

ICP DAS

GW-7472 FAQ

FAQ Version 3.0

ICP DAS Co., Ltd.

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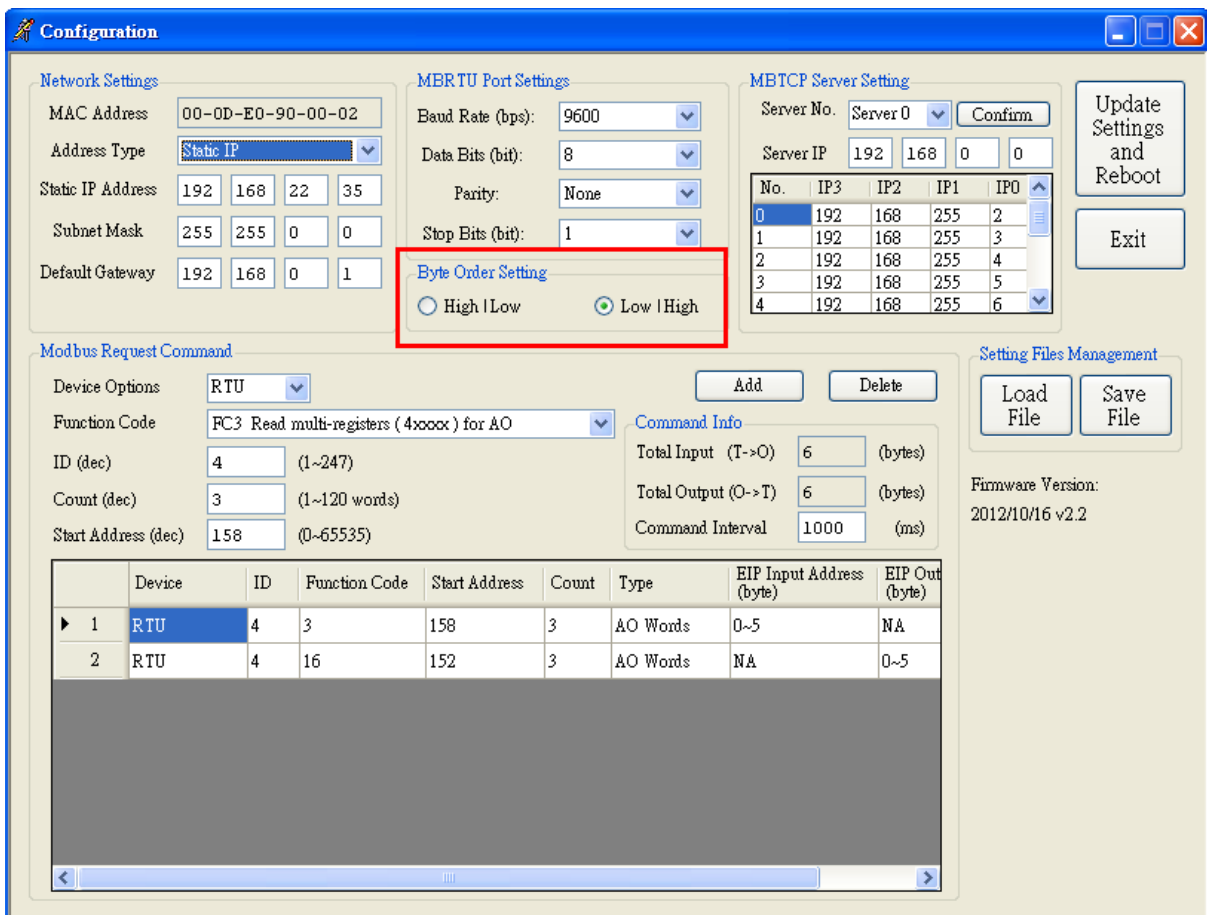
Q1: Could you please confirm that GW-7472 works with SLC-500 (SLC5/05) without any problems?

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.

The screenshot shows the 'Diagnostic (192.168.22.35)' window. The 'Forward Open Class 1 Behavior' section is highlighted with a red box, showing 'O->T Size(dec)' and 'T->O Size(dec)' both set to 6. A red arrow points from these fields to the 'Modbus Request Command' window below.

