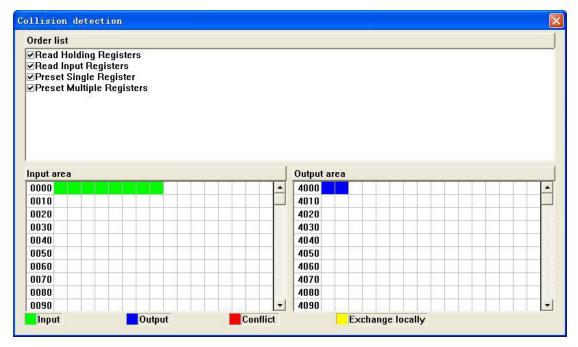




4.5 Conflict Detection

For the detection of whether there is conflict of "the starting address of memory mapping", if conflict it can

adjust in time. The interface is shown as follow:



4.5.1 Operation of Command List

All the configuration commands can be shown at the command list. Each select box before command is used for checking the memory-mapping location of that command. Click on the command can select the check box, and in the memory-mapping area it can show the corresponding share of spatial location. Click the command again will remove the selected box and it doesn't show the mapping location. The function can be used to conflict detect of memory-mapping area.

1	Command List
	✓Read Holding Register
E	Preset Multiple Registers



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4.5.2 Operation of Memory Mapping Area

Memory mapping area is divided two parts: input area and output area.

Input-mapping address: 0x0000 ~ 0x3FFF;

Output-mapping address: 0x4000 ~ 0x7FFF.

Each box represents a byte address.

Green: Read command show in the input-mapping area; no conflict;

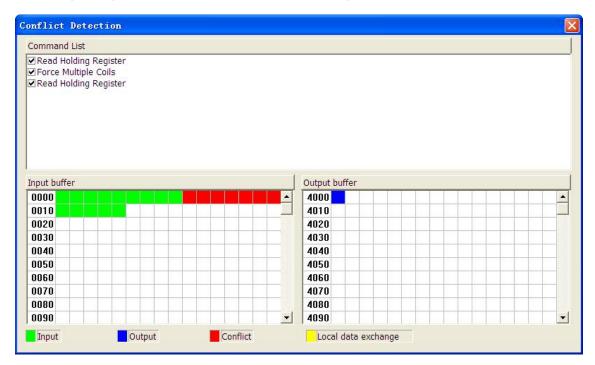
Yellow: Write command show when the mapping addresses in the input area; no conflict;

Blue: When the address mapping area is located in the output area; no conflict.

Red: Output area or input area, different commands occupy the same byte address, the byte is shown as red.

For bit operation commands, the meanings of above shows are also applicable.

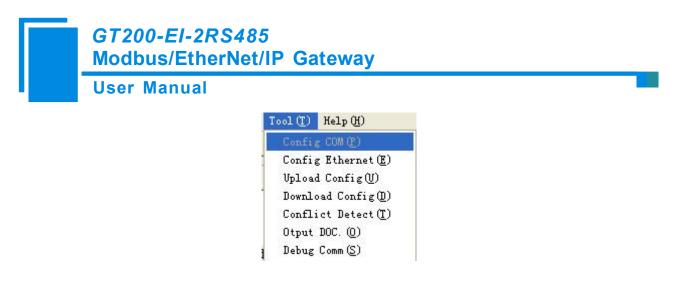
Click the input-output regional grid, whether the grid is occupied or not is shown as follows:



4.6 Hardware Communication

Hardware communications' menu items are shown as follow:





4.6.1 Ethernet Configuration

Users can choose whether to use the search function. When users use the search feature, upload or download configuration when you can search for all Ethernet equipment ENB302-MI; when the user does not use the search feature, users must specify their own devices to connect to, in the configuration when the upload or download only lists the devices.

Note: Please click "OK" button to confirm, click "Cancel" button will be enabled as a search function.

Ethernet Co	onnect	ion		×
Γį	Use the s	scan fur	nction	
The	IP addr	ess to (Connect To:	
01	<		Cancel	

4.6.2 Upload Configuration

Choose to upload configuration dialog box will pop up the search appliance:



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No.	Model GT200-EI-2RS485	IP Address	MAC Addre 00-14-97-0f-:
1	GT200-EI-2RS485	192.168.0.13 192.168.0.110	00-14-97-01- 00-40-9d-fd-a
<			>
Lo	ig In	Refresh	Cancel

Select the device you want to configure and click "Log in", then enter the upload dialog box. Gateway

configuration information will be uploaded to the software from the device; the display interface is as follows: .

on to upload the
Exit



Jser Man	ual
Ur	load 🛛
	Uploading the configuration is successful.
	Upload

4.6.3 Download Configuration

can			Ε
No.	Model	IP Address	MAC Address
1	GT200-EI-2RS485	192.168.0.13	00-14-97-0f-1d-e
2	GT200-EI-2RS485	192.168.0.110	00-40-9d-fd-a8-2
<			>
-	ng complete	Refresh	Cancel

Download configuration and upload configuration similarly:



User Manual

Downl	load	×
	Click on the "Download" button to download the configuration	
	Download Exit	
Down1	oad	
Downl	Downloading the configuration is successful.	

