DCON Utility

User's Manual

Version 1.1, April 2006

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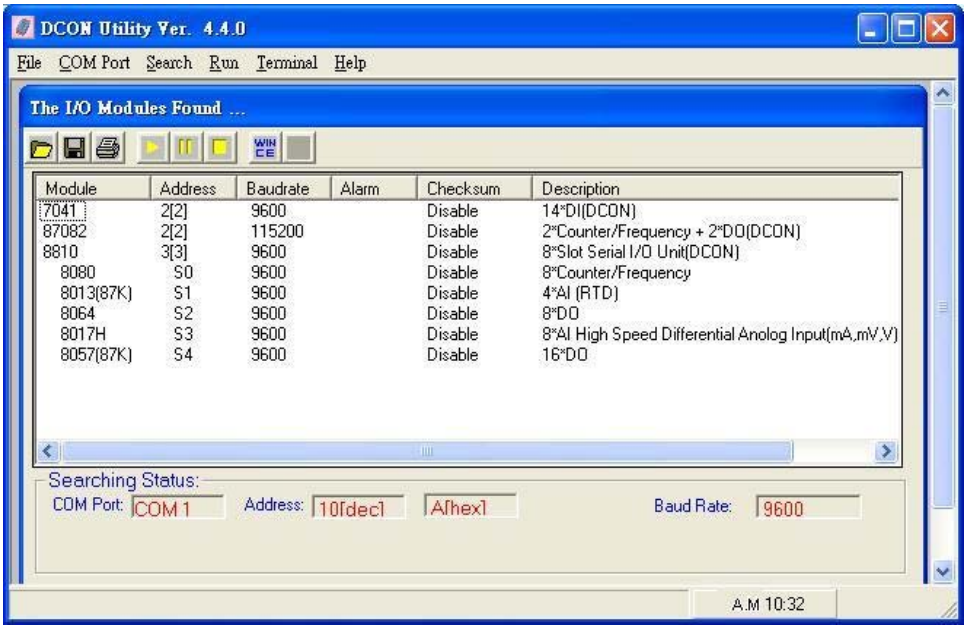
Chapter1. Introduction

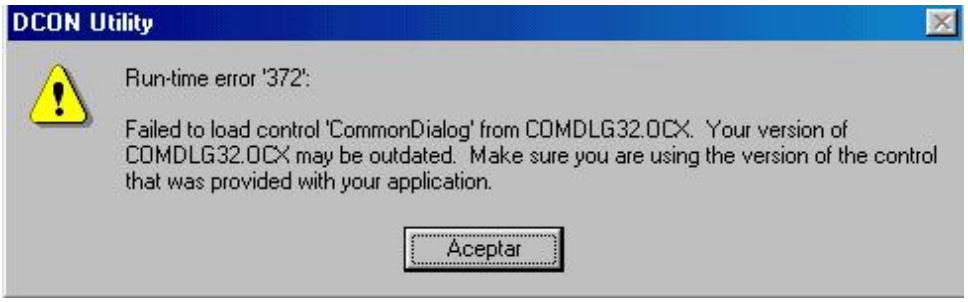
The DCON Utility is a toolkit that help user to search the network, easily to configure and test the I/O modules via the serial port (RS-232/485) or Ethernet port (using virtual com port). It also helps to configure the i-87K I/O modules on WinCon 8000 system. It supports **not only** the **DCON Protocol** I/O modules but also the **M Series I/O Modules (Modbus RTU M-7K,M-87K)** and will support Modbus ASCII M-87K in the future.



For DCON Utility version information and supported module list, please refer to
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/dcon_utility/
CD:\ Napdos\Driver\DCON_Utility

To update the DCON Utility, please refer to
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/dcon_utility/setup/

Note: Sometimes there will be a problem to cause a Run Time Error Message as below.



This error is caused by the different version of ocx, because there is another copy at the path of system32.
1. Please find the ocx file in system32 and backup the ocx to another folder.
2. Copy the ocx that in the DCON Utility installed path to system32.
3. Run the DCON Utility again.