Forward Open Class 1 Behavior Configuration:

- Class Code(hex): 4
- Instance ID(hex): 64
- O->T Point(hex): 66
- T->O Point(hex): 65
- O->T Size(dec): 6
- T->O Size(dec): 6
- Output Count: 1
- RPI(dec): 300 ms

Response Message (Common Industrial Protocol):

```
0_to_T API: 300ms(0x493E0)
T_to_0 API: 300ms(0x493E0)
Application Reply Size: 0(words)
Reserved: 0x00
Application Reply:
```

Common Packet:

```
Item Count: 2
Address Type ID: 0x8002
Address Length: 8(byte)
Connection Identifier: 0x4AF3F5BF
Sequence Number: 128
Data Type ID: 0xB1
Data Length: 8
Sequence Count: 1
```

Modbus TCP Server Status:

TCP No.	Status
TCP No.0	🔌
TCP No.1	🔌
TCP No.2	🔌
TCP No.3	🔌
TCP No.4	🔌
TCP No.5	🔌
TCP No.6	🔌
TCP No.7	🔌
TCP No.8	🔌
TCP No.9	🔌

The screenshot shows the 'Modbus Request Command' window. The 'Command Info' section is highlighted with a red box, showing 'Total Input (T->O)' and 'Total Output (O->T)' both set to 6 bytes.

Modbus Request Command Configuration:

- Device Options: RTU
- Function Code: FC3 Read multi-registers (4xxxx) for AO
- ID (dec): 4 (1~247)
- Count (dec): 3 (1~120 words)
- Start Address (dec): 158 (0~65535)
- Command Interval: 1000 (ms)

Command Info:

- Total Input (T->O): 6 (bytes)
- Total Output (O->T): 6 (bytes)

Modbus Request Command Table:

	Device	ID	Function Code	Start Address	Count	Type	EIP Input Address (byte)	EIP Out (byte)
▶ 1	RTU	4	3	158	3	AO Words	0~5	NA
2	RTU	4	16	152	3	AO Words	NA	0~5

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

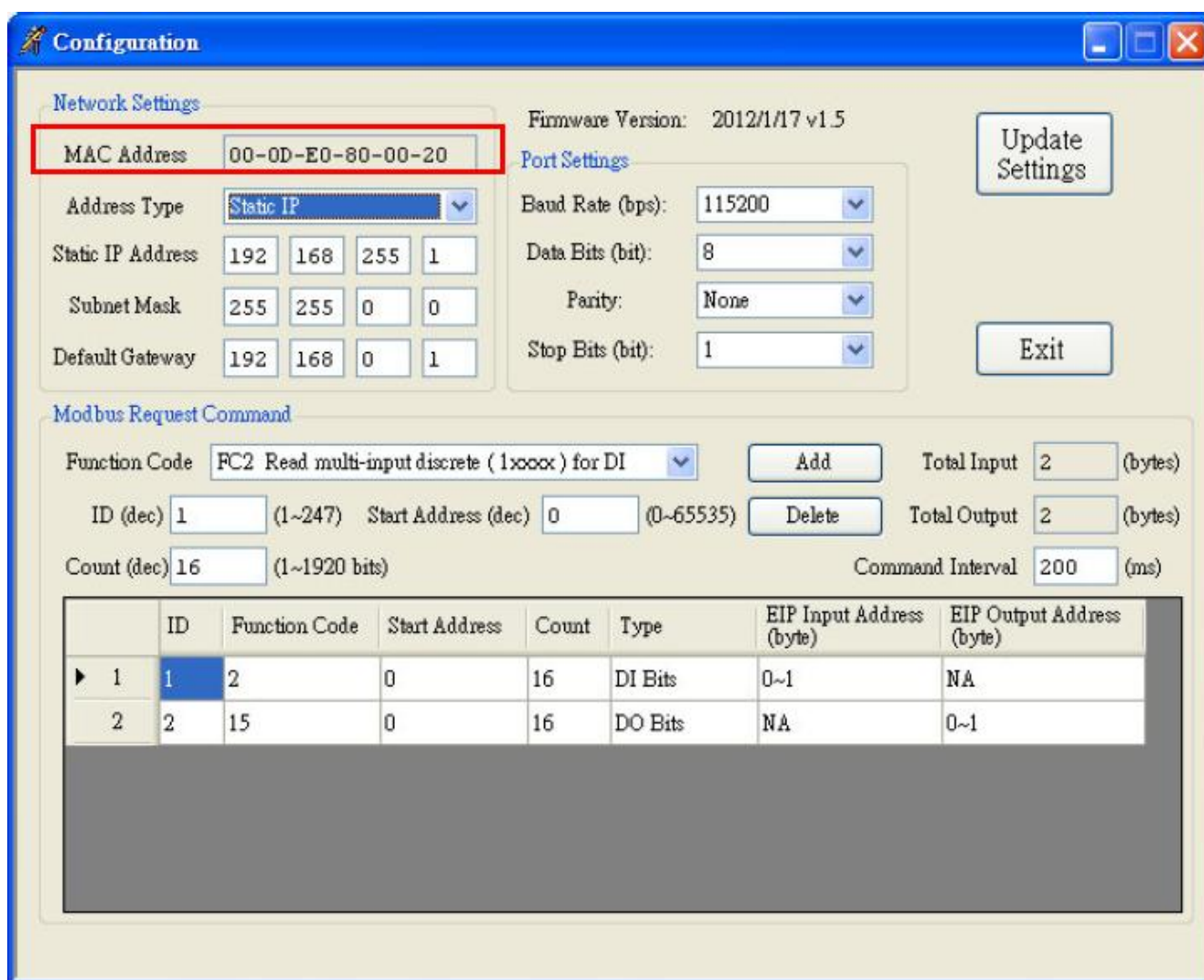
A4 : The utility of version 2.0 and later only supports the firmware version 2.0 and the after. Please go to the product page of the GW-7472 to get the new firmware and update the module. The firmware website is shown below (http://ftp.icpdas.com/pub/cd/fieldbus_cd/ethernetip/gateway/gw-7472/firmware/).



