GW-7434D
Modbus TCP Server/DeviceNet Master Gateway

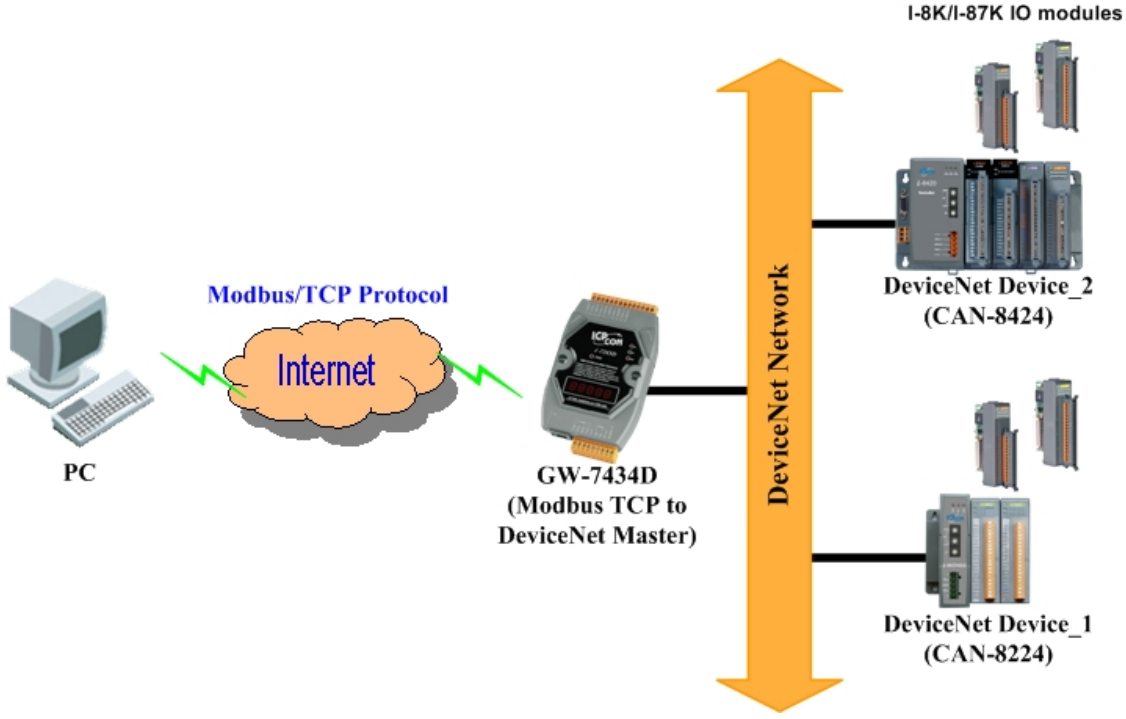
Quick Start User Guide

1. Introduction

This manual introduces the user to the methods used to implement the GW-7434D module into their applications in a quick and easy way. This will only provide with the basic instructions. For more detailed information, please refer to the GW-7434D user manual located on the ICPDAS CD-ROM or download it from the ICPDAS web site:

CAN_CD:\DeviceNet\Gateway\GW-7434D\Manual or
http://www.icpdas.com/products/Remote_IO/can_bus/GW-7434D.htm

The goal of this manual is focused on helping users to quickly familiarize themselves with the GW-7434D module. Here, we use one GW-7434D and two DeviceNet devices as the example that will demonstrate how to use the GW-7434D modules. The architecture of this example is depicted below.



After configuring and letting the GW-7434D start to communicate with these two

DeviceNet devices by Utility tool, users can get the data of these two devices via communicating with the GW-7434D with Modbus TCP protocol.

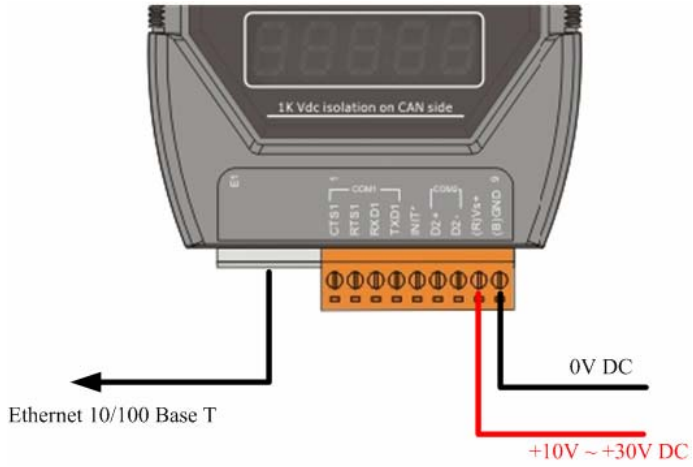
2. Hardware Installation

Step1: Here, we use two DeviceNet devices, the attributes of them are shown below. They are CAN-8424 and CAN-8224 separately.