Note: Before downloading, make sure all the configuration has been completed and correct.

4.7 Load and Save Configuration

4.7.1 Save the Configuration Project

Select "Save" can save the project:



GT200-EI-2F Modbus/Ethe	S485 rNet/IP Gateway
User Manual	
•	File(F) Edit(E) Tool(T)
	New (M) Ctrl+N
	Open (0) Ctrl+0
	Save (S) Ctrl+S

Exit(X)

4.7.2 Load the configuration project

Select "Open" and then you can open a project:

File(F)	Edit(E)	Tool (T)
New (N))	Ctrl+N
Open ((D	Ctrl+0
Save (2	<u>s</u>)	Ctrl+S
Save a	as (<u>A</u>)	
Exit Q	Ø	

4.8 Output Excel Document

Excel document helps users to examine the configuration related.

Choose the icon , save the configuration as excel document and choose the right path.

4.9 Debug

This function is used to monitor the gateway memory data; Use the feature, the dialog box will pop up the search appliance:

User Manual

No.	Model GT200-EI	IP Address 192.168.0.13	MAC Address 00-14-97-0f-1d-e3
2	GT200-EI	192.168.0.110	00-40-9d-fd-a8-2a
			-
L	og In	Refresh	Cancel

Note: If the user specified IP address in the "Ethernet Configuration", the search list will only list the devices.

Select the device you want to configure and click "Log on", then enter the debug dialog. Display interface as follows:



User Manual

Seria	Status	Slave	Start				Dat	a/E	xce	pti	on	code	-
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
1	Respo	1	0	00	01	02	03	00	00	00	00	00	
<									ľ			>	~
	pping addre 01 02 03	ess: 4000											

Memory-mapped address: Memory starting address of writing data in the gateway

Data: Data being written to memory of gateway

Users can debug Modbus communication through transmitting data.

When Modbus slave has no response or time-out:



User Manual

Seria	Status	Slave	Start	Data/Ex 🛆
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
1	Response timeout			
			1	×
<				>
lemory map	ping address: 4000			
ata: 00	01 02 03			



User Manual

5 EtherNet/IP Connection Parameters

Gateway provides the connection parameters are as follows:

Input Instance: 102 (128Bytes), 112 (256Bytes), 122 (512Bytes);

Output Instance: 101 (128Bytes), 111 (256Bytes), 121 (512Bytes);

Configuration Instance: 113 (10 Bytes), 113 (10 Bytes), 123 (10 Bytes).

The parameters being configured in RSLogix5000 below:

lodule F	roperties:	ENetMaster	(ETHERNET-IO	DULE 1.1)	
General Cor Type: Vendor: Parent: Na <u>m</u> e: Descri <u>p</u> tion:	nnection Module ETHERNET-MO Allen-Bradley ENetMaster	Info DULE Generic Eth	Connection Pa	arameters Assembly Instance: 112 111	Size: 65 ÷ (32-bit) 64 ÷ (32-bit)
Comm Eorma Address / H IP Addr IP Addr I Host N Status: Offline	ress: 192 . 16	58 . 0 . 12 OK	O <u>u</u> tput: Configuration Status Input: Status Outpu	r 113	10 ÷ (8-bit)

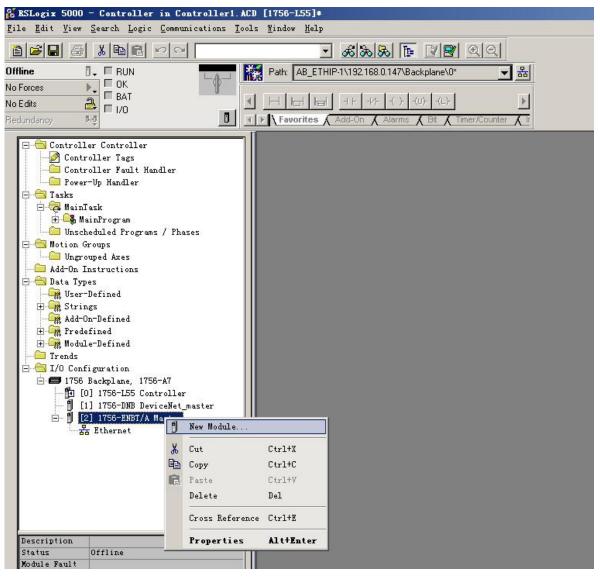


6 How to read/write I/O data

6.1 Read&write data through I/O (Recommended)

The following RSLogix 5000 example will describe how to read/write I/O data

Right click on EtherNet/IP master module, click "New Module", as shown below:



In the pop-up dialog box, unfold "+" before "Communications", choose "ETHERNET-MODULE", click "OK", as shown below:



User Manual

	Description	Vendor
<pre>1769-L35E Ether 1788-EN2DN/A 1788-ENBT/A 1788-ENBT/A 1794-AENT/A Drivelogix5730 ETHERNET-BRIDGE EtherNet/IP PH-PSSCENA/A Digital Drives HMI</pre>	Generic EtherNet/IP CIP Bridge	Allen-Bradley Allen-Bradley
•		Eind <u>A</u> dd Favorite