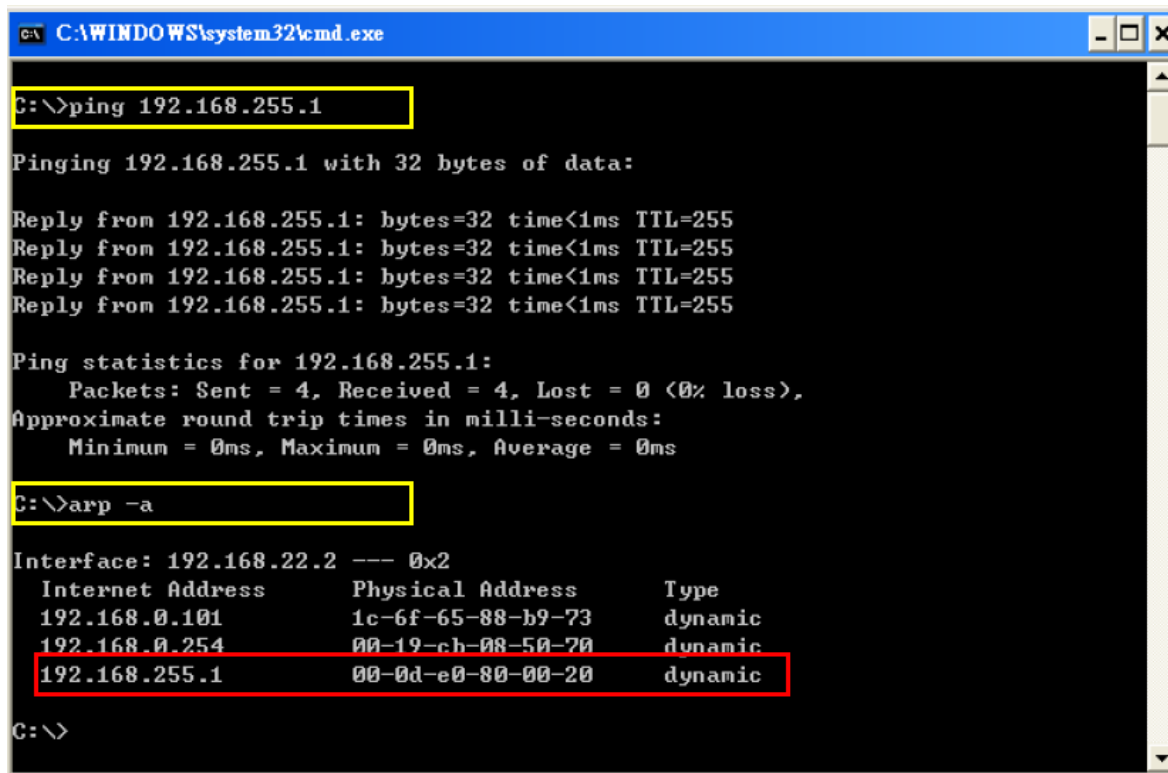
Please follow our steps to update the firmware :