Chapter2. The Wirings of I/O modules

Before searching the I/O, make sure the I/O modules are correctly wired, the basic wiring includes **power supplier** and **communication interface**.

2.1 Power Supplier:

ACE-540A

DIN-540A

Please refer to: http://www.icpdas.com/products/Accessories/power_supply/power_list.htm

1. The power supply must be **DC power** between **+10V to +30V**.

2. Wiring: **+Vs** connects to **+Vs**; **GND** connects to **GND**.

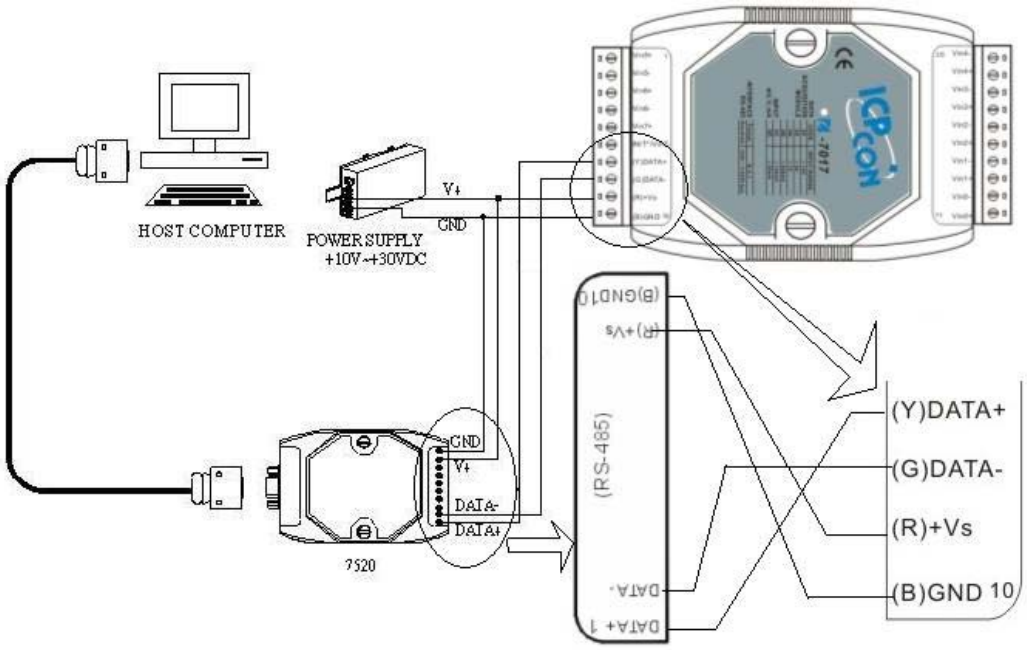
3. Carefully calculate the total watts or current consumption of the system.
   If the total watts were not enough, the system will become unstable and abnormal.

Total watts = Σ(supplied Voltage)*(Ampere consumed)

2.2 The Wirings:

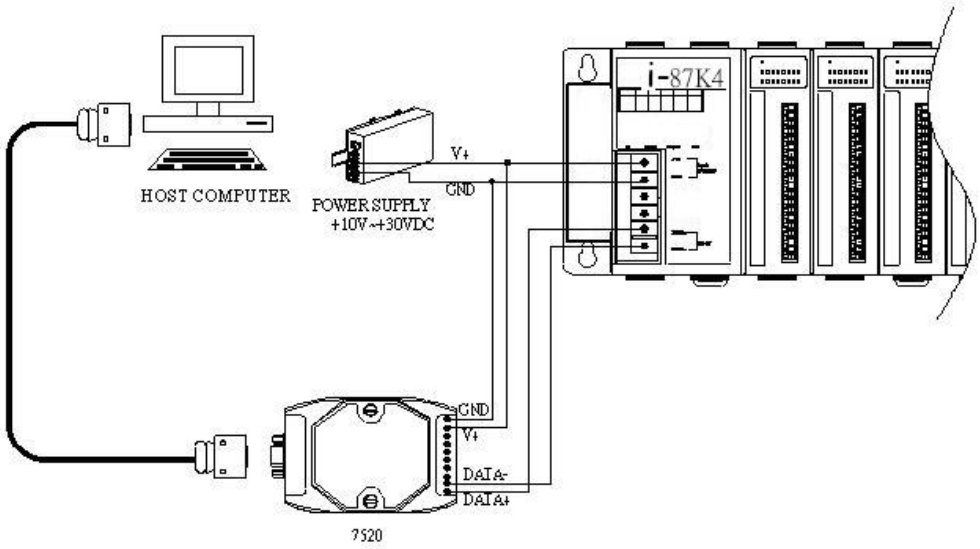
2.2.1 i-7000 and M-7000 series:

i-7000 I/O modules and M-7000 I/O modules are typical **distributed remote I/O modules** and support only **RS-485** interface.



2.2.2 i-87K I/O Expansion with i-87K and M-87K series I/O modules:

The only communication interface of i-87K I/O Expansion is its **RS-485** port. i-87K I/O Expansion unit is a convenient and compact plastic housing which only equipped one power module, one RS-485 interface and several I/O slots. It is used to expand I/O modules via the RS-485 interface. Only i-87K and M-87K series I/O modules can plug in this unit.



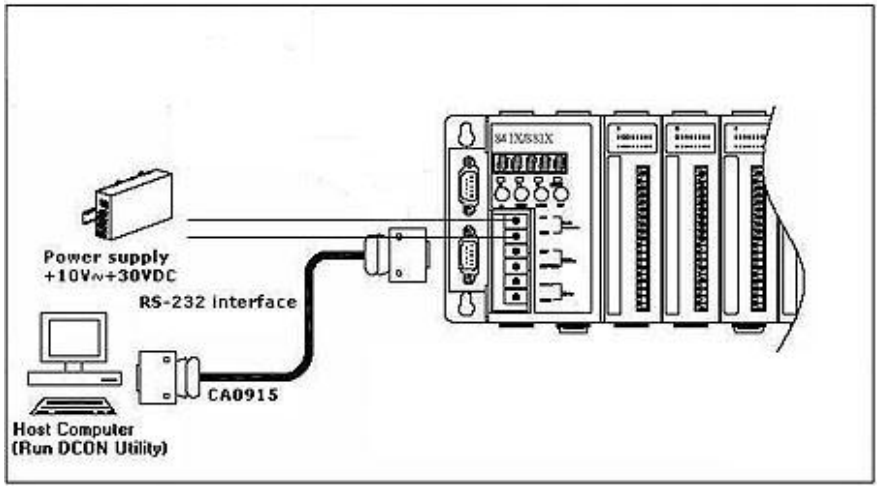
2.2.3 i-8410, i-8810, i-8411 and i-8811 Serial I/O Units:

The **DCON_nnn.exe** is the default DCON firmware running on i-8410, i-8810, i-8411 and i-8811 and it can choice RS-232(COM1 port) or RS-485 (COM2 port) as its communication interface.

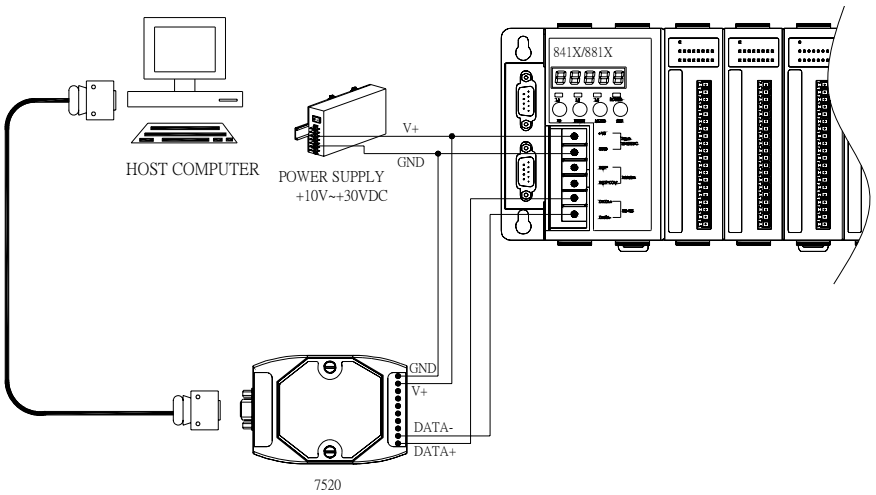
Note: **User can not use the RS-232 and RS-485 at the same time**.