Configure relevant information of GT200-EI-2RS485 in the pop-up window, as shown below:

Type: ETHERNET-MODULE Generic Ethernel	Module Set Instance and siz
Vendor: Allen-Bradley	This means 128 byt
Parent: Master	Connection Parameters input and 128 byte output
Name: GT200EI2RS485 Description: Set name of EtherNet/IP slave Comm Format: Data - DINT Address / Host Name IP Address: 192 168 0 10 C Host Name: IP address of GT200-EI-	Assembly Instance Size: Input: 102 33 ÷ (32-bit) Output: 101 32 ÷ (32-bit) Configuration: 113 10 ÷ (8-bit) Status Input: 2RS485 utput:

In the above picture, the module information needs to be configured includes:

Name: Name the added EtherNet/IP salve module (GT200-EI-2RS485 module).

Comm Format: Configure data types. Users can choose data types as DINT, INT, SINT and REAL, etc. After confirmation, this cannot be changed. If you want to change data types, you can create new module.



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IP Address: Set IP address of the EtherNet/IP slave module (IP address of GT200-EI-2RS485). IP address of GT200-EI-2RS485 is the address downloaded into module through software SST-GT-CFG.

Connection Paremeters: Set Connection parameters during communication, this parameter GT200-EI-2RS485 supports can refer to past chapter.

Note: "Size" (configured bytes) in the above picture should be the consistent with relevant input and output bytes of Instance in the above chapter.

Click "OK", set master polling time interval in the pop-up dialog box, the default is 10ms, as shown below:

General Connection Module Info	r (ETHERNET-MODULE 1.1)
<u>R</u> equested Packet Interval (RPI):	10.0 — ms (1.0 - 3200.0 ms)
Inhibit Module	
Major Fault On Controller If Con	nection Fails While in Run Mode
r Module Fault	
Module Fault	
Module Fault	
Module Fault	
Module Fault	
Module Fault	

After setting this interval, click "OK" to save. Double click "Controller Tags", unfold "GT200EI2RS485: O", as shown below:



User Manual

BSLogix 5000 - Controller in Controller1. A Tile Edit View Search Logic Communications To		
Iffline D. ERUN	Patr: AB_ETHIP-1\192.168.0.147\Backplane\0"	
o Edits		
	Controller Tags - Controller (controller)	_ [] ×
E- 🔄 Controller Controller	Scope: To Controller Show Show All	
Controller Fault Handler	Name A Value + Force + Style Data Type Description	
🖻 😁 Tasks	ENB301MI:1 () () AB:ETHERNET MODULE DINT 1	
🖻 🤯 MainTask	AB:ETHERNET_MODULE_DINT_1	
🖶 🚭 MainProgram ————————————————————————————————————	EIRB301MI:0.Data () () Hex DINT[32]	
- Motion Groups		
- Ungrouped Axes		
- Add-On Instructions		
- 🔁 Data Types 	Hex DINT	
E Strings	ENB301MI:0.Data[3] 16#0000_0000 Hex DINT	
Add-On-Defined	ENB301MI:0.Data[4] 16#0000_0000 Hex DINT	
🕀 🙀 Predefined	ENB301MI:0.Data[5] 16#0000_0000 Hex DINT	
😟 🖼 Module-Defined	ENB301MI:0.Data[6] 16#0000_0000 Hex DINT	
	ENB301MI:0.Data[7] 16#0000_0000 Hex DINT	
- I/O Configuration - I/O Configuration - I/O Configuration	ENB301MI:0.Data[8] 16#0000 0000 Hex DINT	
-fe [0] 1756-L55 Controller	ENB301MI:0.Data[3] 16#0000 0000 Hex DINT	
- 🗍 [1] 1756-DNB DeviceNet_master		
🖻 🗍 [2] 1756-ENBT/A Master		
Ethernet		
1756-ENBT/A Master		
	ENB301MI:0.Data[14] 16#0000_0000 Hex DINT	
	ENB301MI:0.Data[15] 16#0000_0000 Hex DINT	
	ENB301MI:0.Data[16] 16#0000_0000 Hex DINT	
	ENB301MI:0.Data[17] 16#0000_0000 Hex DINT	
Description	ENB301MI:0.Data[18] 16#0000_0000 Hex DINT	
Status Offline Module Fault	ENB301MI:0.Data[19] 16#0000_0000 Hex DINT	

In the above picture, GT200EI2RS485:O.Data [0] ~GT200EI2RS485:O.Data [31] is the corresponding

output data address of GT200-EI-2RS485 module in master.