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.



```
C:\WINDOWS\system32\cmd.exe

C:\>ping 192.168.255.1

Pinging 192.168.255.1 with 32 bytes of data:

Reply from 192.168.255.1: bytes=32 time<1ms TTL=255
Reply from 192.168.255.1: bytes=32 time<1ms TTL=255
Reply from 192.168.255.1: bytes=32 time<1ms TTL=255
Reply from 192.168.255.1: bytes=32 time<1ms TTL=255

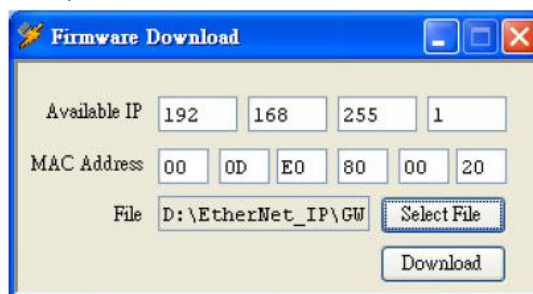
Ping statistics for 192.168.255.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>arp -a

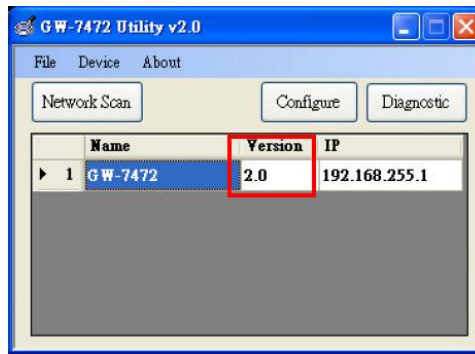
Interface: 192.168.22.2 --- 0x2
    Internet Address      Physical Address      Type
    192.168.0.101         1c-6f-65-88-b9-73    dynamic
    192.168.0.254         00-19-ch-08-50-70    dynamic
    192.168.255.1         00-0d-e0-80-00-20    dynamic

C:\>
```

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.