- **RS-232 interface:**

The RS-232 interface also can be used as the communication interface, but for the **short transmitting distance** of **RS-232**, it usually used in development stage to configure and test the I/O modules.



- **RS-485 Interface:**



RS-485 is the most popular and basic communication interface in industry.

Generally, the host PC needs a **RS-232 to RS-485 converter (i-7520)** to convert the RS-232 electrical signal to RS-485.

Some industrial computers have RS-485 interface, they do not need i-7520 converter. But ICP DAS's 7520 series have the ability on **auto tuning** the different baud rates, this is the advantage when the network exists modules with different baud rates.

For more detail about the converter selection guide, please refer to:
http://www.icpdas.com/products/Industrial/communication_module/communication_list.htm

For using the i-7520, please refer to:
http://ftp.icpdas.com.tw/pub/cd/8000cd/napdos/7000/manual/7520.pdf

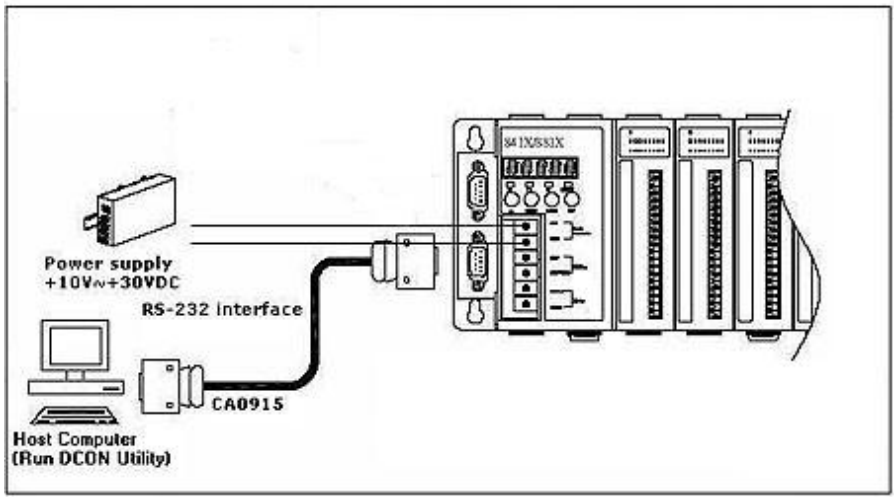
2.2.4 i-8430, i-8830, i-8431, i-8831, i-8KE4 and i-8KE8 Ethernet I/O unit：

This application only applies to DCON Utility with DCON Firmware **E10M_nnn.exe** running on i-8000 Ethernet I/O unit. The E10M_nnn.exe can support both **Ethernet port** and **RS-232 port**.