Device 1: MACID: 0x01, support Poll IO connection, Baud-rate: 125Kbps
Produced connection size: 2 bytes
Consumed connection size: 2 bytes

Device 2: MACID: 0x02, support Poll IO connection, Baud-rate: 125Kbps
Produced connection size: 16 bytes
Consumed connection size: 8 bytes

Step2: Connect the (R)Vs+ and (B)GND pins of the GW-7434D module to the DC power supply (10~30V_{DC}).



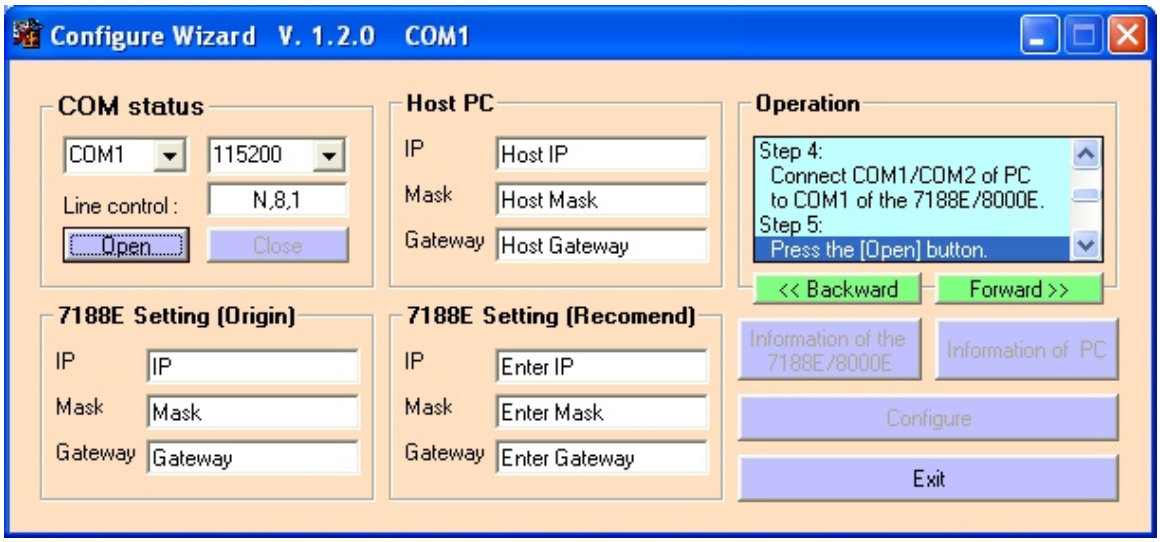
Step3: Connect the Ethernet ports of the GW-7434D and the PC to the hub with standard network cable respectively.

Step4: Connect the CAN ports of the GW-7434D with these two DeviceNet devices

3. Configure the GW-7434D with these two DeviceNet devices

Before starting the GW-7434D gateway tests, users need to configure the parameters of it via the “Configuration Wizard” and “GW-7434D Utility” tools. The details of this procedure are shown below. For more information about setting steps, please refer to section 5 of the GW-7434D’s user’s manual.

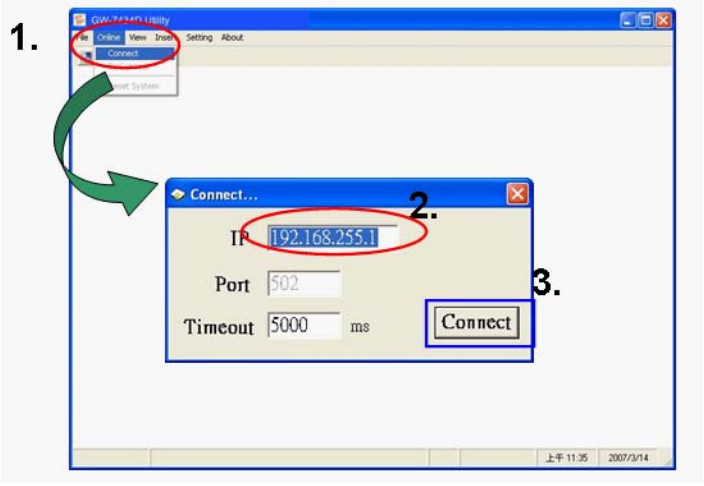
Step1: Configure the network parameters via “Configuration Wizard”