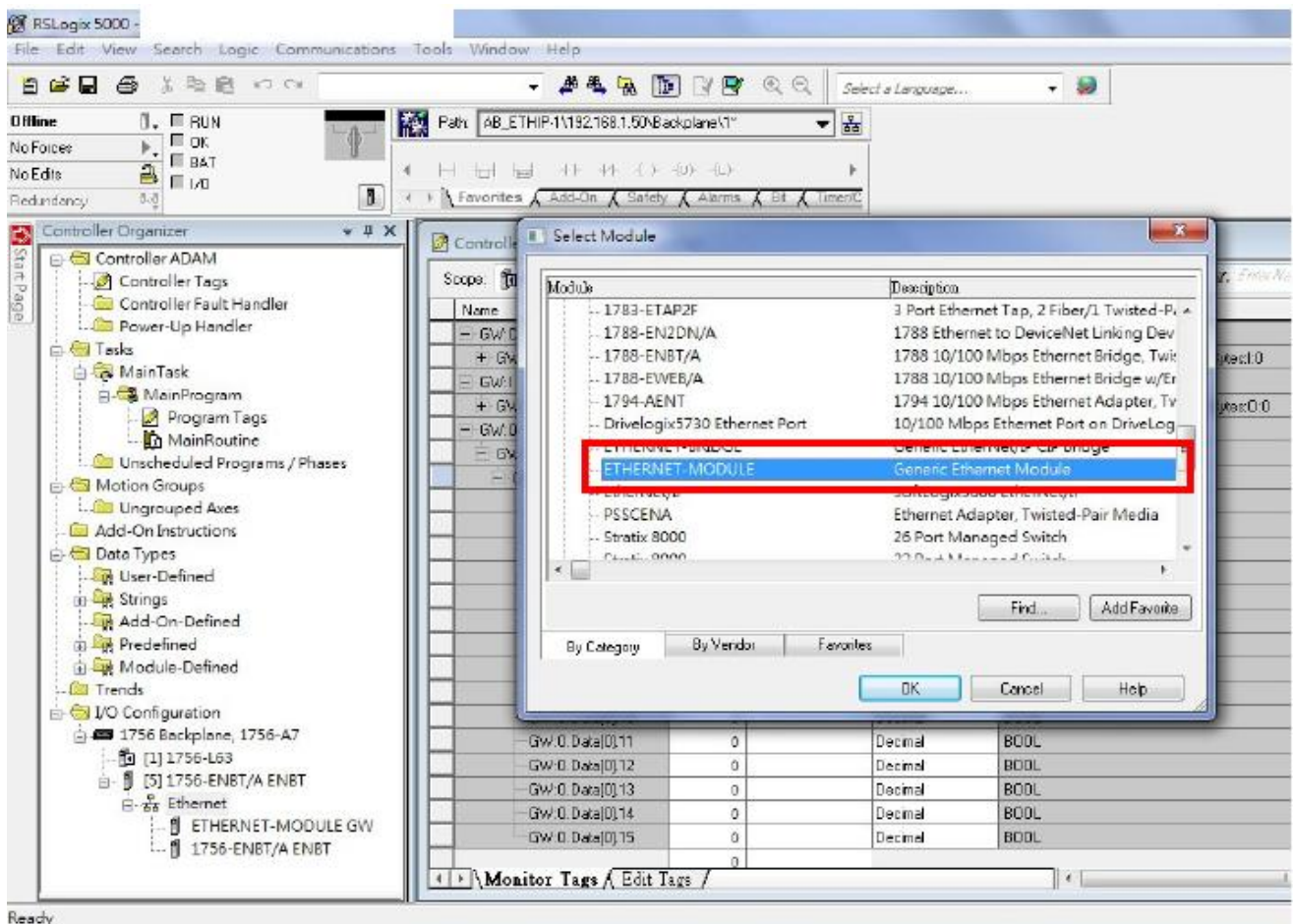
Step3 : After downloading the firmware, please check the Utility whether the version is V2.0 or not on the Main Menu.



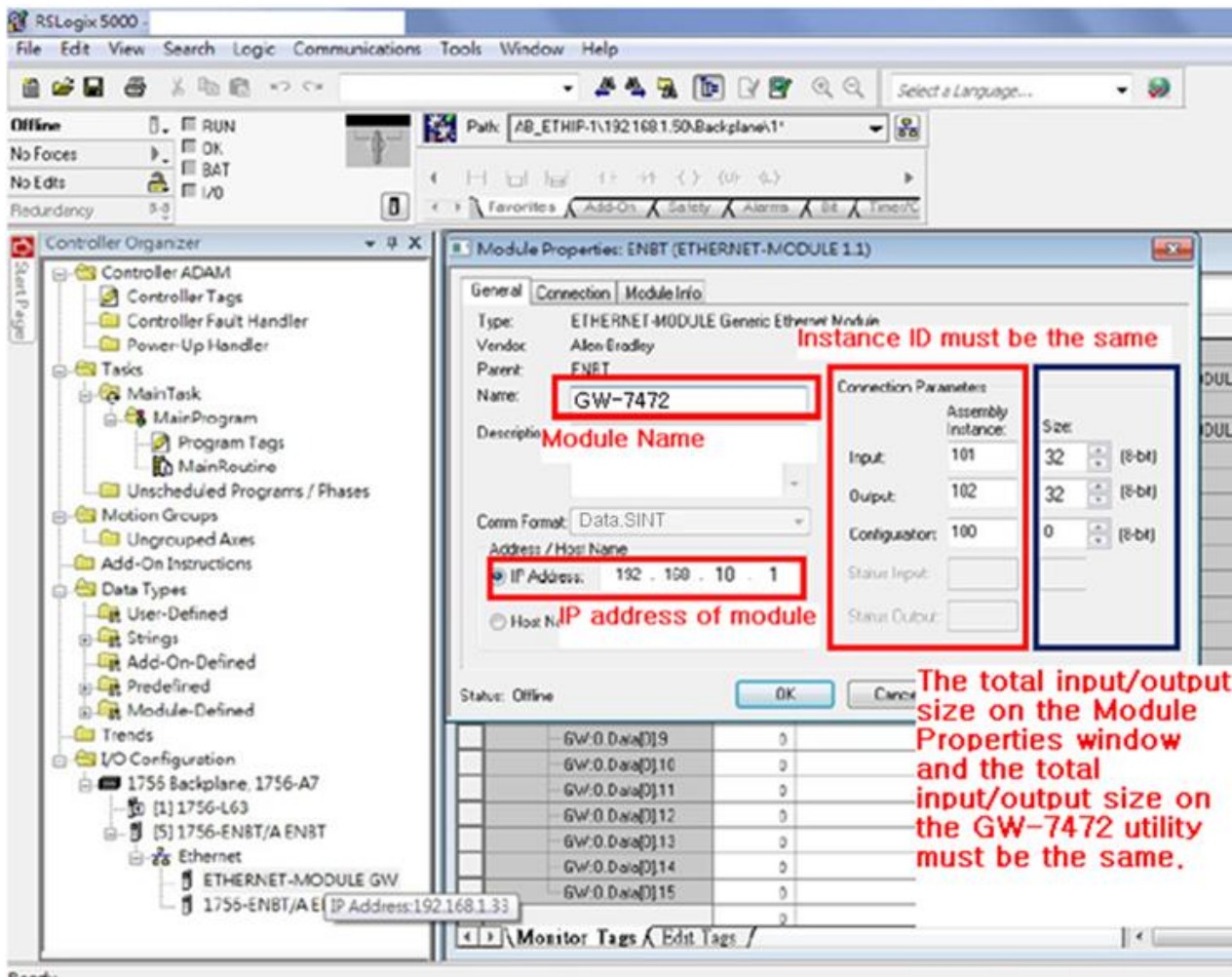
Q5 : How to connect to the Allen-Bradley PLC ?

