ICP DAS

GW-7472 FAQ

FAQ Version 3.7

ICP DAS Co., Ltd.
2020-11-30

Table of Contents

Q1: Could you please confirm that GW-7472 works with SLC-500 (SLC5/05) without any problems?

A1: We never test GW-7472 this device with SLC-500. But this device ever tested with the Hilscher CIFX 50-RE Ethernet/IP master. It can communicate with the master via following I/O connection methods.

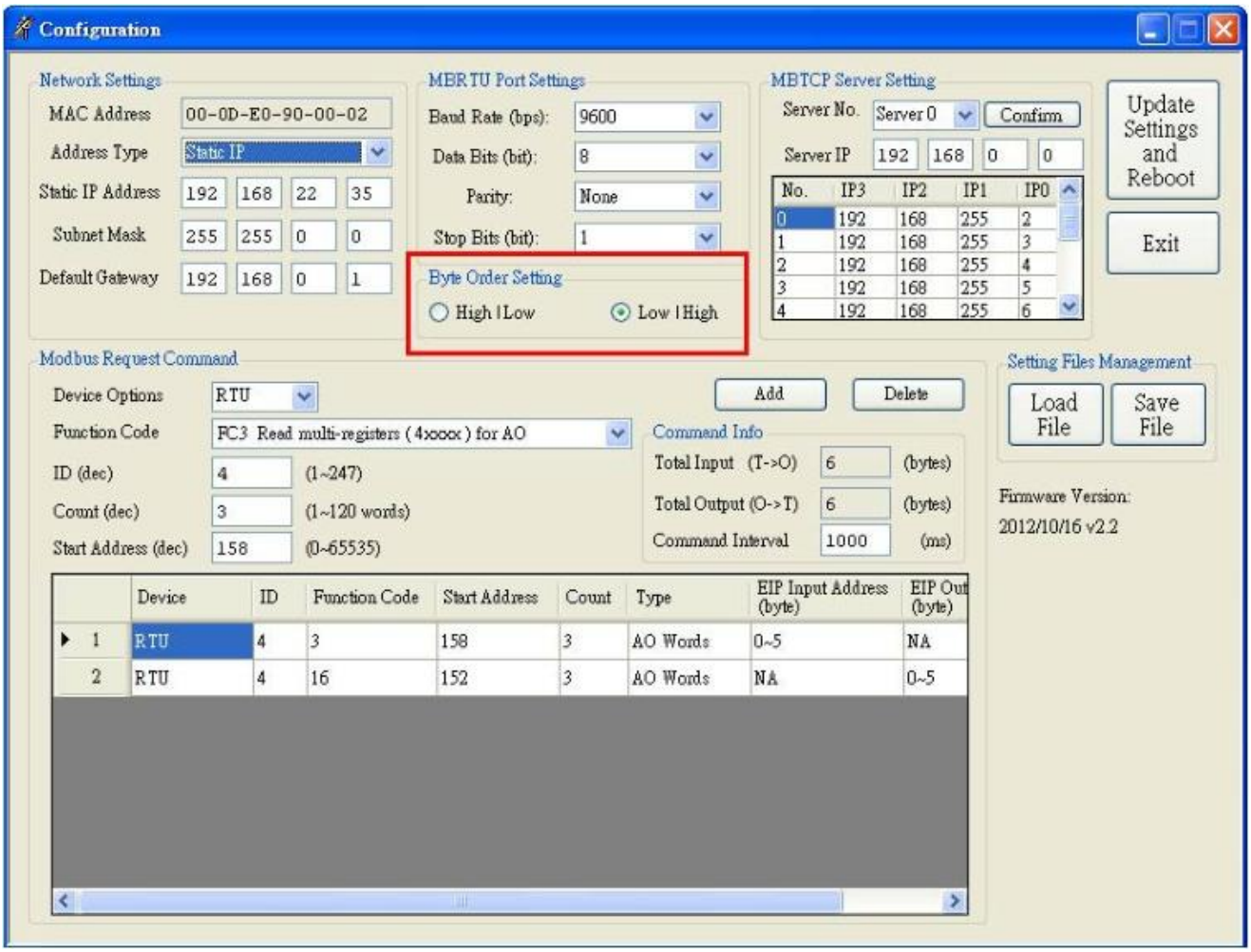
(1) Transport and trigger: Exclusive-Owner, Cyclic

(2) Original to Target Type: POINT2POINT, (MULTICAST not supported)

(3) Target to Original Type: POINT2POINT, MULTICAST

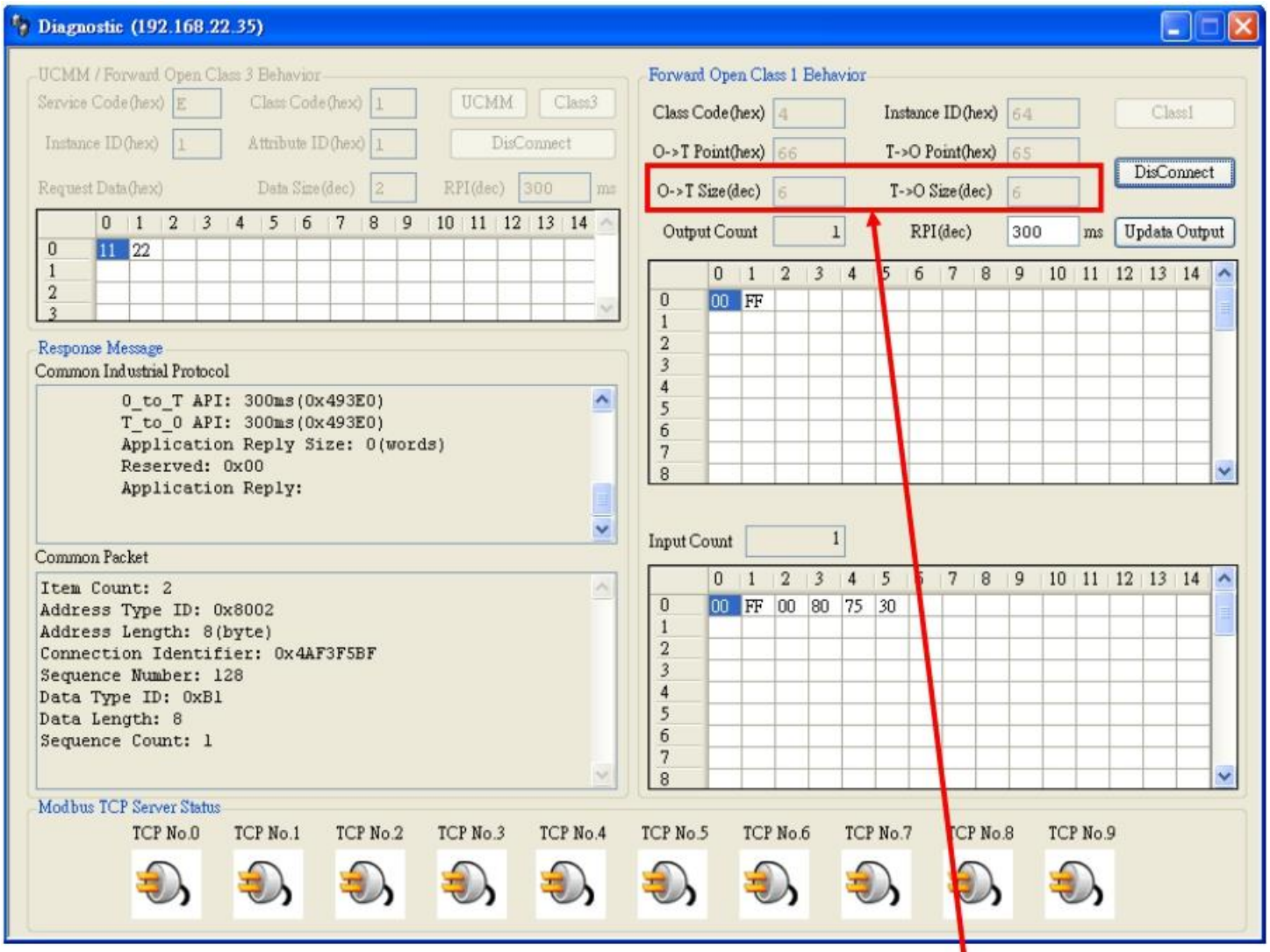
Q2: In some case, the byte order of the AI/AO word data in the communication is reversed, i.e. low byte is MSB and high byte is LSB. Is there a byte swapping function?

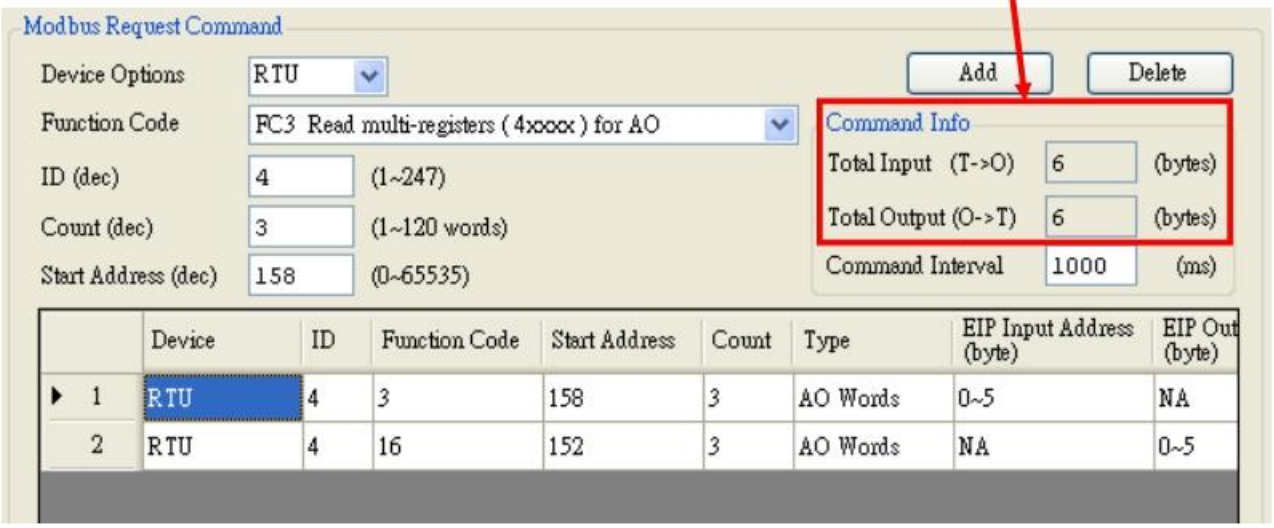
A2: After the firmware version 1.5 of GW-7472, the utility supports the “Byte Order Setting” as shown in the following figure.