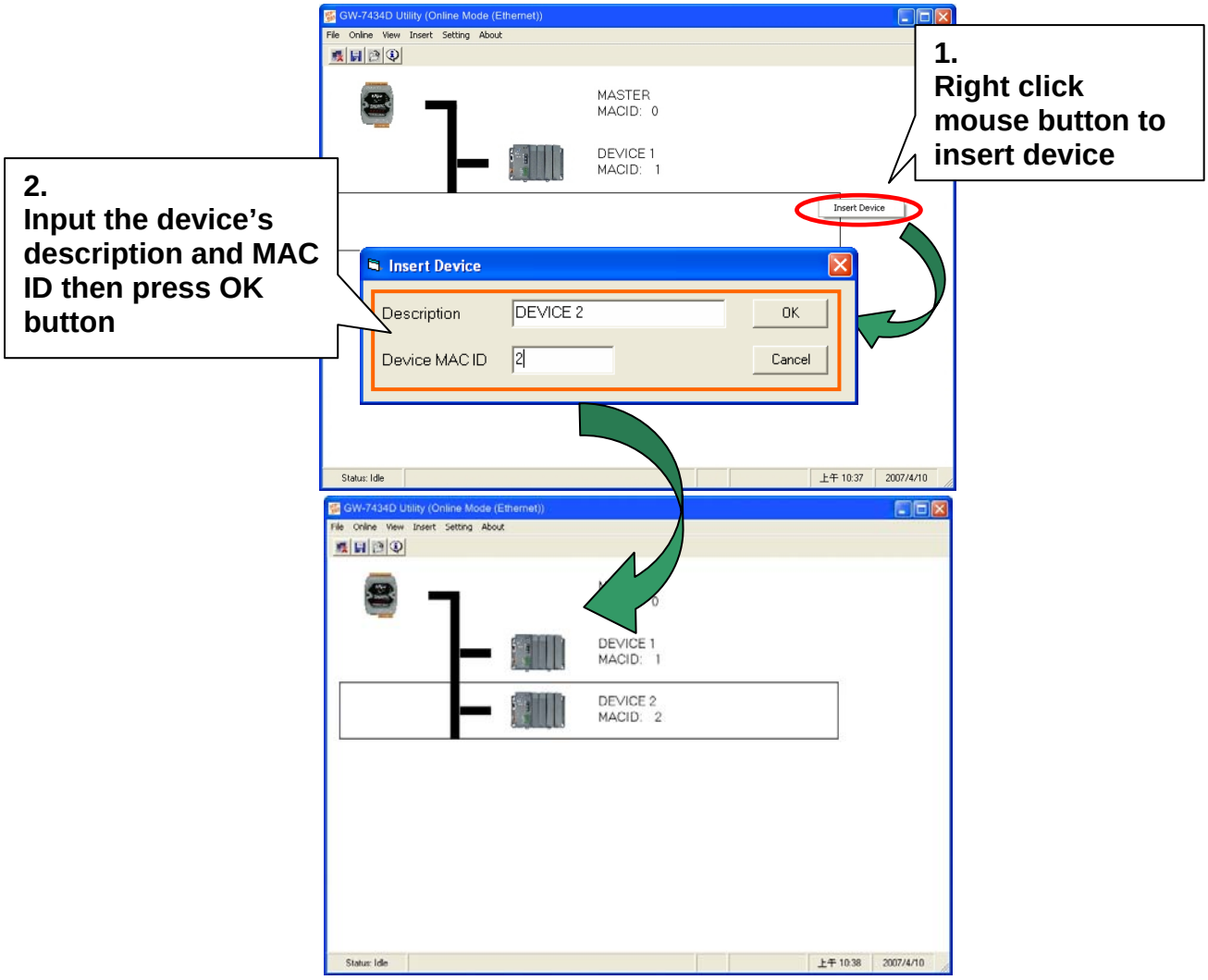
To Use the Configuration Wizard, you must first install PCDiag.
(8000CD:\Napdos\7188e\TCP\PCDiag\Setup\Setup.exe)

Step2: After configuring the network setting of the GW-7434D, users can use the GW-7434D Utility tool to configure it with these two DeviceNet devices.