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:

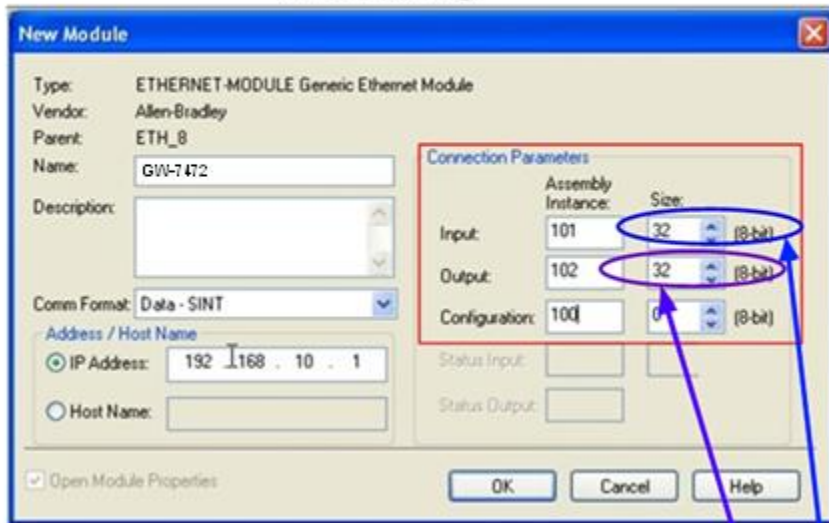
(a) Add a new Module and select ETHERNET-MODULE.



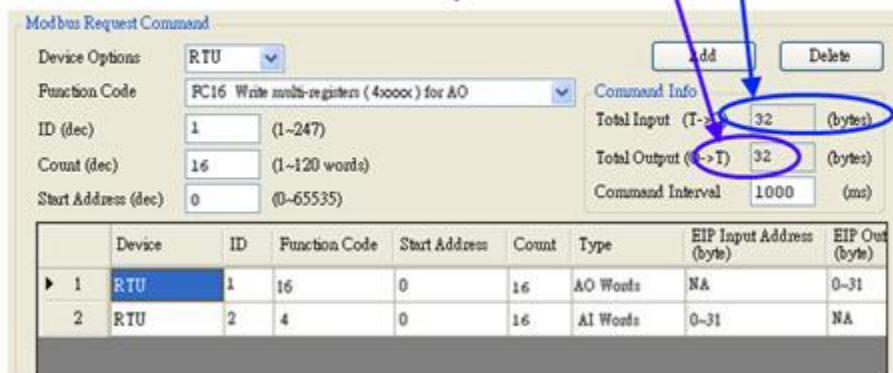
(b) Configure the “Module Properties” window. Please notice that the total input size on the Module Properties window and the total input size on the GW-7472 Utility must be the same. Also, the total output size on the Module Properties window and the total output size on the GW-7472 Utility must be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