Q3：How to make a Class1 connection with the GW-7472 Utility Diagnostic window?

A3：Configure the total output/input size in the “Forward Open Class1 Behavior” on the Diagnostic window. Please notice that the total input/output size on the Diagnostic window and the total input/output size on the Configuration window must be the same. Then, you can click “Class1” button to make a Class1 connection on the Diagnostic window.





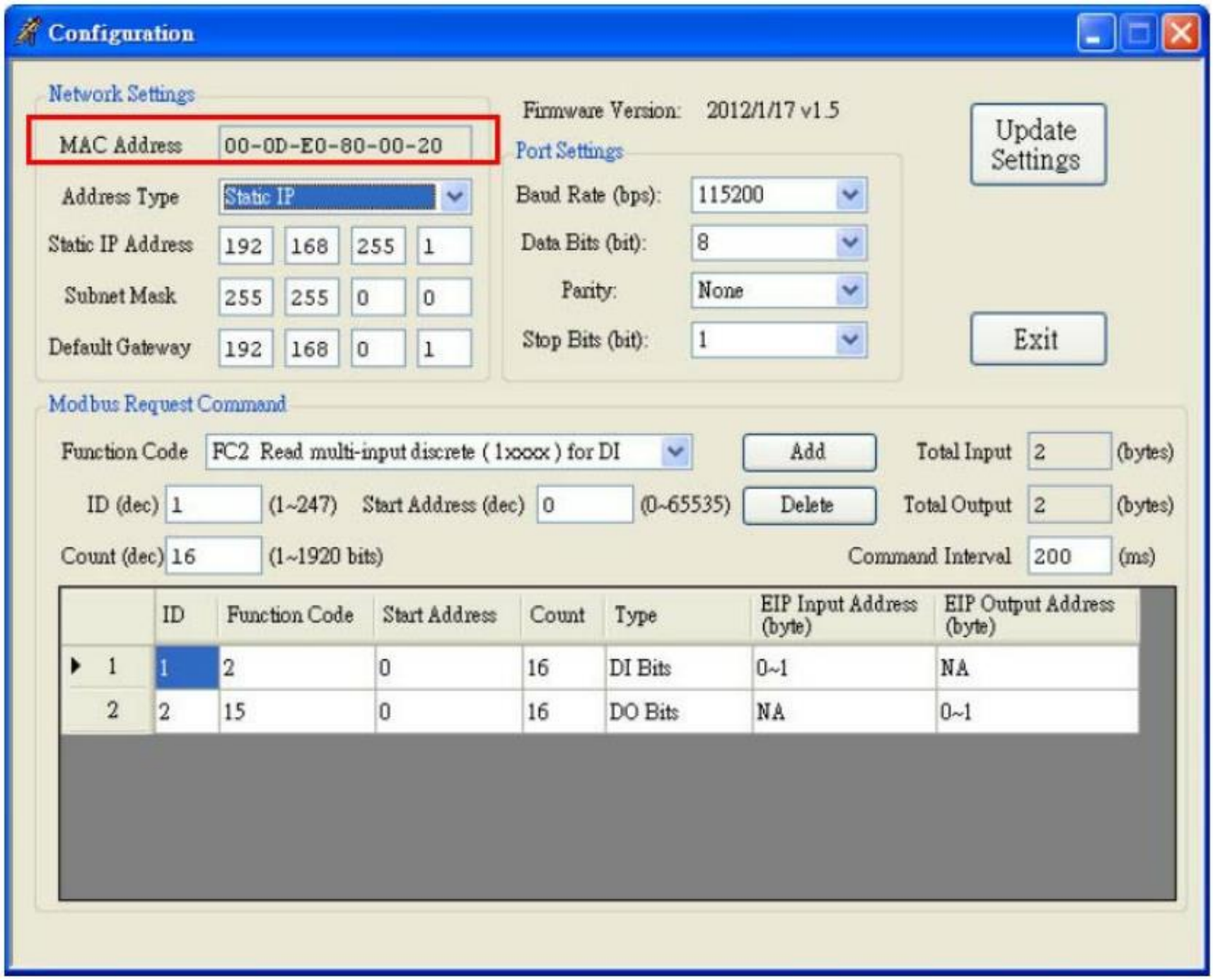
Q4：Why did the pop-up message “FW Version Error” be shown after I run the new version Utility?

A4：The utility of version 2.0 and later only supports the firmware version 2.0 and the after. Please go to the product page of the GW-7472 to get the new firmware and update the module. The firmware website is shown below (ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/ethernetip/gateway/gw-7472/firmware/).

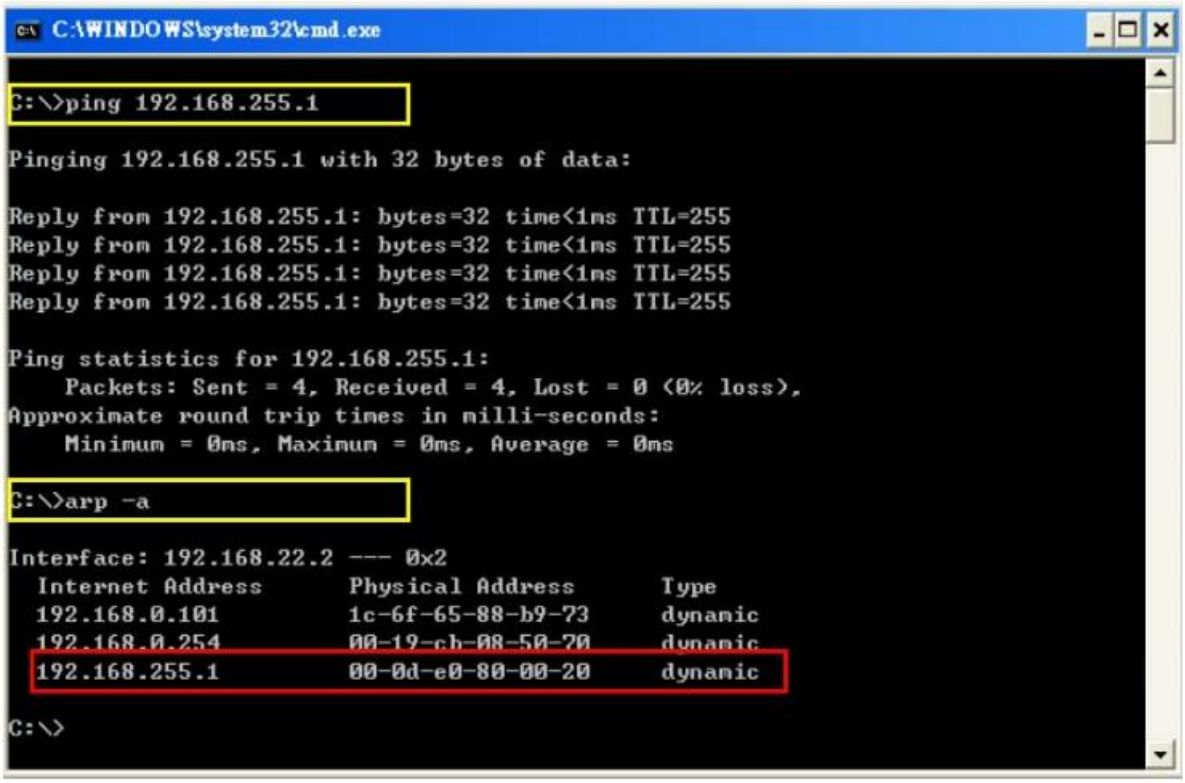
Please follow our steps to update the firmware ：

Step1：We provide two ways to check MAC address.

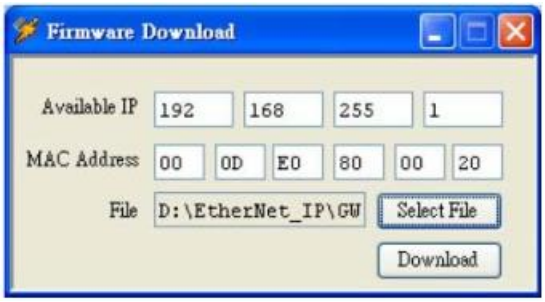
(a) Use v1.X GW-7472 Utility configuration window to find out your MAC address on the top of “Network Settings”.



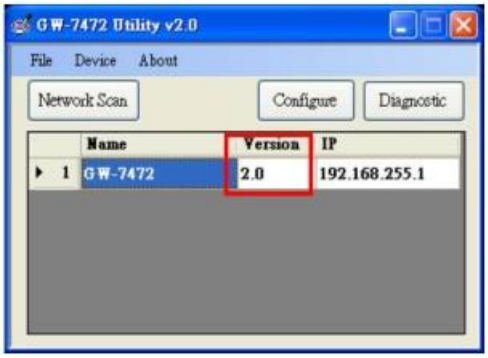
(b)In another way, you can get your MAC address from the ARP list. Follow the “[Start Menu] →[Run] →[cmd]” to open the command window and check GW-7472 IP address through Ping command (e.g. ping 192.168.255.1). Then, you could get the ARP list through ARP command (e.g. arp -a). Finally, you`ll get the MAC address is shown below.