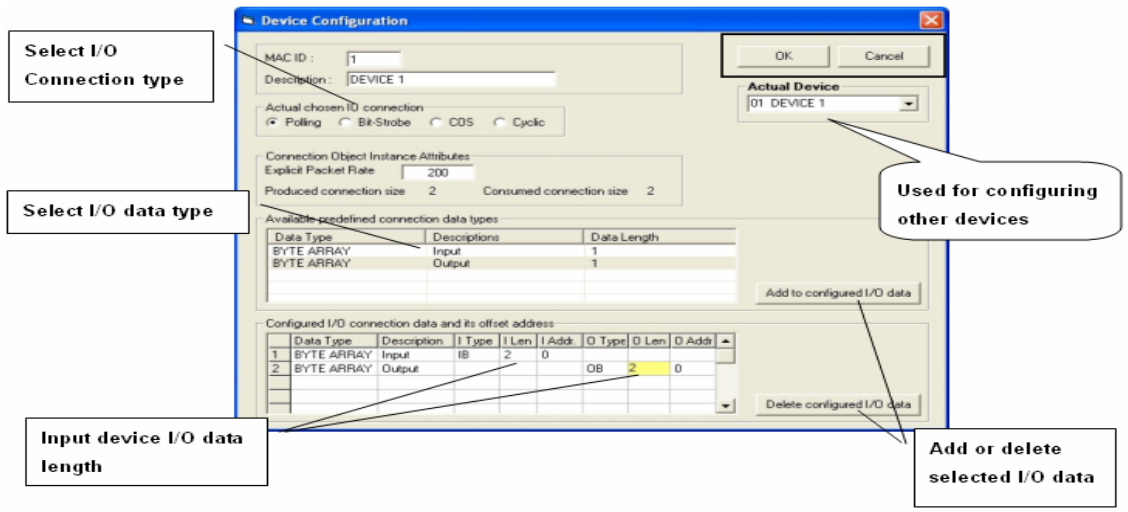
Step3: Click the “Connect” button to connect with the GW-7434D. These steps are shown in the following figure.



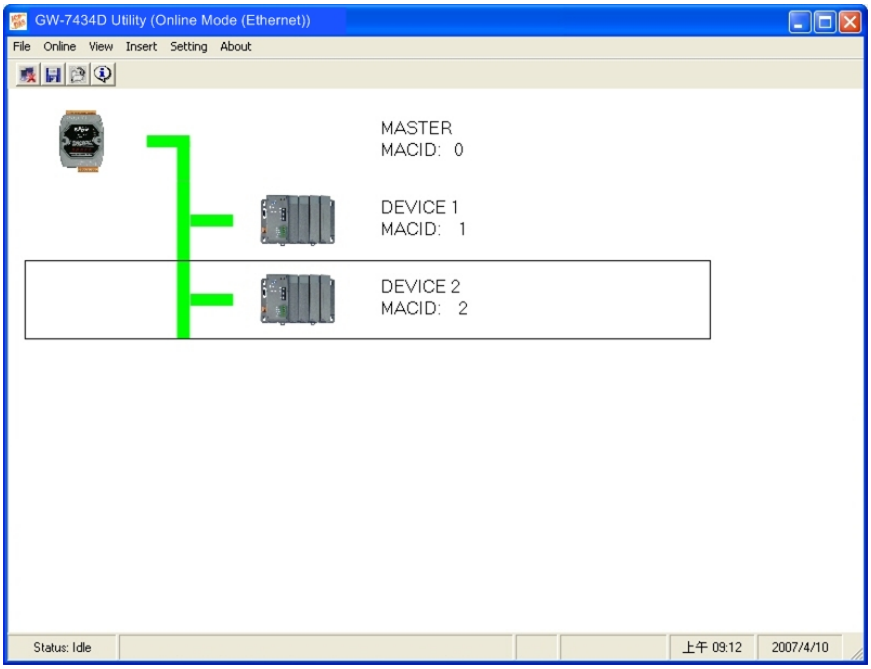
Step4: Click right of the mouse button to add these two devices into GW-7434D's scan-list table.