Unfold "GT200EI2RS485: I", as shown below:

e <u>E</u> dit <u>V</u> iew <u>Search</u> <u>Logic</u> <u>Communications</u> <u>T</u> oo						
FR 5 X BR 20	- <u>&</u> &&	<u> 22</u>				
	Path: AB_ETHIP-1\192.168.0.147	\Backplane\0*	- 8			
	 Instantial laterate from and a process discover discovery 	-former former f				
dits 📇 🗖 1/0		(U)(L)-	>			
Indancy D.O	Favorites Add-On Alarm	ns 🔏 Bit 🔏 Timer/Counte				
- Controller Controller	Controller Tags - Contro	ller(controller)				- 0
- Controller Controller						
Controller Fault Handler	Scope: 🛐 Controller 💌	Show Show All				
Power-Up Handler	Name	Value 🔶 I	Force 🔦 Style	Data Type	Description	
- Tasks	E-ENB301MI:I	()	()	AB:ETHERNET_MODULE_DINT_1		
😑 🧖 MainTask 🗄 🕞 MainFrogram	E-ENB301MI:I.Data	()	{} Hex	DINT[33]		
Unscheduled Programs / Phases	E-ENB301MI:I.Data[0]	16#0000 0000	Hex	DINT		
😑 😁 Motion Groups	ENB301MI:I.Data[1]	16#0000 0000	Hex	DINT		
Ungrouped Axes	ENB301MI:I.Data[2]	16#0000 0000	Hex	DINT		
- Add-On Instructions	ENB301MI:I.Data[3]	16#0000 0000	Hex	DINT		
User-Defined	ENB301MI:LData[4]	16#0000 0000	Hex	DINT	-	
🕀 🙀 Strings	ENB301MI:I.Data[5]	16#0000_0000	Hex	DINT		
Add-On-Defined						
Predefined Module-Defined	+ ENB301MI:I.Data[6]	16#0000_0000	Hex	DINT		
Trends	ENB301MI:I.Data[7]	16#0000_0000	Hex	DINT		
E G I/O Configuration	ENB301MI:I.Data[8]	16#0000_0000	Hex	DINT		
🖻 📼 1756 Backplane, 1756-A7	ENB301MI:I.Data[9]	16#0000_0000	Hex	DINT		
[1] [0] 1756-L55 Controller	ENB301MI:I.Data[10]	16#0000_0000	Hex	DINT		
[1] 1756-DNB DeviceNet_master [2] 1756-ENBT/A Master	ENB301MI:I.Data[11]	16#0000_0000	Hex	DINT		
E S Ethernet	ENB301MI:I.Data[12]	16#0000_0000	Hex	DINT		
ETHERNET-MODULE ENB301MI	ENB301MI:I.Data[13]	16#0000_0000	Hex	DINT		
1756-ENBT/A Master	ENB301MI:I.Data[14]	16#0000_0000	Hex	DINT		
	ENB301MI:I.Data[15]	16#0000_0000	Hex	DINT		
	ENB301MI:I.Data[16]	16#0000 0000	Hex	DINT		
	+ ENB301MI:I.Data[17]	16#0000 0000	Hex	DINT		
	ENB301MI:I.Data[18]	16#0000 0000	Hex	DINT		
Description	ENB301MI:I.Data[19]	16#0000 0000	Hex	DINT		
Status Offline	ENB301MI:I.Data[20]	16#0000_0000	Hex	DINT		

In the above picture, four bytes of GT200EI2RS485: I. Data [0] is real time frame head of EtherNet/IP slave. GT200EI2RS485:I.Data [1] ~GT200EI2RS485: I. Data [32] is the corresponding input data address of GT200-EI-2RS485 module in master.





6.2 Read and Write Data using MSG

The following RSLogix 5000 example will describe how to read/write I/O data using MSG.

6.2.1 Read I/O Data

Create a new project; it is in the "Offline" mode. Add two new tags "ReadTag" and "ReadData" under the "Controller Tags" and set the type of "ReadTag" as "MESSAGE" and "ReadData" as "DINT [500]".

SLogix 5000 - Controller in Controller1. 2 Edit View Search Logic Communications I						_
	Path: AB_ETHIP-1\192.168.0.14	NBackplane\0*				
		D OR XOR SWPB NOT CLR BTD			M	
dits AT	Favorites & Add-On & Alan		ut 🔏 Compare 🔏 Compute/Math 🗎 M	ove/Logical 🖌 File/Misc. 🔏 F	Tile/Shift 🔏 Sequer	
indancy się			a A compare A comparemian A in	DVE/LUGICAL A LIEWISC. A		
∃- 🔂 Controller Controller	🖉 Controller Tags - Contr	oller (controller)				
- 🖉 Controller Tags - 🧀 Controller Fault Handler	Scope: 🗗 Controller 🔹	Show Show All				
- Power-Up Handler	Name	△ Value	Data Type	Description		
- 🔄 Tasks	E Local 1:1	{}	AB:1756_DNB_500Bytes:1:0			
🖻 🚑 MainTask 🖻 🕞 MainProgram	±'Local:1:0	{}	AB:1756_DNB_496Bytes:0:0			
- Program Tags	⊞:Local:1:S	{}	AB:1756_DNB_Status_128Bytes:S:0			
🚺 MainRoutine		{} {} Hex	DINT[500]			
	± ReadTag	{}	MESSAGE			
Ungrouped Axes						
🗀 Add-On Instructions						
🗄 🛅 Data Types						
User-Defined						
Add-On-Defined						
🖅 🙀 Predefined						
🗄 🙀 Module-Defined						
🗀 Trends 🔂 I/O Configuration						
1756 Backplane, 1756-A7						
[0] 1756-L55 Controller						
[1] 1756-DNB DeviceNet_Master						
- 1 [2] 1756-ENBT/A Master						
thernet						
scription	-1111					
atus Offline						
dule Fault						
	Tonitor Tags (Edi					
)			1			