Step2：Follow these steps “[Main Menu]→[Device]→[Download]” to open the FW download window. Key in the MAC address we found in Step1, and an available IP address on this window. Select the firmware file (e.g. GW7472_v2.dat) to download.



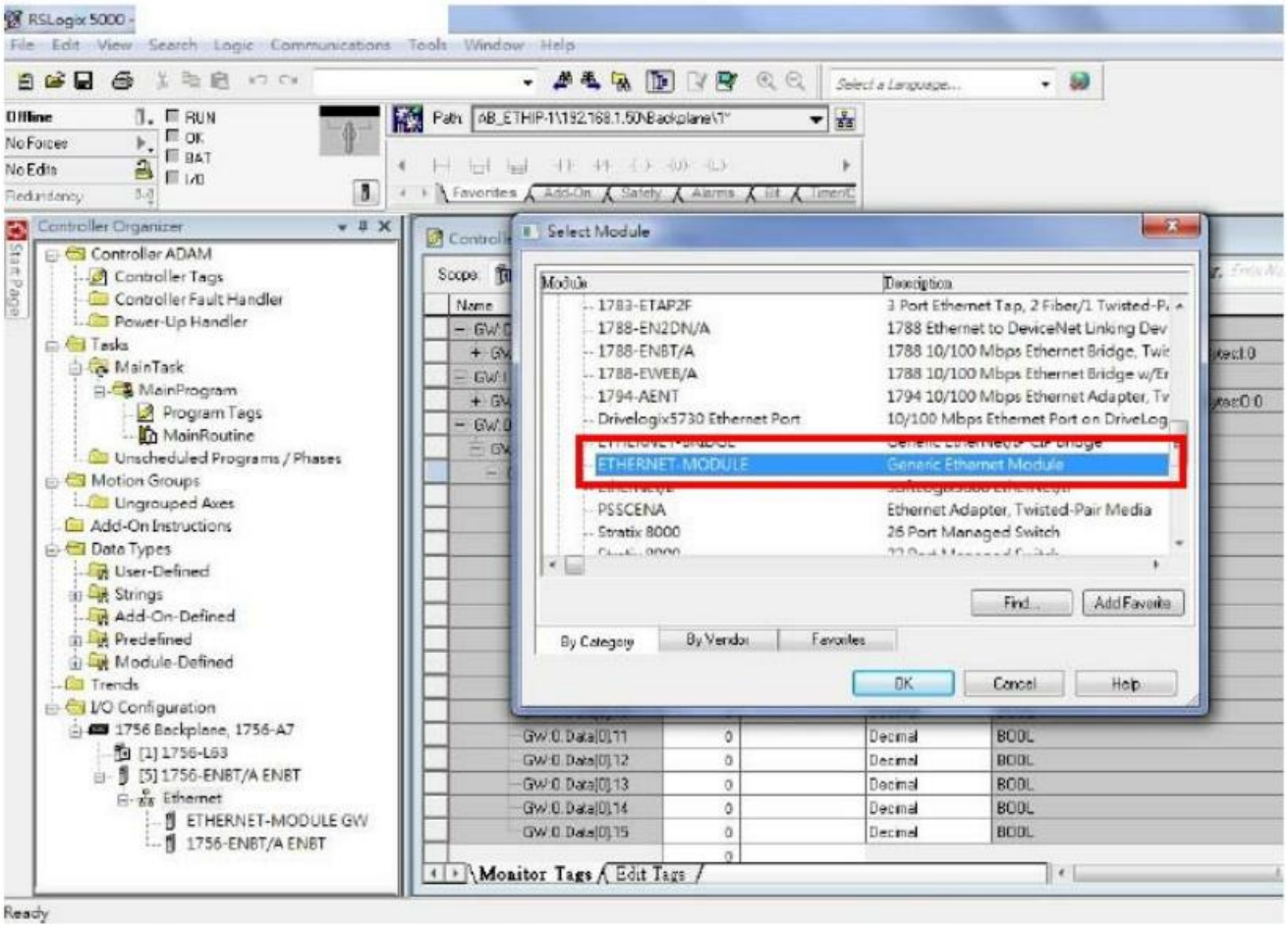
Step3：After downloading the firmware, please check the Utility whether the version is V2.0 or not on the Main Menu.



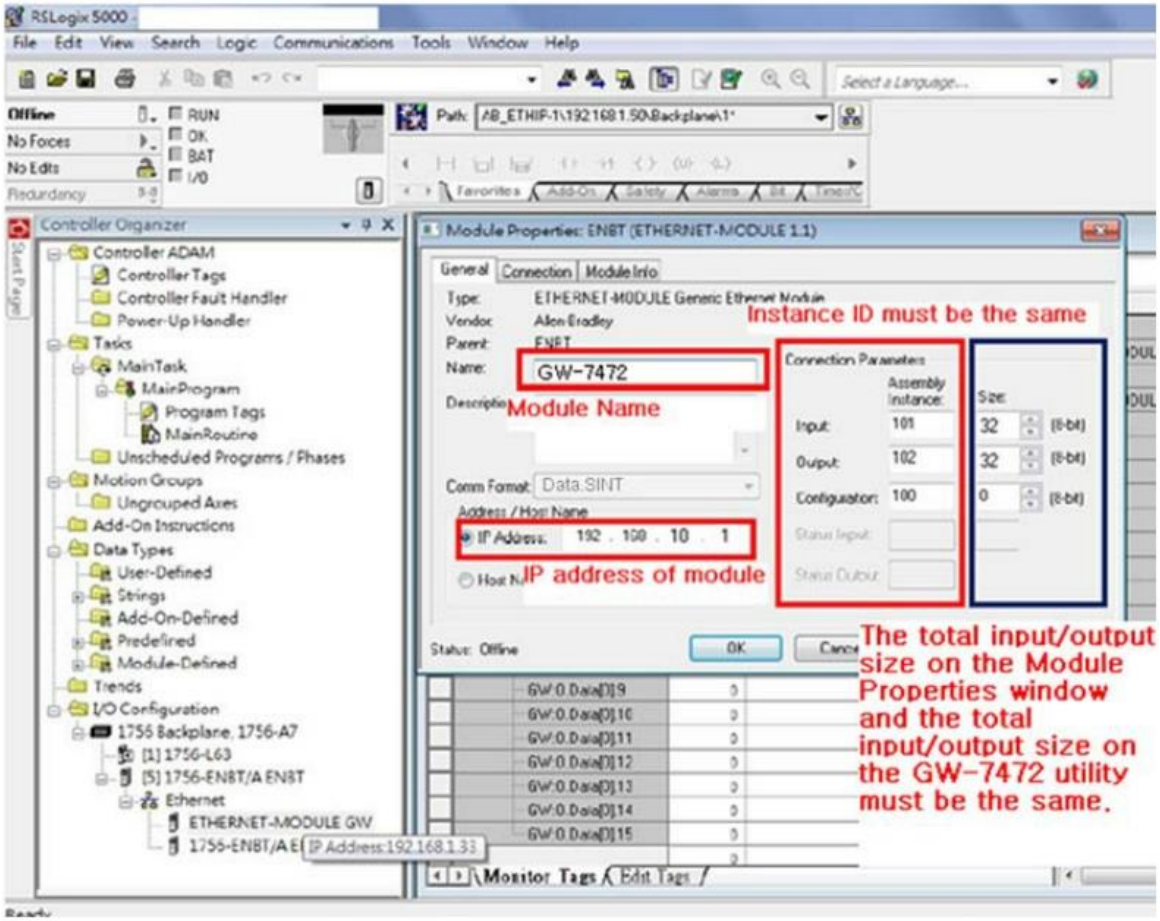
Q5：How to connect to the Allen-Bradley PLC？

A5：It is tested and confirmed that the GW-7472 can be connected to the Allen-Bradley™ ControlLogix Logix 5563 through the 1756-ENBT ControlLogix EtherNet/IP Module successfully. The configuration software is RSLogix 5000. Please follow the steps below:

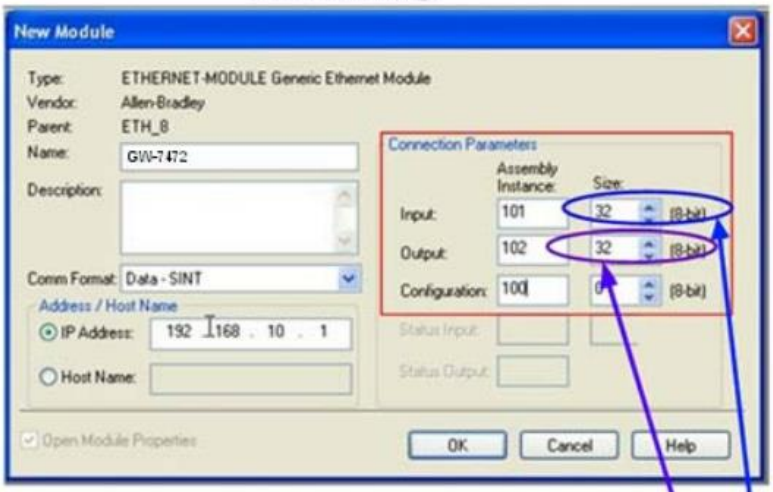
(a)Add a new Module and select ETHERNET-MODULE.