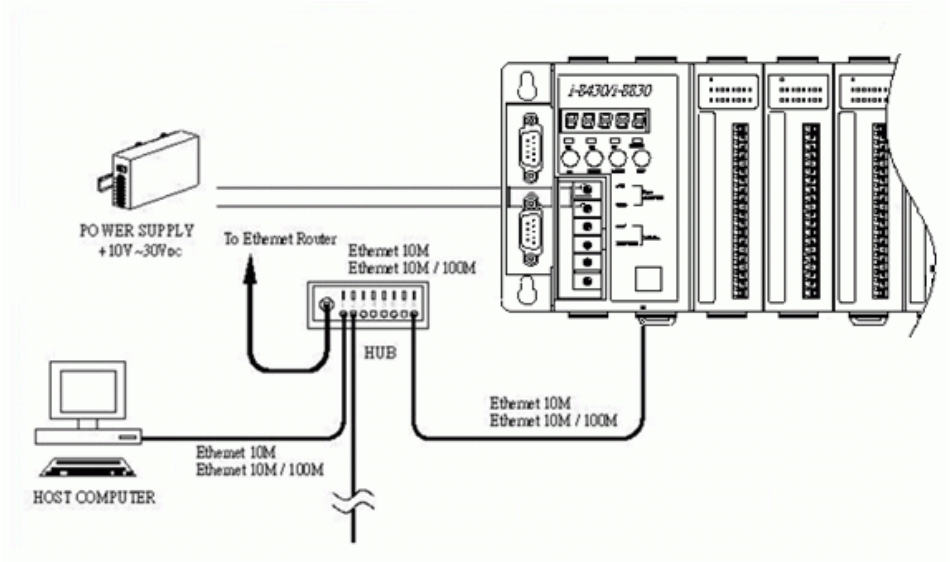
Note: **User can not use the RS-232 and RS-485 at the same time**.

- **RS-232 interface:**

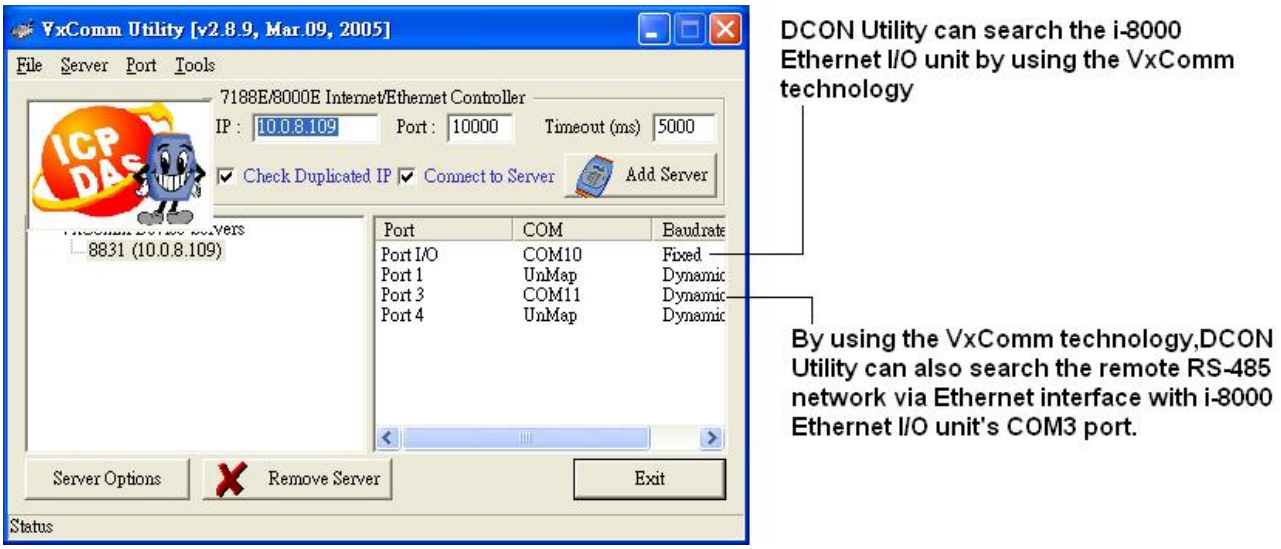
The RS-232 interface also can be used as the communication interface, but for the short transmitting distance of RS-232, it usually used in development stage to configure and test the I/O modules.