Right click "ReadTag", select "Configure "ReadTag"":



User Manual

🖉 Controller Tags	- TyEthernetIP(controller)		
Scope: 🖞 MyEthernetlP	✓ Show Show All		
Name	△ Value ← Force Mask ← Style	Data Type	Description
E-Local:1:1	{}	AB:1756_DN	
+ Local:1:0	{}	AB:1756_DN	
E-Local:1:S	{}	AB:1756_DN	
🕨 🕂 ReadTag	Edit "ReadTag"	ALEON OF	
	Edit "ReadTag" Properties	Alt+Enter]	
	Configure "ReadTag"		
	Edit "MESSAGE" Data Type		
	Go to Cross Reference for "ReadTag" Message Path Editor	Ctrl+E	
	Go To	Ctrl+G	
	Toggle Bit	Ctrl+T	
	Force On		
	Force Off		
	Remove Force		
*	Cut	Ctrl+X	
₽ P	Copy	Ctrl+C	
C	Paste	Ctrl+V	
	Paste Pass-Through		
	Delete	Del	
	Options		
	1		
▲ Monitor Tage	s 🖌 Edit Tags /		(1

In the new pop-up window, it needs to set some parameters as below:

Message Type: CIP Generic

Service Type: Select "Get Attribute Single", now, relevant service code will become "e (Hex)"

Class: 4 (Hex)

Instance: 102 (128 Bytes), 112 (256 Bytes) and 122 (492 Bytes) can be set

Attribute: 3 (Hex)

Destination: Select "ReadData" label, now, the data that have been received will be saved in this tag.



User Manual

		guration - Re Communication 1	adIag Nag			Ľ
Message Service Type: Ser <u>v</u> ice		CIP Generic ribute Single (Hex) <u>C</u> lass: 4	• (Hex)	Source Element:	0 🛨	(Bytes)
Code: <u>I</u> nstance:	-	Attri <u>b</u> ute: 3	(Hex)	<u>D</u> estination	ReadData	
) Enable	🔵 Er	able Waiting 🔘 S	Start	O Done	Done	0
) Error (ror ror	Code:	Extended Er	ror		🦵 Timed Ou	•

Choose "Communication" label, input the relevant path of connecting EtherNet/IP slave in the blank space behind the Path, the path format is: EthetNet IP hostname, EtherNet/IP master slot No., IP address of EtherNet/IP slave, after setting the path, click "Apply", "Confirm". As is shown below:

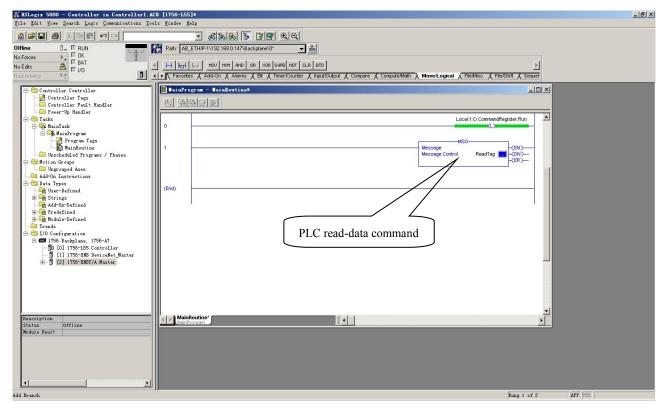
In this instance, EtherNet/IP hostname is "Master", EtherNet/IP master slot No. Is "2", EtherNet/IP slave (GT200-EI-2RS485) is "192.168.0.10". IP address of GT200-EI-2RS485 is the address which is downloaded into the module through SST-GT-CFG.

	Master, 2, 192.					Browse	
	Master, 2, 192.1	68.0.10					
e (munication Meth DIP C D <u>H</u> +			Destina	tion Link:		3
0	CIP <u>W</u> ith Source ID	Source Link:	0	🛨 Destina	tion <u>N</u> ode:	Jo <u>=</u>	(Octal)
	C <u>o</u> nnected		🔽 Cach	e Connections	*		
				O Done	Done	0	
Enab	le 🔘 Enabl						

Add a "MSG" command in "MainRoutine" under the "MainProgram" and choose "ReadTag" as "Message



Control", as shown below:



This is a simple command which can sent a read request, it still needs to add some logic commands to trigger this command in common program. About the detailed information, please refer to RSLogix5000.

Download the program to the PLC and set PLC into "Online" state.