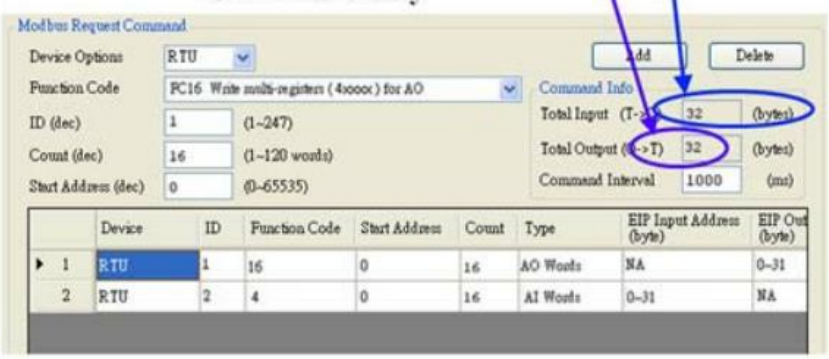
(b)Configure the “Module Properties” window. Please notice that the total input size on the Module Properties window and the total input size on the GW-7472 Utility must be the same. Also, the total output size on the Module Properties window and the total output size on the GW-7472 Utility must be the same.



PLC Setting

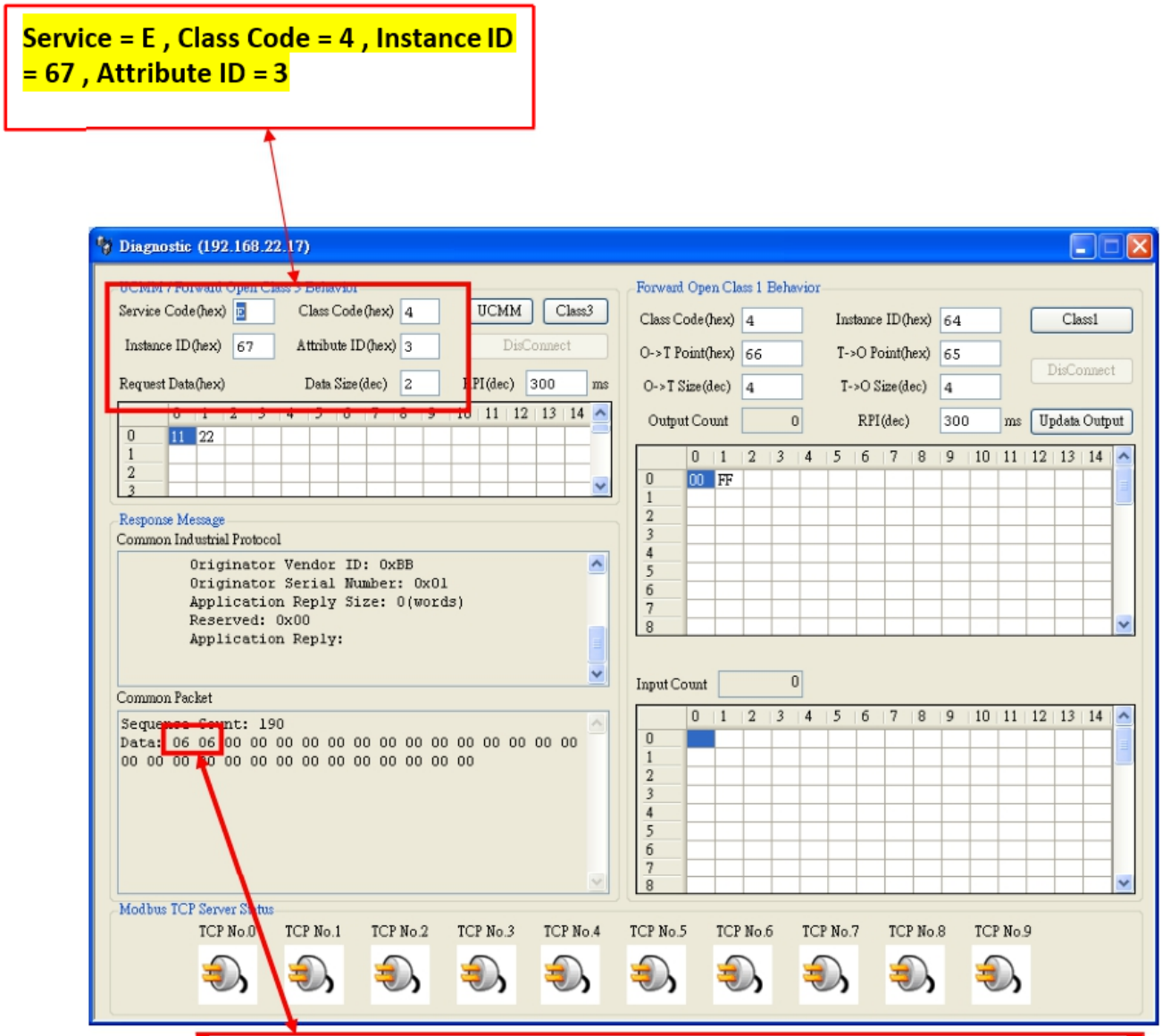


GW-7472 Utility



Q6：How to check the connections between the GW-7472 and the Modbus devices？

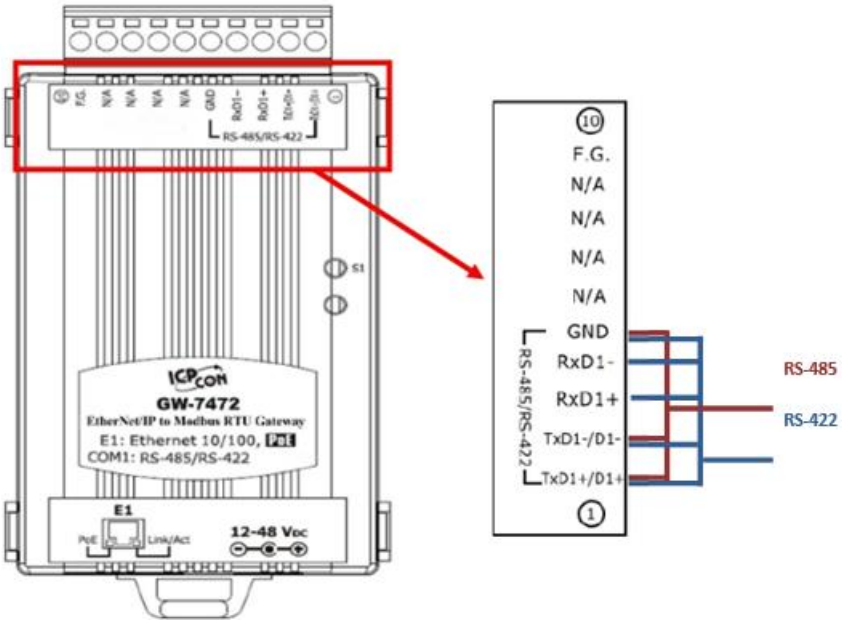
A6：Open the GW-7472 Utility Diagnostic window, and set the UCMM values (Service = E, Class Code = 4, Instance ID = 67, Attribute ID = 3), as shown in the figure below. Click “Class3” to start the connection. If the devices have been connected and receive the information from Modbus devices, the “common packet” will show “00”. If GW-7472 couldn`t receive the information from a Modbus devices, the “common packet” will show “06”. The status table is shown below, and it could be found in the GW-7472 manual on page 47.



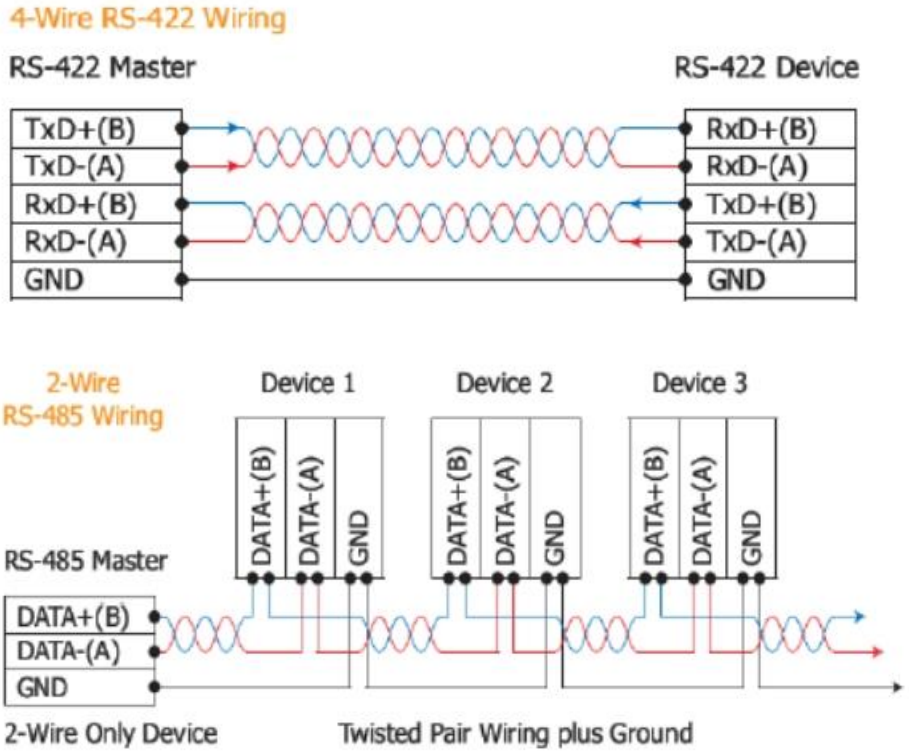
Command Status (in hex)	Explanation
00	No Error
01	Illegal device ID
02	Illegal function code
03	Illegal data address
04	Receiving an Invalid command
05	CRC checking error
06	Timeout error occurred

Q7: How can I check the wire connections？

A7:There are 4-wire RS-422 wiring and 2-wire RS-485 wiring. The wire connection interface is shown below.