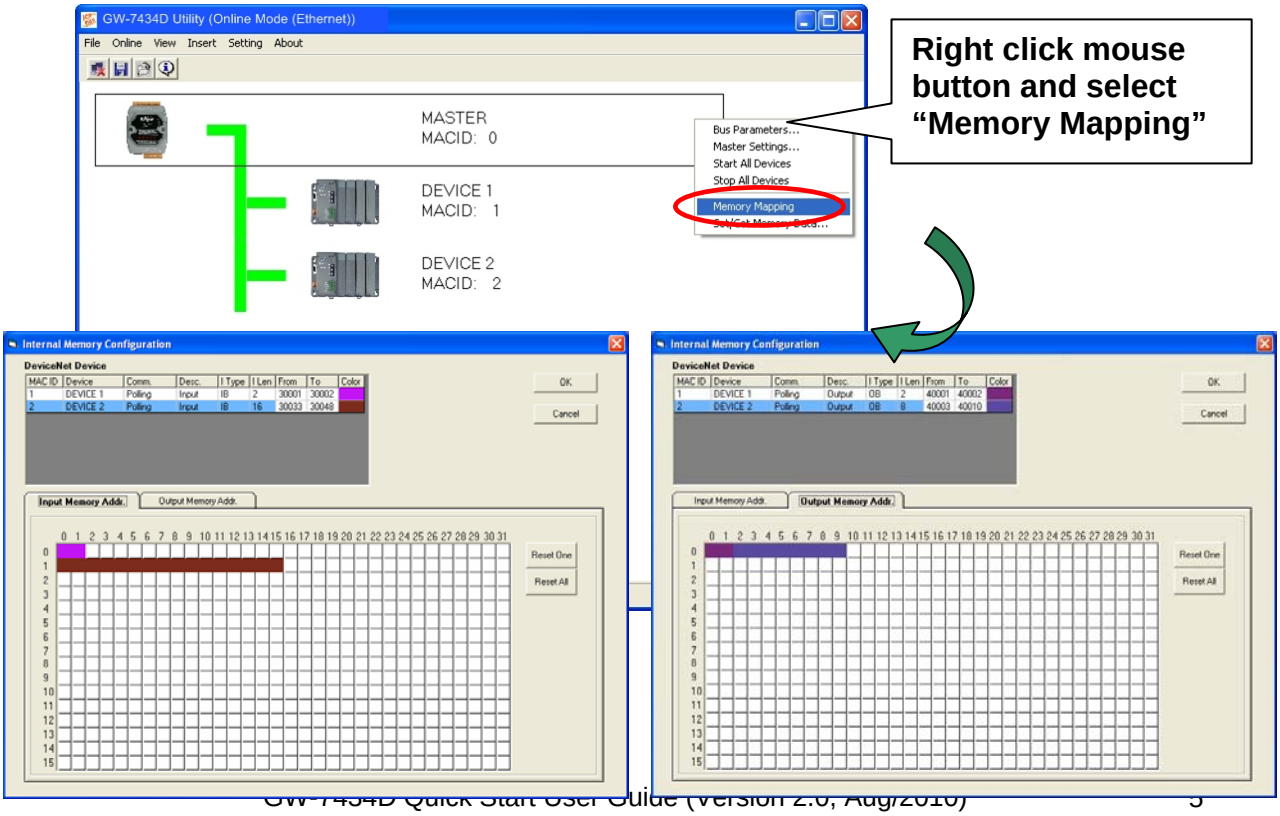
Step5: Now users need to configure the connection parameters between the GW-7434D and these two parameters by double click the left of mouse button on the device's picture.



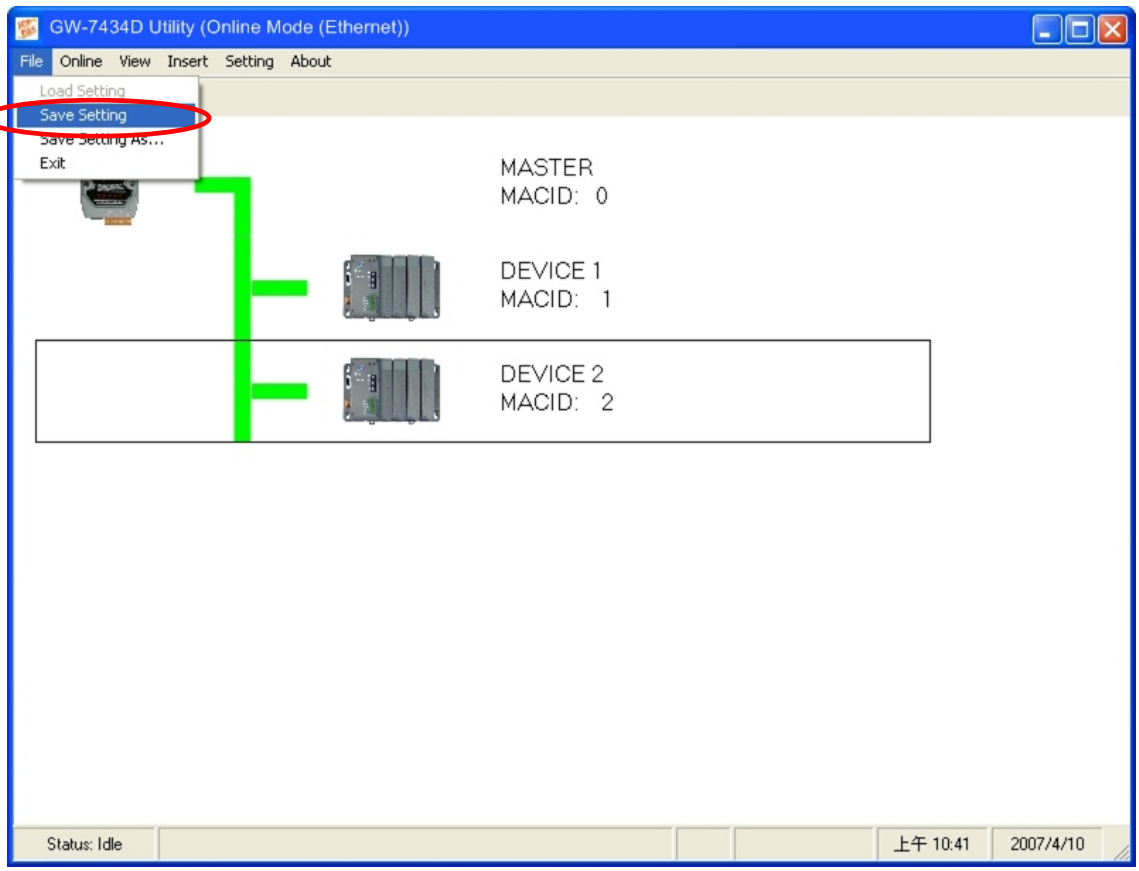
Step6: After configuring these two devices, the GW-7434D will start to communicate with two devices. And the Utility will start to monitor the status of the GW-7434D.