Click "Control Tags" and select "Monitor Tags", unfold "ReadData", you will see that PLC can read the data of Modbus slave through the adapter GT200-EI-2RS485.



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e Edit View Search Logic Communications]			1				
		a 🖪 🗹 🕿 🔍 Q Q					
ine 🛛 🗸 🗏 RUN	Path: AB_ETHIP-1\192.168.	0.147\Backplane\0*	- *				
Edits 🔒 👘 🖓	▲ H H H H NOV NVN	AND OR XOR SUPB NOT	GLR BTD			Þ	
lundancy 🖓 🛄	Add-On A	Alarms & Bit & Timer/Coun	ter 🖌 Input/Outs	out 🔏 Compare 🔏 Compute	Math \lambda Move.Logical 🖌 FileMisc. 👗	File/Shift Sequer	
	Controller Tags - Co	untroller (controller)					
Controller Controller							
Controller Fault Handler	Scope: 🛐 Controller	Show Show All					
Power-Up Handler	Name	🛆 Value 🔶 For	xe 🗲 Style	Data Type	Description		
🖻 🚖 Tasks	☐ ReadData	() {) Hex	DINT[500]			
Hainiask	E ReadData[0]	16#0000_0000	Hex	DINT			
- Program Tags	E ReadData[1]	16#0000_0000	Hex	DINT			
👘 🛍 MainRoutine	E:ReadData(2)	16#0000_0000	Hex	DINT			
Unscheduled Programs / Phases	E ReadData[3]	16#0000 0000	Hex	DINT			
Ungrouped Axes	E ReadData[4]	16#0000 0000	Hex	DINT			
- Can Add-On Instructions	E ReadData[5]	16#0000 0000	Hex	DINT			
🖻 😁 Data Types	E ReadData(6)	16#0000 0000	Hex	DINT			
User-Defined	⊞ ReadData[7]	16#0000 0000	Hex	DINT			
Add-On-Defined	E ReadData[8]	16#0000 0000	Hex	DINT			
🕀 🙀 Predefined	E ReadData(9)	16#0000 0000	Hex	DINT			
😟 🔙 Module-Defined	E ReadData[0]	16#0000 0000	Hex	DINT			
- 🗁 Trends - 🚔 I/O Configuration	BeadData[11]	16#0000_0000	Hex	DINT			
- m 1756 Backplane, 1756-A7	E:ReadData[12]	16#0000_0000	Hex	DINT			
📴 [0] 1756-L55 Controller	E ReadData[12]		Hex	DINT			
		16#0000_0000		DINT			
H- D [2] 1756-ENDI/A Master	E ReadData[14]	16#0000_0000	Hex				
	E ReadData[15]	16#0000_0000	Hex	DINT			
	E ReadData(16)	16#0000_0000	Hex	DINT			
	E ReadData(17)	16#0000_0000	Hex	DINT			
	E ReadData[18]	16#0000_0000	Hex	DINT			
	E ReadData[19]	16#0000_0000	Hex	DINT			
	E ReadData(20)	16#0000_0000	Hex	DINT			
	E ReadData(21)	16#0000_0000	Hex	DINT			
	E ReadData[22]	16#0000_0000	Hex	DINT			
	E ReadData[23]	16#0000_0000	Hex	DINT			
	E ReadData[24]	16#0000_0000	Hex	DINT			
	E ReadData[25]	16#0000_0000	Hex	DINT			
	E ReadData[26]	16#0000_0000	Hex	DINT		-	
4 ()	I Ionitor Tags	Edit Tags /		1			

6.2.2 Write I/O Data

Enter the "Offline" mode, add two new tags "WriteTag" and WriteData" under the "Controller Tags". Define the type of "WriteTag" as "MESSAGE" and "WriteData" as "DINT [500]":

New Tag		×	Hew Tag		×
<u>N</u> ame:	WriteData	OK	<u>N</u> ame:	WriteTag	ОК
Description:	*	Cancel	Description:		Cancel
		Help			Help
	*				
<u>U</u> sage:	<normal></normal>		<u>U</u> sage:	<normal></normal>	
Тур <u>е</u> :	Base <u>Connection</u>		Typ <u>e</u> :	Base	
Alias <u>F</u> or:			Alias <u>F</u> or:		
Data <u>T</u> ype:	DINT[500]		Data <u>T</u> ype:	MESSAGE	
<u>S</u> cope:	Controller		<u>S</u> cope:	🔁 Controller 💽	
Style:	Hex		Style:	Y	
🗖 Open Cor	nfiguration		🔲 <u>O</u> pen ME	SSAGE Configuration	