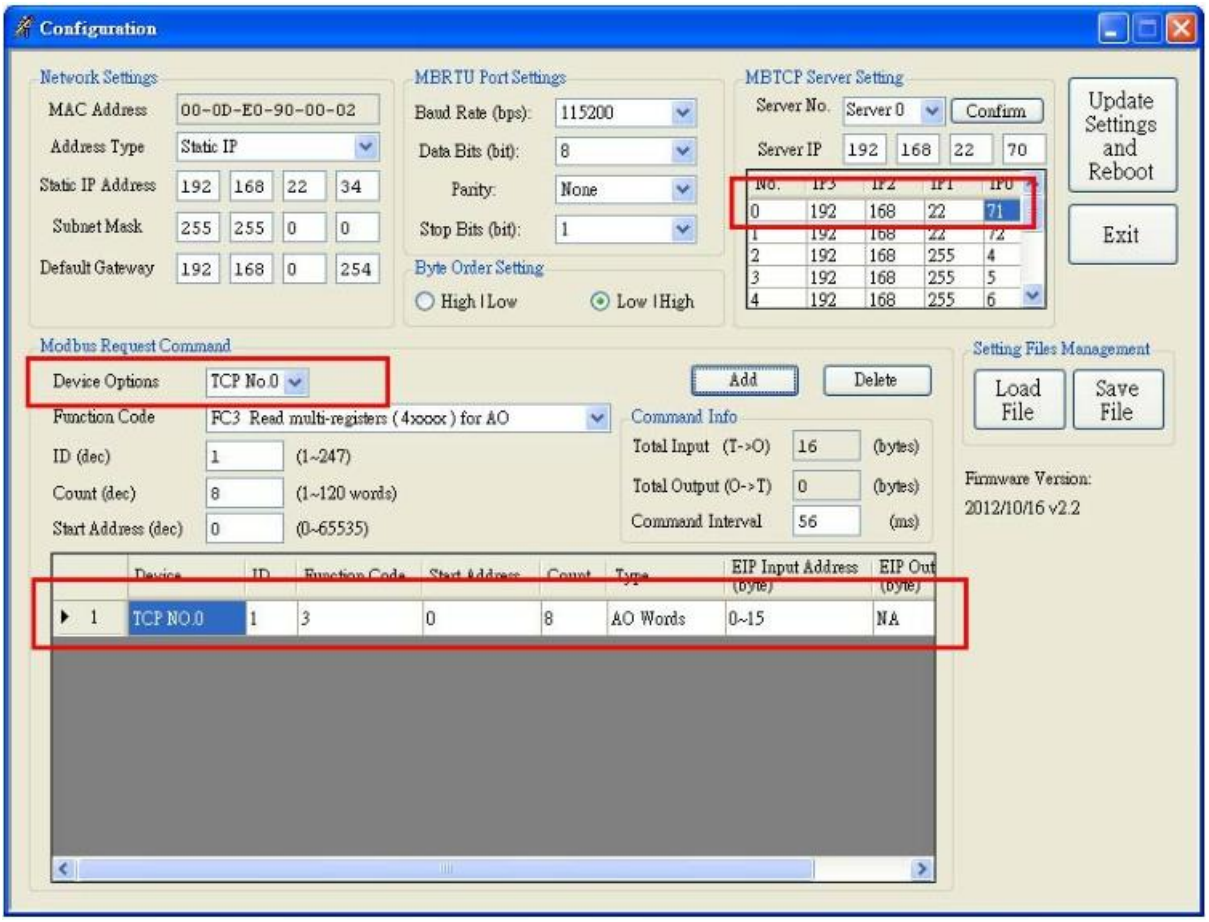


The wire connections between Modbus masters and Modbus slaves must be follow the figure we show below. For non-isolated RS-422/485 ports, you should connect all signal grounds of RS-422/485 devices together. This reduces common-mode voltage between devices.



Q8 : How to set up the GW-7472 for Modbus TCP ?

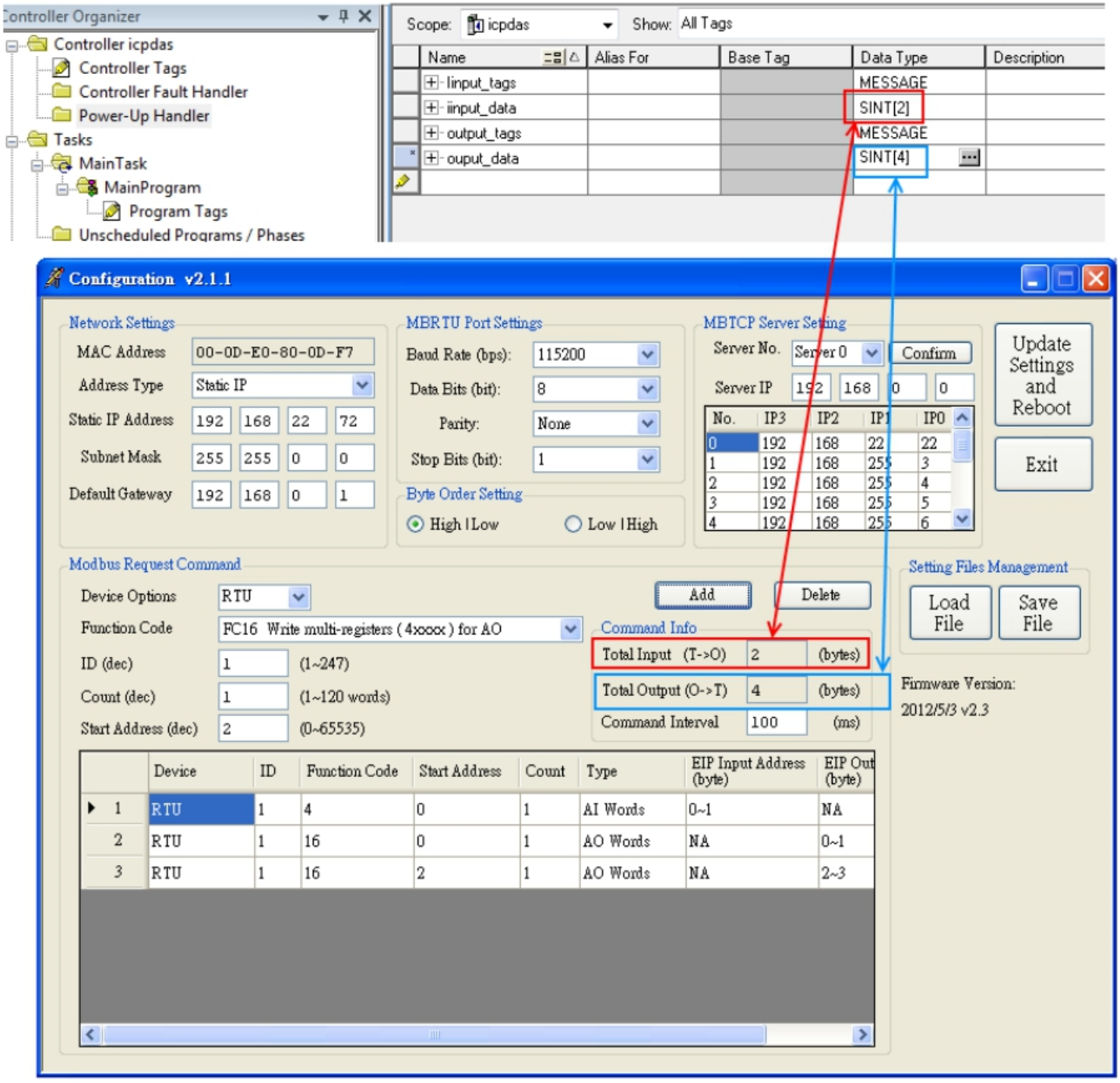
A8:In the GW-7472 configuration window, please change the “Device Options” to be “TCP No.0” in the “Modbus Request Command” and fill out the Modbus device settings you want to connect with. Then, set the Server IP in the “MBTCP Server Setting”. Please notice that the total input/output size on the Diagnostic window and the total input/output size on the configuration window must be the same. The example settings are shown below.



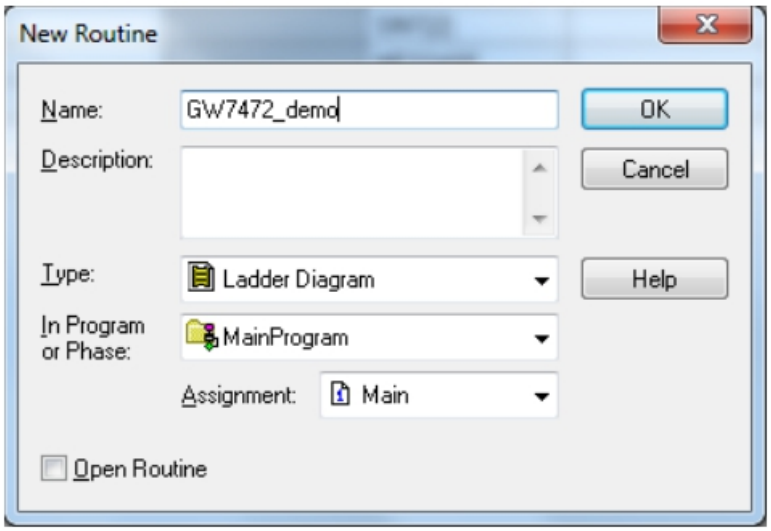
Q9 : How to set up GW-7472 in RSLogix 5000 MSG ladder element ?