Step7: Finally, users need to map these two devices' IO connection data path into GW-7434D's Input/Output Data Area. So that users can get/set IO data from/into IO Data Area via Modbus/TCP function 16 command, force multiple registers, to get/set these two DeviceNet devices' IO data.



Step 8: After clicking “Save setting”, the GW-7434D Utility generates one record file (default file is called MBTCPDNM.ini). You can run the GW-7434D Utility to load the record file to review all settings of specific GW-7434D. If you forget to store these settings, you can still obtain the information for the GW-7434D via Ethernet.

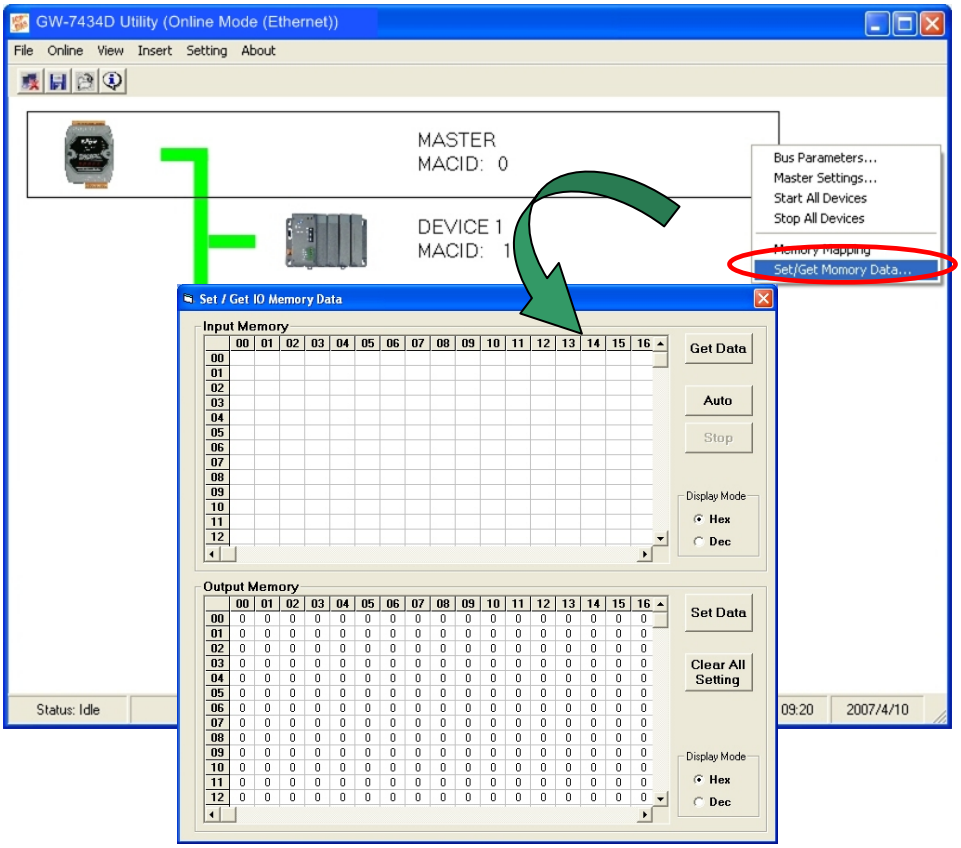


4. Get/Set the IO data of these two DeviceNet devices.

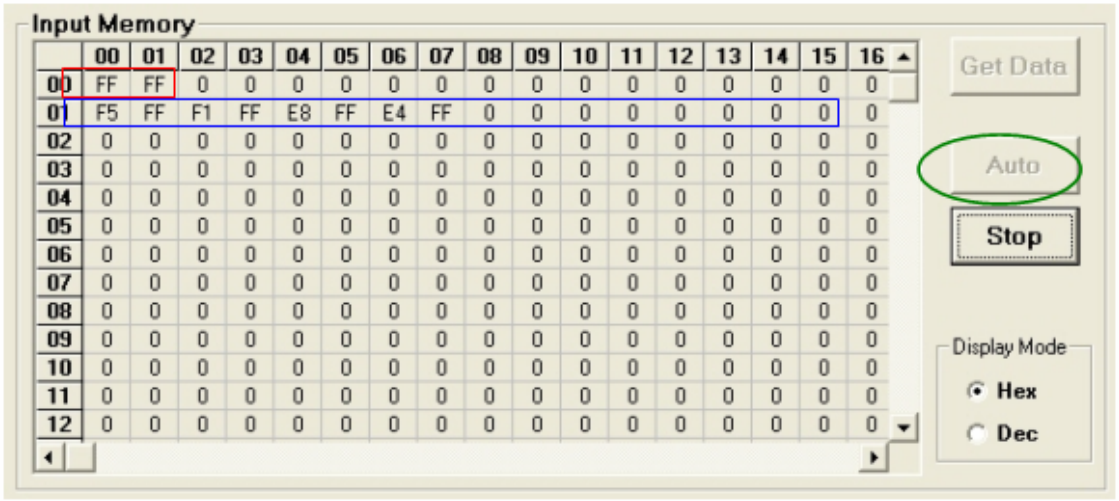