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Edit View Search Logic Communications I			1				
	and the second s	6 🖪 🖉 🖳 🔍 G					
	Path: AB_ETHIP-1\192.168.0	l.147\Backplane\0*	▼ 品				
	at the stand the stand	l ser l'art l'era l'ara l'ar	Issuel as a			1	
° 📥 🗆 1/0 🔤		COP FLL AVE SRT ST) SIZE CPS			<u>}</u>	
lancy R.đ	Favorites 🖌 Alarms 👗 E	lit 🔏 Timer/Counter 🤾 Inpu	:/Output 🖌 Com	oare 🔏 ComputeMath 🔏 Move/Logical	File/Misc. File/Shit	t K Sequencer K Equir	
🔂 Controller Controller	Controller Tags - Co	ntroller (controller)					
- 🖉 Controller Tags	Scope: Controller	 Show Show All 					
- Controller Fault Handler - Diver-Vp Handler	Name		ce 🗲 Style	Data Type	Description	1	
🖮 Tasks	E-Local:1:1		}	AB:1756 DNB 500Bytes:I:0	Description		
E - A MainTask	E-Local:1:0)	AB:1756_DNB_496Bytes:0:0			
Anthrogram	E-Local:1:S			AB:1756_DNB_Status_128Bytes:S:0			
MainRoutine	± ReadData		} Hex	DINT[500]			
- 🔄 Unscheduled Programs / Phases	⊞ ReadTag		····}	MESSAGE			
Motion Groups	E WriteData		} Hex	DINT[500]			
Add-On Instructions	⊞ WriteData[0]	16#0000 0000	Hex	DINT			
🔂 Data Types		16#0000_0000	Hex	DINT			
User-Defined	± w/riteData[2]	16#0000_0000	Hex	DINT			
Add-On-Defined	⊞ WriteData[3]	16#0000 0000	Hex	DINT			
🗄 🛄 Predefined	⊞ WriteData[4]	16#0000 0000	Hex	DINT			
🕀 🏣 Module-Defined 🧰 Trends	⊕ WriteData[5]	16#0000 0000	Hex	DINT			
🖮 I/C Configuration		16#0000_0000	Hex	DINT			
🖻 📾 1756 Backplane, 1756-A7	⊞ WriteData[7]	16#0000 0000	Hex	DINT			
	TwiteData[8]	16#0000_0000	Hex	DINT			
E [2] 1756-ENBT/A Master	⊞ WriteData[9]	16#0000_0000	Hex	DINT			
RAMAC	The WriteData[10]	16#0000_0000	Hex	DINT			
	± WriteData[11]	16#0000_0000	Hex	DINT			
	WriteData[12]	16#0000_0000	Hex	DINT			
	⊞ WriteData[13]	16#0000_0000	Hex	DINT			
	⊞ WriteData[14]	16#0000_0000	Hex	DINT			
	WriteData[15]	16#0000_0000	Hex	DINT			
		16#0000_0000	Hex	DINT			
	± WriteData[17]	16#0000_0000	Hex	DINT			
	WriteData[18]	16#0000_0000	Hex	DINT			
	WriteData[19]	16#0000_0000	Hex	DINT			
		16#0000_0000	Hex	DINT			
	⊕ WriteData[21]	16#0000_0000	Hex	DINT		-	

Enter the "Monitor Tags" interface; input some data beginning from address WriteData[0] in the "WriteData" tag. There data will be outputted to GT200-EI-2RS485 through PLC and write these data to Modbus slave devices through Modbus write command.

Right click "WriteTag", select "Configure "WriteTag"":

ReadData	•	{}	{}	Hex	DINT[500]	
ReadTag		{}	{}		MESSAGE	
WriteData	1	{}	{}	Hex	DINT[500]	
Write 👩	New Tag		Ctr	1+w	MESSAGE	
	Edit "WriteTag" Edit "WriteTag" Pr	operties	Alt	+Enter		
	Configure "WriteTa	e″	Ctr	1+I		
	Edit "MESSAGE" Dat Go to Cross Refere		ag″Ctr	1+E		
	Message Path Edito <u>G</u> o To	r	Ctr	1+G		
	Toggle Bit			1+T		
	Force On					
	Force Off					
	Remove Force					
Ж	Cut		Ctr	1+X		
Ē	Copy		Ctr	1+C		
8	Paste		Ctr	1+V		
	Paste Pass-Through					
	Delete		Del			
	Find All "WriteTag	"				

In the new pop-up window, it needs to configure as below:



GT200-EI-2RS485 Modbus/EtherNet/IP Gateway User Manual

Message Type: CIP Generic

Service Type: Select "Set Attribute Single", now, relevant Service Code will become "10 (Hex)"

Class: 4 (Hex)

Instance: 101 (128Bytes), 111 (256Bytes) and 121 (492Bytes) optional

Attribute: 3 (Hex)

Source Element: Select "WriteData" tag, it indicates the data in the "WriteData" tag will become the data

PLC outputs.

Source Length: Use byte as unit, this value should be less than or equal to the current selecting bytes which Instance represents (Configured bytes number in SST-GT-CFG).