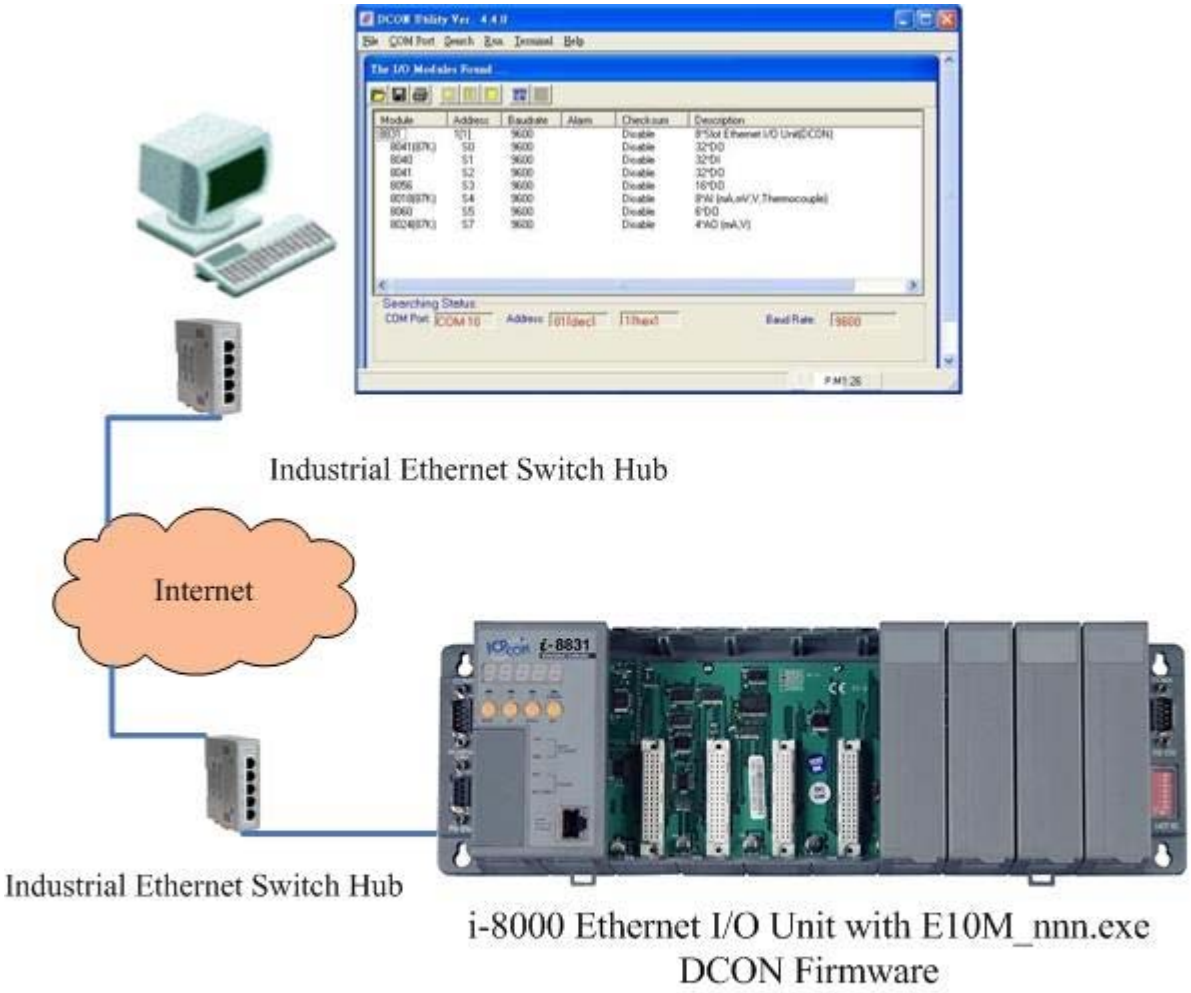


- **Ethernet interface:**



DCON Utility is a **program** using the **COM port** as its **communication interface**. When DCON Utility wants to communicate with the remote the Ethernet I/O unit, the host PC has to install **VxComm utility** and assigned a COM port to map the port **I/O(9999)** of i-8000 Ethernet I/O unit. And the remote Ethernet I/O must support **XServer** to have the **virtual COM port's** function.