Then users can get/set the IO data of these two devices by the Utility tool. Or users can get/set the IO data of these devices via using Modbus TCP function code 4 and 16 commands to set/get data to/from GW-7434D's IO Data Area, The details of this procedure are shown below.

4.1 Get/Set Data By using the GW-7434D Utility tool

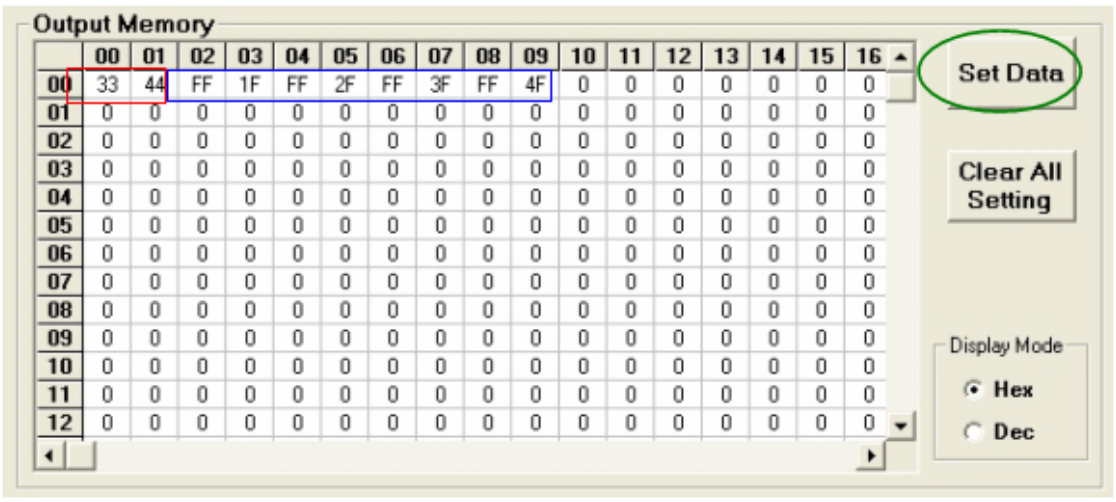
Step1: Open the "Set/Get IO Memory Data" window.



Step2: Users can get the Device1, 2 bytes polling input data, and Device2, 16 bytes polling data, on the Input Memory Table, 0000~0001 and 0100~0115 after click the “Get Data” button or “Auto button”.



Step3: By pressing the “Set Data” button, users also can set the data on the Output Memory Table into GW-7434D’s output data area.