PLC Setting



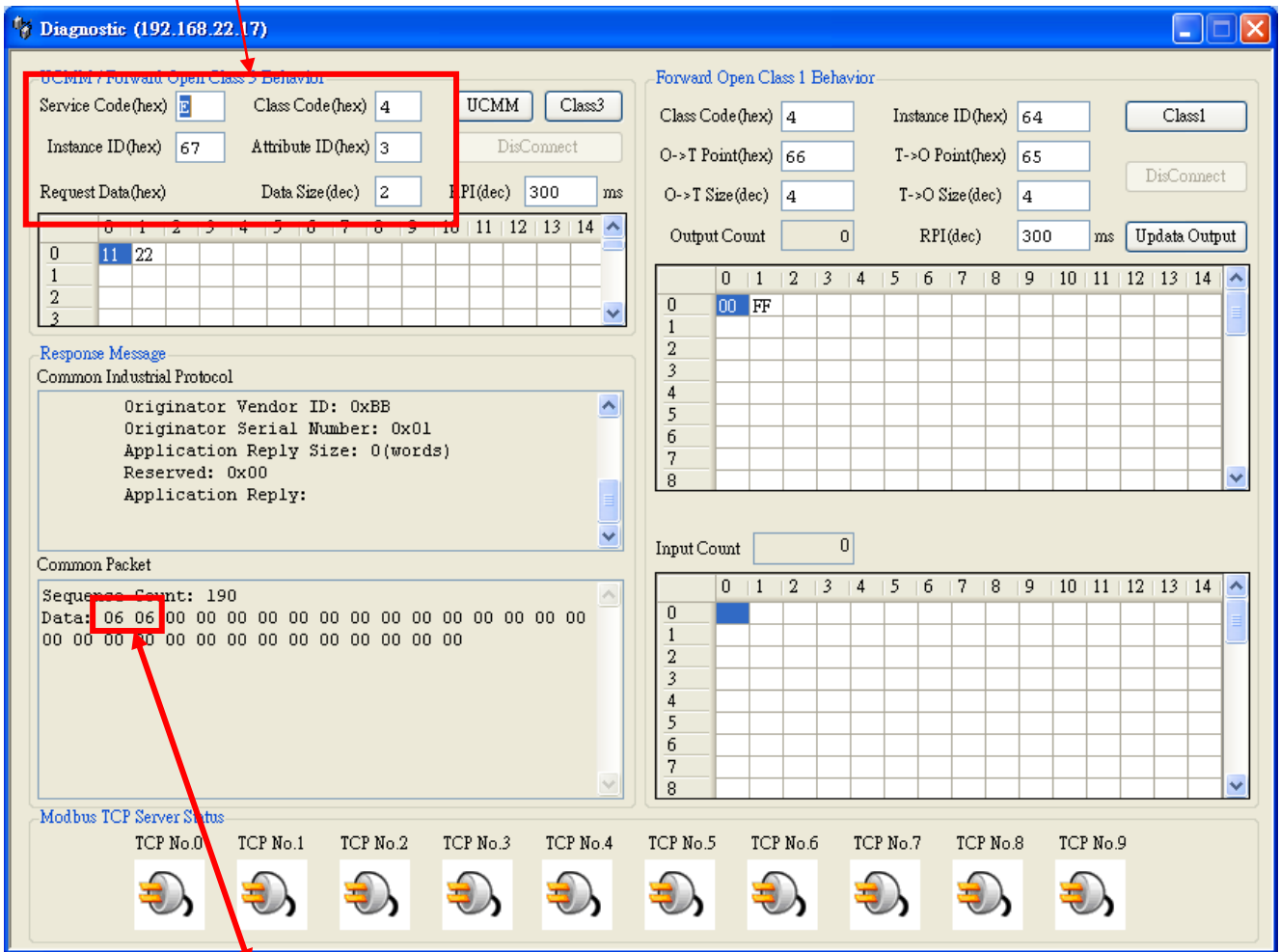
GW-7472 Utility



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.