T essage Configuration - ReadTa	ig 🗸 📉 🔀
Configuration Communication Tag Message Type: CIP Generic Service Set Attribute Single Type: Service Service 10 (Hex) Class: 4 (Hex)	Source Element: ReadDataW[0] Source Length: 128 (Bytes) Hex) Destination Hex) New Tag
 Enable Enable Waiting Start Error Coć Extended Error Error Error 	. 💿 Done Done O

Choose "Communication" label, input the relevant path of connecting EtherNet/IP slave in the blank space behind the Path, the path format is: EthetNet IP hostname, EtherNet/IP master slot No., IP address of EtherNet/IP slave, after setting the path, click "Apply", "Confirm". As is shown below:



User Manual

th: Master,2,192.168.0.10				Browse
Master, 2, 192.168.0.10				
Communication Method CIP ODH+ Channe CIP With Source ID Source		Destinatio		T T T T T (Octal)
Connected	🔽 Cach <u>e</u>	Connections	÷.	
nable 🔘 Enable Waitir	ng 🔘 Start	🔾 Done	Done	0

In this instance, EtherNet/IP hostname is "Master", EtherNet/IP master slot No. Is "2", EtherNet/IP slave (GT200-EI-2RS485) is "192.168.0.10". IP address of GT200-EI-2RS485 is the address which is downloaded into the module through SST-GT-CFG.

Add a "MSG" command in "MainRoutine" under the "MainProgram" and choose "WriteTag" as "Message Control", as shown below:

😤 RSLogix 5000 - MyEnetIP_proj in ENB30xWI_W	36_1286yte.ACD [1766-1.56]
Eile Rdit Yiew Search Logic Communications Tools Window Halp	
	· ***
No Edite BAT Redundency 3-3	x [AB_ETHIP-1/192.168.0.147/Backplane/UP"
Controller MyEnetIP_proj Controller Tags Controller Fault Mandler	HintProgram - LainRoutine
Power-Up Headler Take Take Take Take Take Take Take Take Town Tage To	0 ImerScan DN 1 Terestan 100 2 Startup1 3 Startup2 1 Type - CP Opener 1 Type - CP Op
Type Ladder Diagram (Main) Description	(End) PLC write-data command
View Tag Configuration Dialog	Rung 3 of 4 APP VER
Alex 18% Coull&mation histo&	Aung 5 or 4 APP VER

Download PLC program to the PLC and set PLC to "Online" state, the data in "WriteData" will be outputted





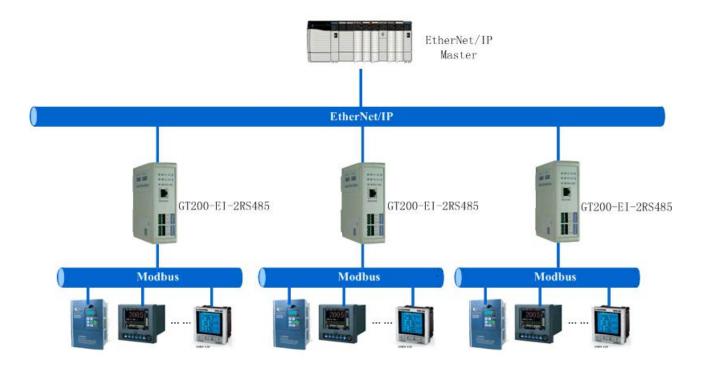
to Modbus slave through GT200-EI-2RS485 (EtherNet/IP slave).





7 Typical Application

GT200-EI-2RS485 can connect Modbus devices to the EtherNet / IP network, and achieve communication between PLC (or PC) with EtherNet / IP interface and Modbus devices:



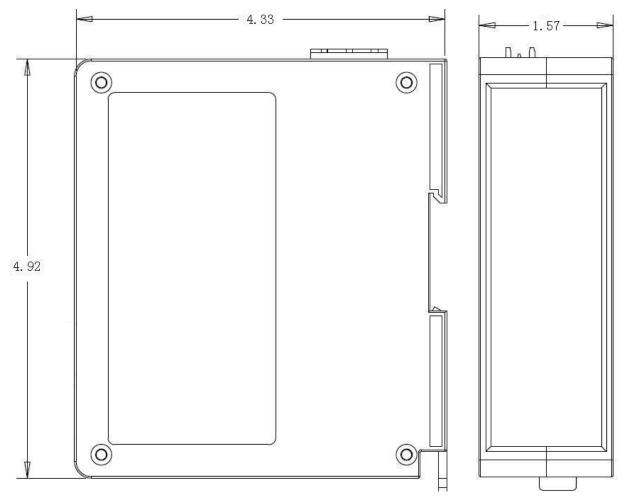




8 Installation

8.1 Mechanical Dimensions

Size: 1.57 in (width)*4.92 in (height)*4.33 in (depth)



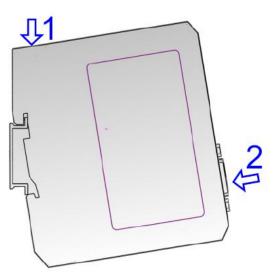
8.2 Installation

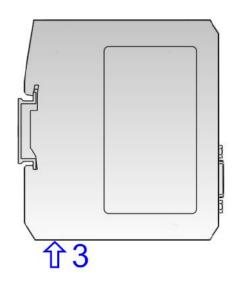
Using 1.38 in (35mm) DIN RAIL





Installing the gateway





Uninstalling the gateway