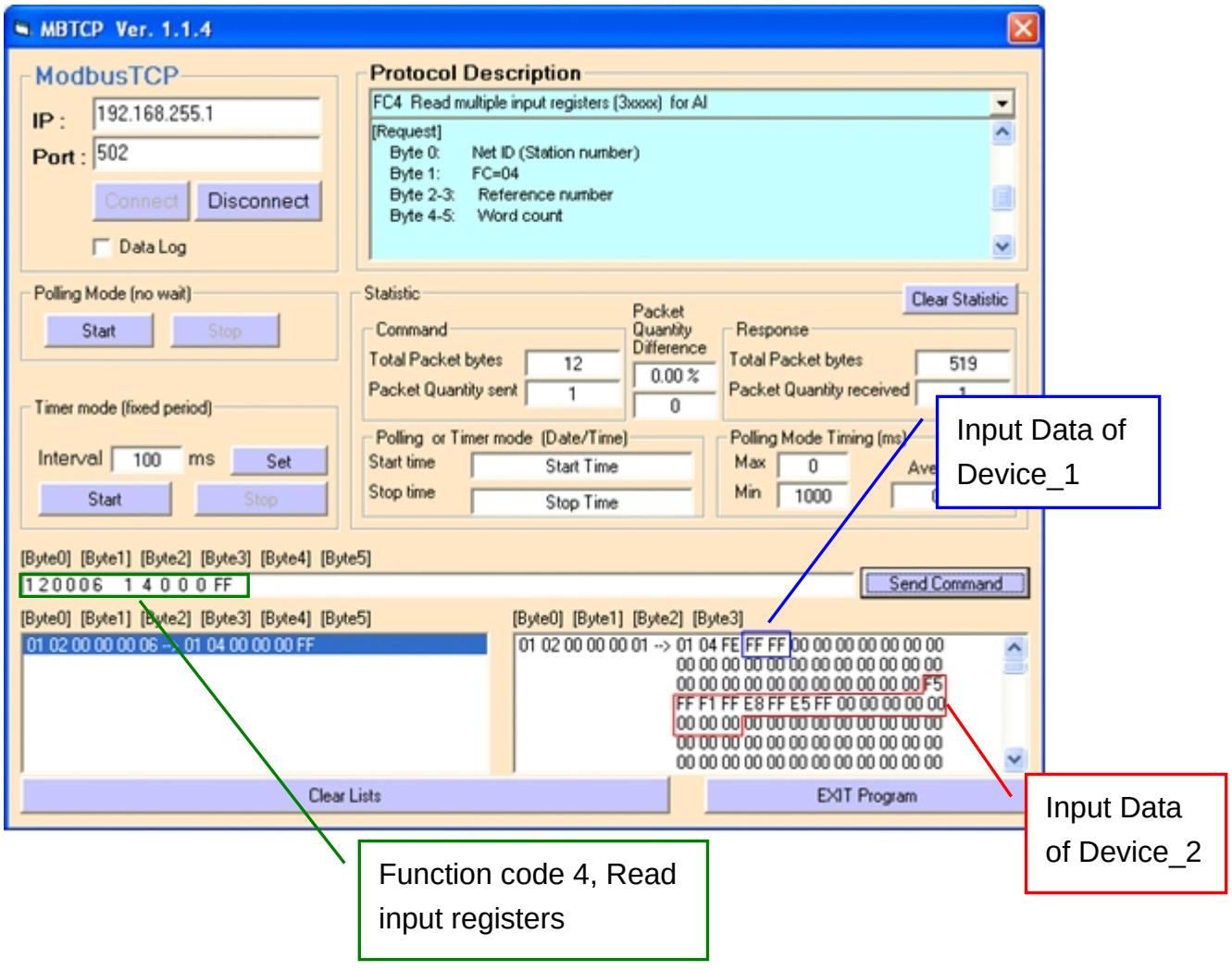
4.2 Get/Set Data By using the MBTCP tool

The address of the Input/Output Data Area is form 0x00 to 0xFF, 256 words. Users can get /set these two devices data by using Modbus/TCP function code 4 and 16 commands to set/get data to/from GW-7434D's IO Data Area. The following tables are the setting of the address mapping on the section 3, step7.

Device	Connection Type	Data Type	Data Length	Mapping Address of IO Data Area
Device_1	Poll	Input	2 Bytes	Input Area: 0x00~0x01
		Output	2Bytes	Output Area: 0x00~0x01
Device_2	Poll	Input	16 Bytes	Input Area: 0x20~0x2F
		Output	8 Bytes	Output Area: 0x02~0x09

Note: Here the setting of the GW-7434D's Net ID is 0x01.

Step1: Using Modbus/TCP function code 4, read input registers, to read devices' input data from GW-7434D's Input Data Area.



Step2: Using Modbus/TCP function code 16, force multiple registers, to write output data into GW-7434D's Output Data Area.