A9: If you want to connect to GW-7472 with Get Attribute Single or Set Attribute Single, you can configure MSG ladder element in your routine. Please refer the steps to complete the configurations.

(1) Create input/output tags and input/data data. The data type of tags are “Message”. The data type of data are “SINT[...]”. Please notice that the size of data array (RSLogix 5000) and the size of I/O length (GW-7472) must be the same.

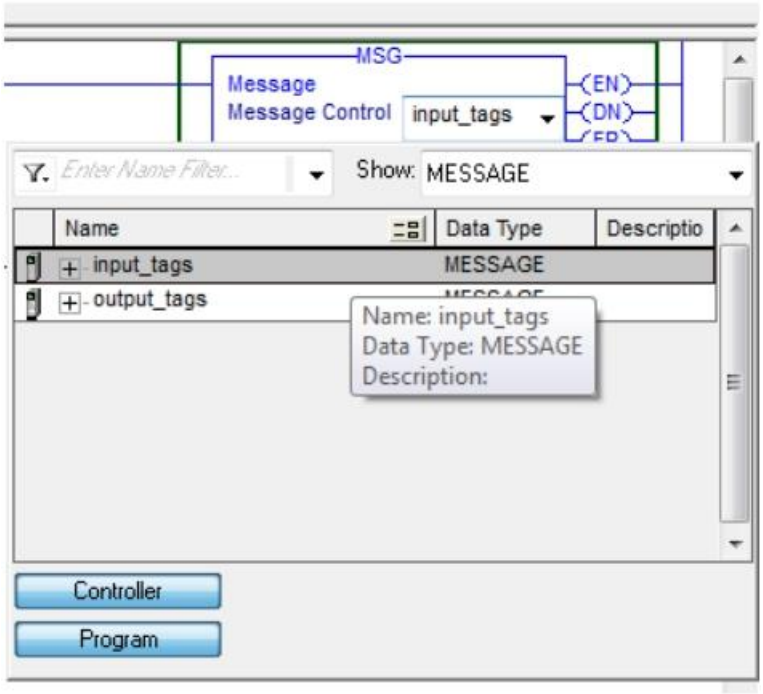


(2) Add a new routine

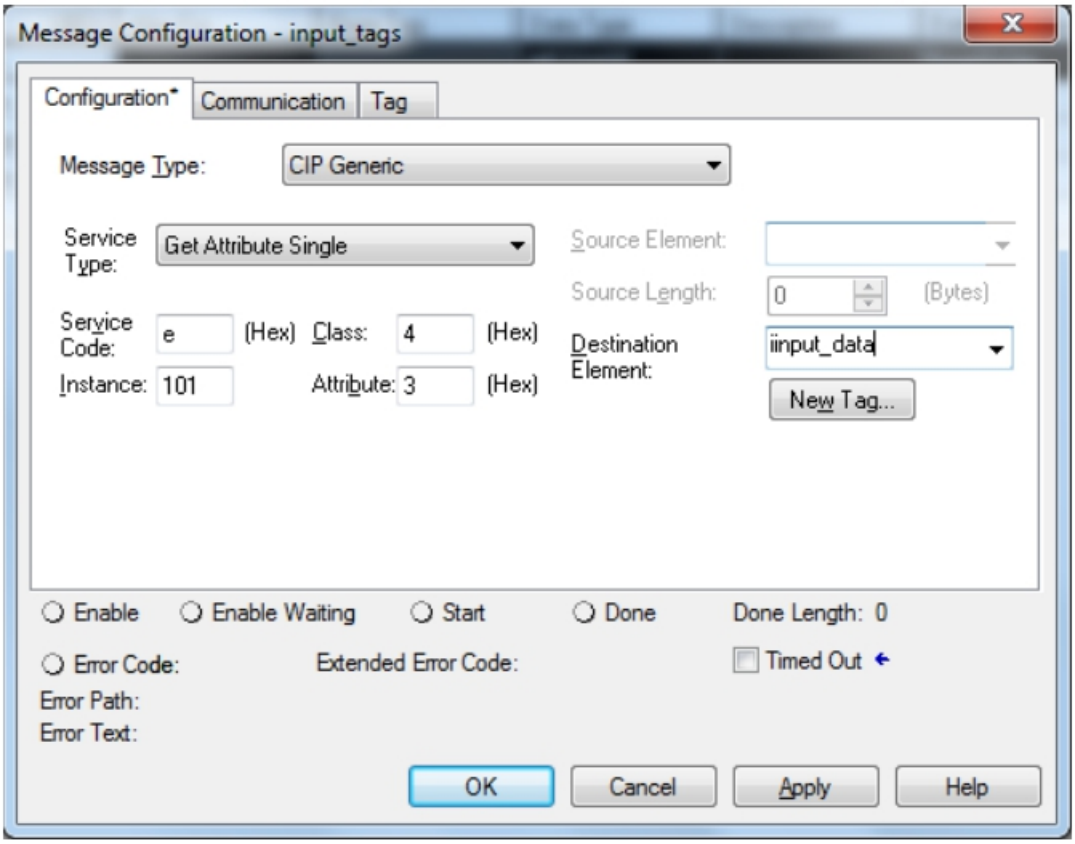


.

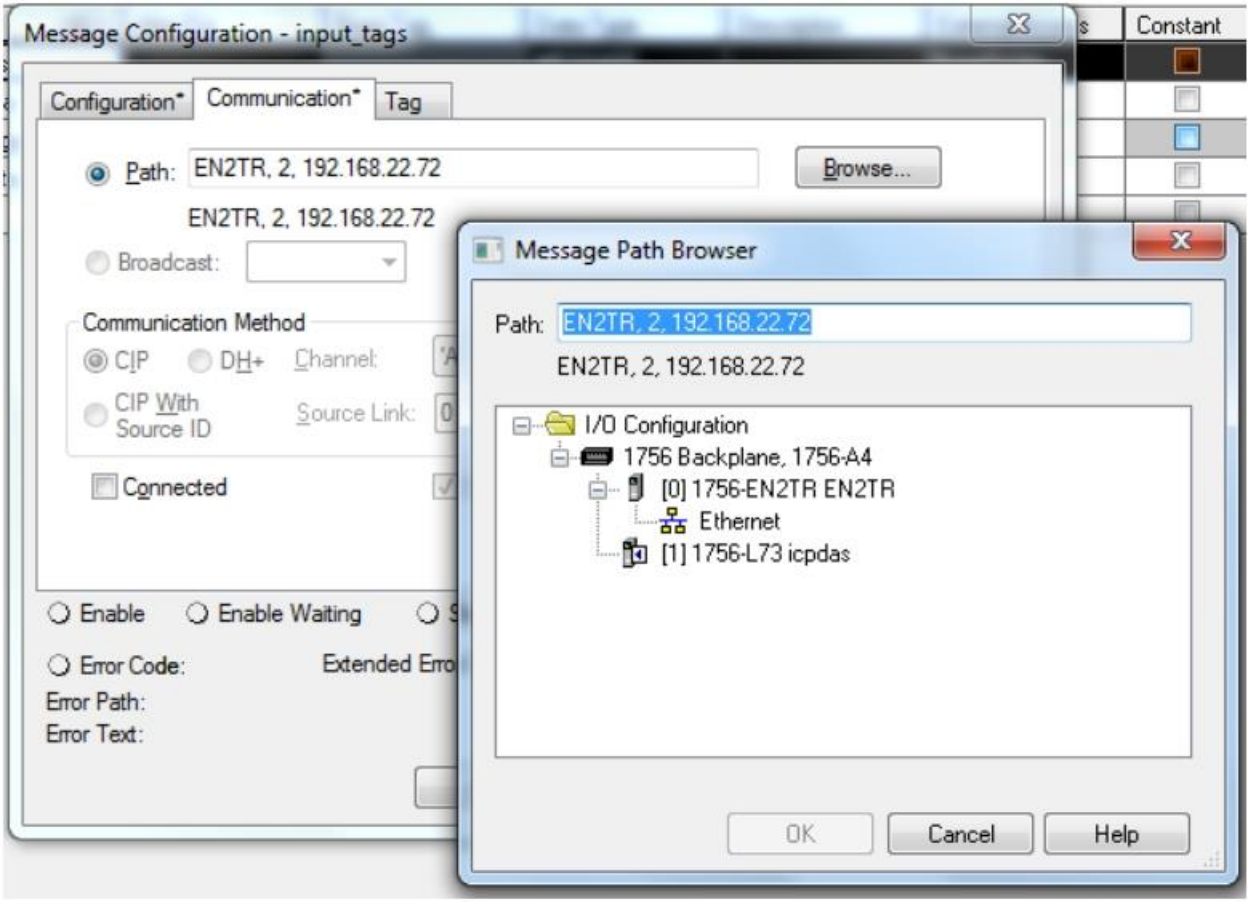
(3) Add MSG element in your ladder and select “input_tags”.