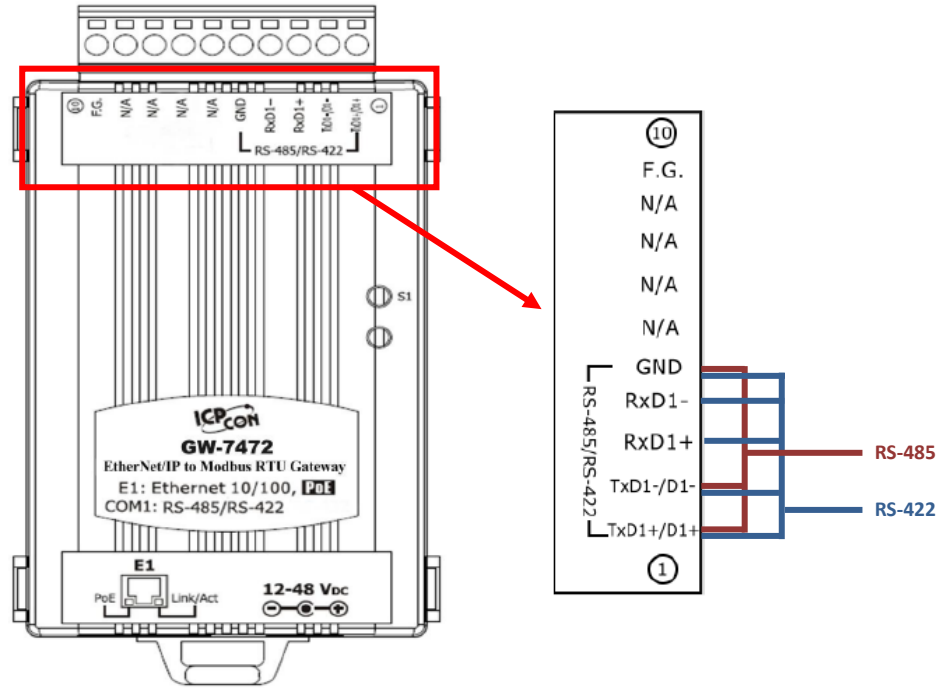
Service = E , Class Code = 4 , Instance ID = 67 , Attribute ID = 3



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

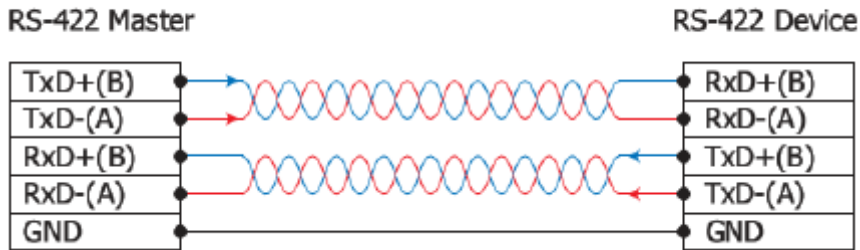
Q7: How can I check the wire connections ?

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

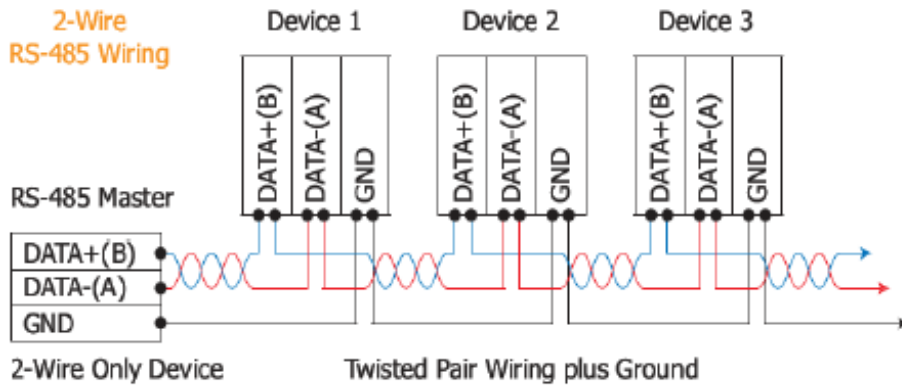


The wire connections between Modbus masters and Modbus slaves must follow the figure we show below. For non-isolated RS-422/485 ports, you should connect all signal grounds of RS-422/485 devices together. This reduces common-mode voltage between devices.

4-Wire RS-422 Wiring



2-Wire RS-485 Wiring



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.