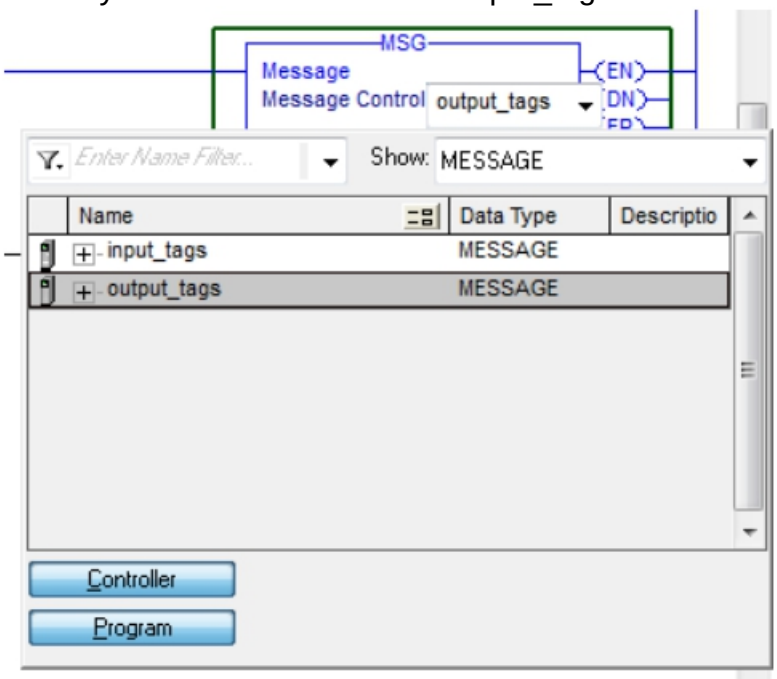
Configure the Message Configuration. here we have to select the “Service Type” of “Get Attribute Single”. To fill in the “Class” as 4, “Instance” as 101 and “Attribute” 3. In the “Destination” dropdown box select the “input_data”.



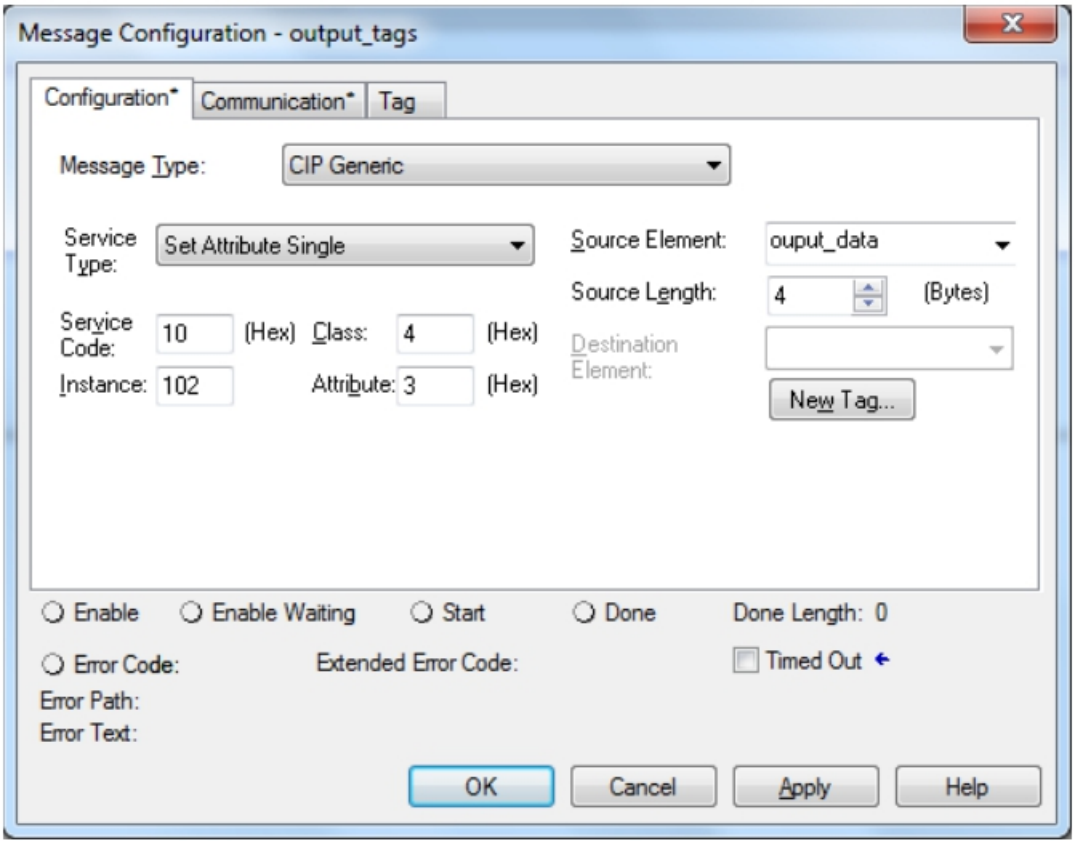
Next select the “Communication” tab, first click on the “Browse” button. This will bring up a new window; here select the Ethernet module in the PLC and click OK. Now the name of the Ethernet module should be filled in at the “Path”, here we also have to fill in the full path to GW-7472 (in this example GW-7472 have the IPaddress of 192.168.22.72). After the name of the Ethernet module in the PLC, add a comma, a space, and a 2, this indicates that the message should be routed out on Ethernet. Following the 2 add a comma, a space, and the IP-address to GW-7472, here 192.168.22.72. This is everything that has to be done here, click on OK.



(4) Add MSG element in your ladder and select “Output_tags”.



Configure the Message Configuration. here we have to select the “Service Type” of “Set Attribute Single”. To fill in the “Class” as 4, “Instance” as 102 and “Attribute” 3. For “Source Element” select the “output_data” tag and the “Source Length” should be 4 bytes. Under “Communication” tab the “Path” should be the same as the one used to read data.



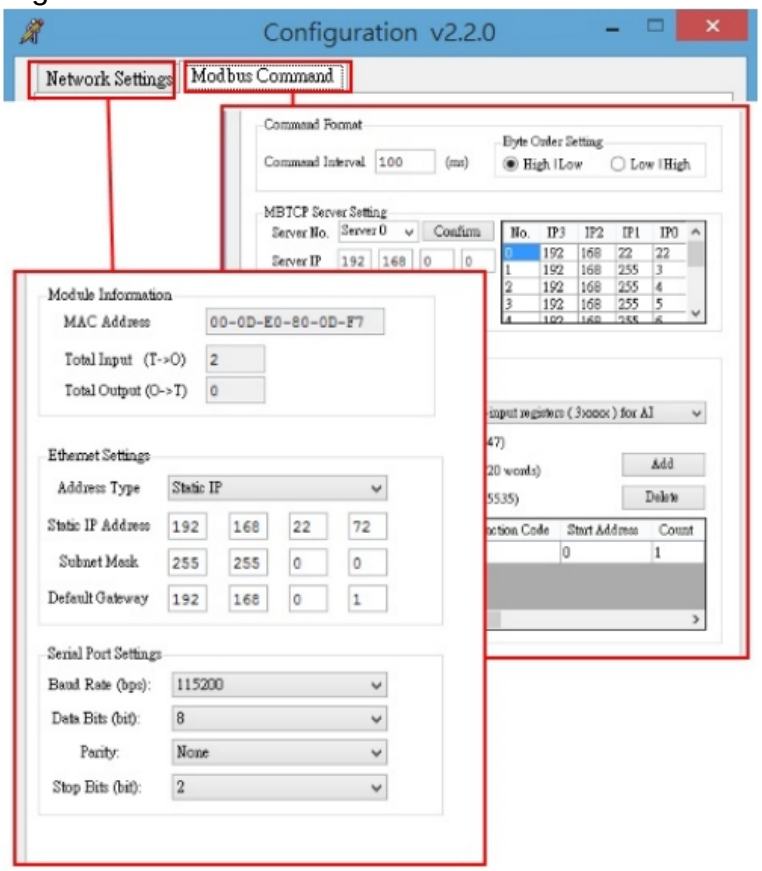
(5) This is a simple example that only will issue one read request, in a normal program some logic have to be added to trigger the instruction again, for more information regarding this issue refer to documentation for RSLogix5000. Now download the program to the PLC and go “Online”.

If you want to send Get/Set Attribute Single continuously, you can refer to the ladder below.

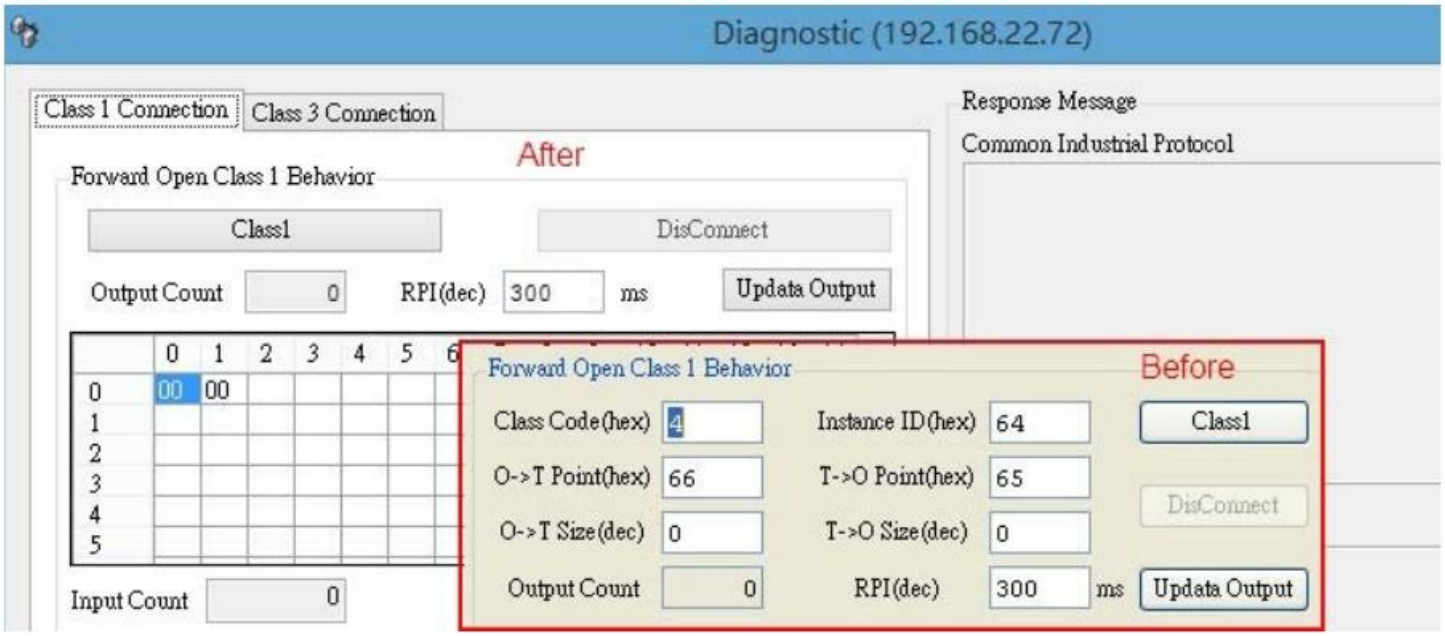
Q10: What is the difference between Utility V2.2.0 and the older version ?

A10: The user interface of GW-7472 Utility V2.2.0 is changed. It is getting easier and friendly.

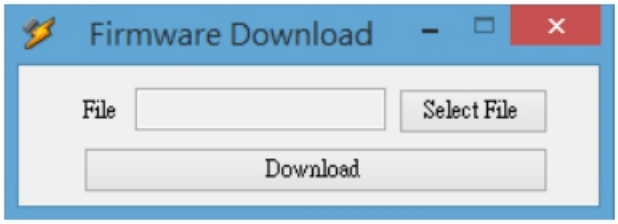
(1) To configure network settings and Modbus command on different label.



(2) To reduce the parameters on Class 1 connections. Just click "Class 1" button to make EtherNet/IP connection with GW-7472.



(3) Do not fill out the IP and MAC address on Firmware Download window.



Q11: How should I do when the impedance matching problem occured?

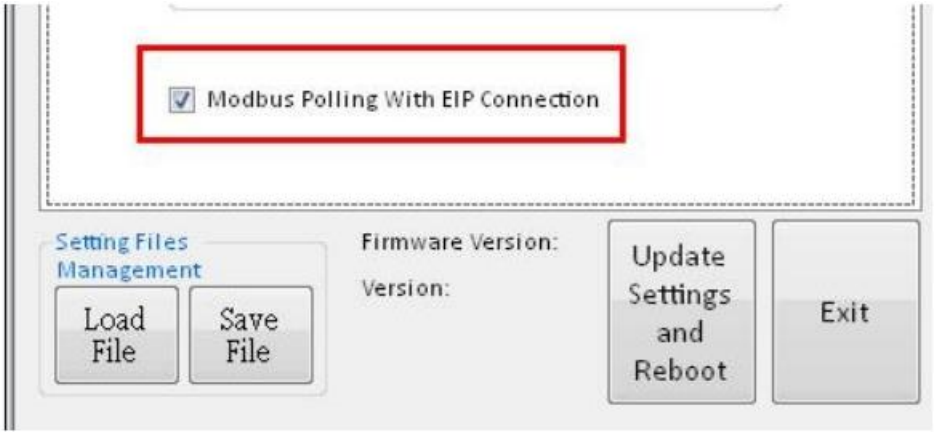
A11: Please follow these tips to solve the problem.
(1) Add a 125Ω resistor on RS-485 interface.
(2) Add a tM-SG4 module on RS-485 interface.
http://www.icpdas.com/root/product/solutions/signal_conditioning_modules/sg-700/tm-sg4.html
(3) Add RS-485 repeater I-7510 on RS-485 interface.
http://www.icpdas.com/root/product/solutions/industrial_communication/converter/i-7510.html

Q12: I can not find my GW-7472 when I click Network Scan button?

A12: Please follow these tips to solve the problem.
(1) Disable your anti-virus and the firewall.
(2) Connect to your GW-7472 directly with an Ethernet cable.
(3) Disable ALL your Wi-Fi adapter and another Ethernet adapter that doesn't connect with yourGW-7472.
(4) Run the GW-7472 Utility with the system Administrator.

Q13: I don't want to establish the Modbus connection before I connect to GW-7472 with EtheNet/IP. What should I do?

A13:Users can enable the "Modbus Polling" function on the Configuration window of GW-7472 Utility.
When this function is enable, Modbus command is tranceived when the EtherNet/IP connection is established.
This function is built in the FW version v2.7 and the Utility version v2.2.2. (and the later version of them)



Q14 : We make a wrong setting in the GW-7472, how do I set the GW-7472 to factory default?

A14: Please select to the FW mode then reboot.

Connect to the GW-7472 with Ethernet cable directly. The GW-7472 factory default value is

Parameters	Factory Default Value
IP	192.168.255.1
Subnet Mask	255.255.0.0
Gateway	192.168.0.1

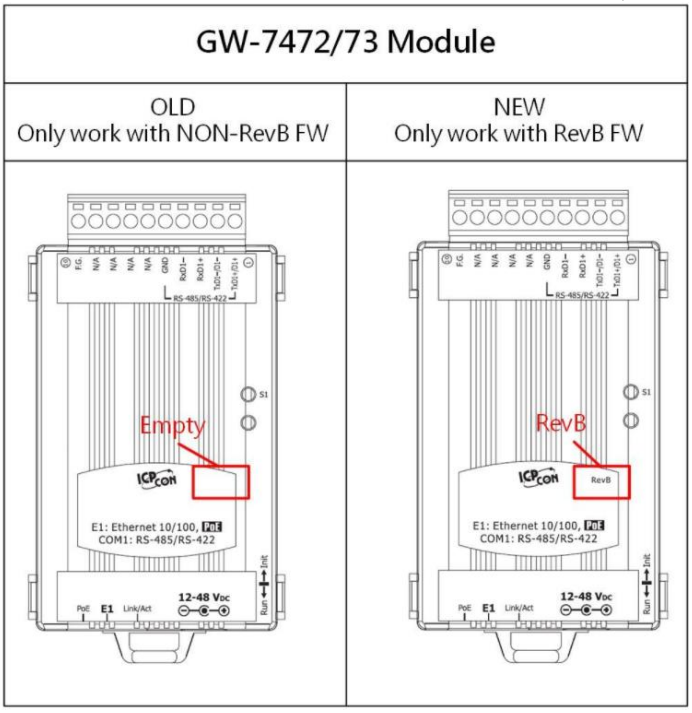
Please set the IP address in 192.168.255.xx, then scan the module with the GW-7472 Utility.

Q15: When I update the firmware, the update status is always 0%. What should I do?

A15: Please try the following tips,
(1) Disable the firewall and anti-virus.
(2) Connect the module directly without Ethernet switch.
(3) Disable the Wi-Fi adapters and any other Ethernet interfaces.
(4) The firmware file (.dat file) is saved in the path that includes illegal characters, for example, "/_.)&-+!...", space, Chinese, etc.
(5) The IP address of PC (laptop) is not in the same network area of the module. (The IP address of PC must be the same with the factory settings of EIP modules)

Q16: How to know the version of GW-7472 modules hardware ?

A16: There is a mark on the front side of the case to distinguish non-RevB and RevB.
The case with "RevB" means the RevB version, and empty means "non-RevB" version.

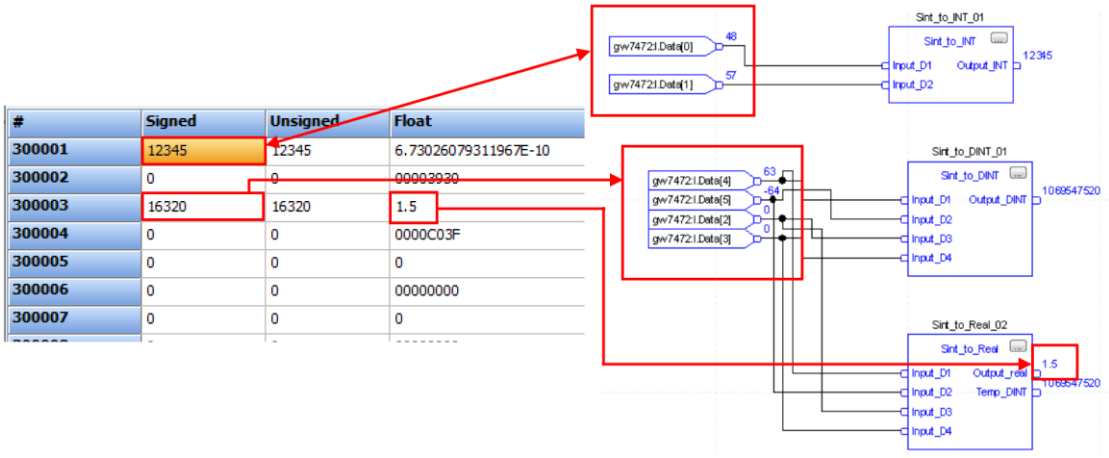


Q17: : How to find the compatible FW for GW-7472 modules?

A17: Refer to FW list and find the compatible FW.
Warning: If you download the incompatible FW to the module, it may occur something uncertain error.

Q18: How to merge the GW-7472 data which is larger than 1 byte with Allen-Bradley RSLogix5000 tool?

A18: All the data value can be merged by the Add-On Instructions. For example, there are an integer value “12345” in the Modbus device register 300001 and a float value ”1.5” in the Modbus device register 300003. They all can be put into the AOI function block. User can read the observation value from the AOI function block conveniently.



Q19: If the GW-7472 can’t be scanned by the Utility, how to configure or make test to the GW-7472?

A19: The GW-7472 Utility v2.2.4 and the later version provide a new connection mod. User can type the GW-7472 IP address and then set the configuration without scanning. Just select the "GW7472 IP Address:" and then click "Configure" or "Diagnostic" button.