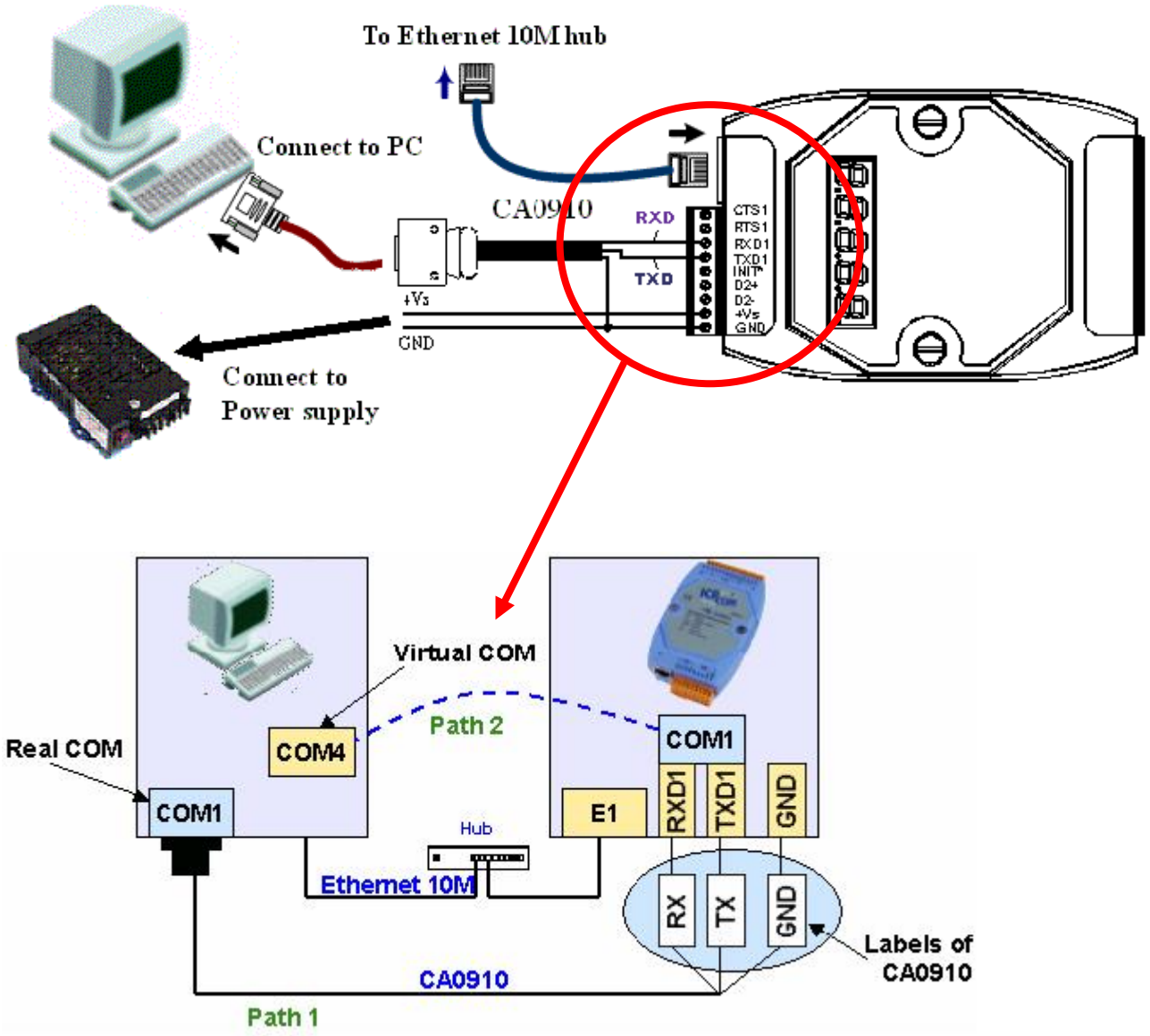


By using the VxComm technology, DCON Utility can search the DCON Protocol I/O modules via Ethernet Interface.

For VxComm technique, please refer to
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/dcon/8430_8830/documents/ or
CD:\ Napdos\DCON\8430_8830\Documents
8430_8830_8KE4_8KE8_Manual.pdf (Chapter 2 and Chapter 3)

2.2.5 i-7188EF-016：

This application only applies to DCON Utility with Firmware **EF016nnn.exe** running on i-7188EF-016.



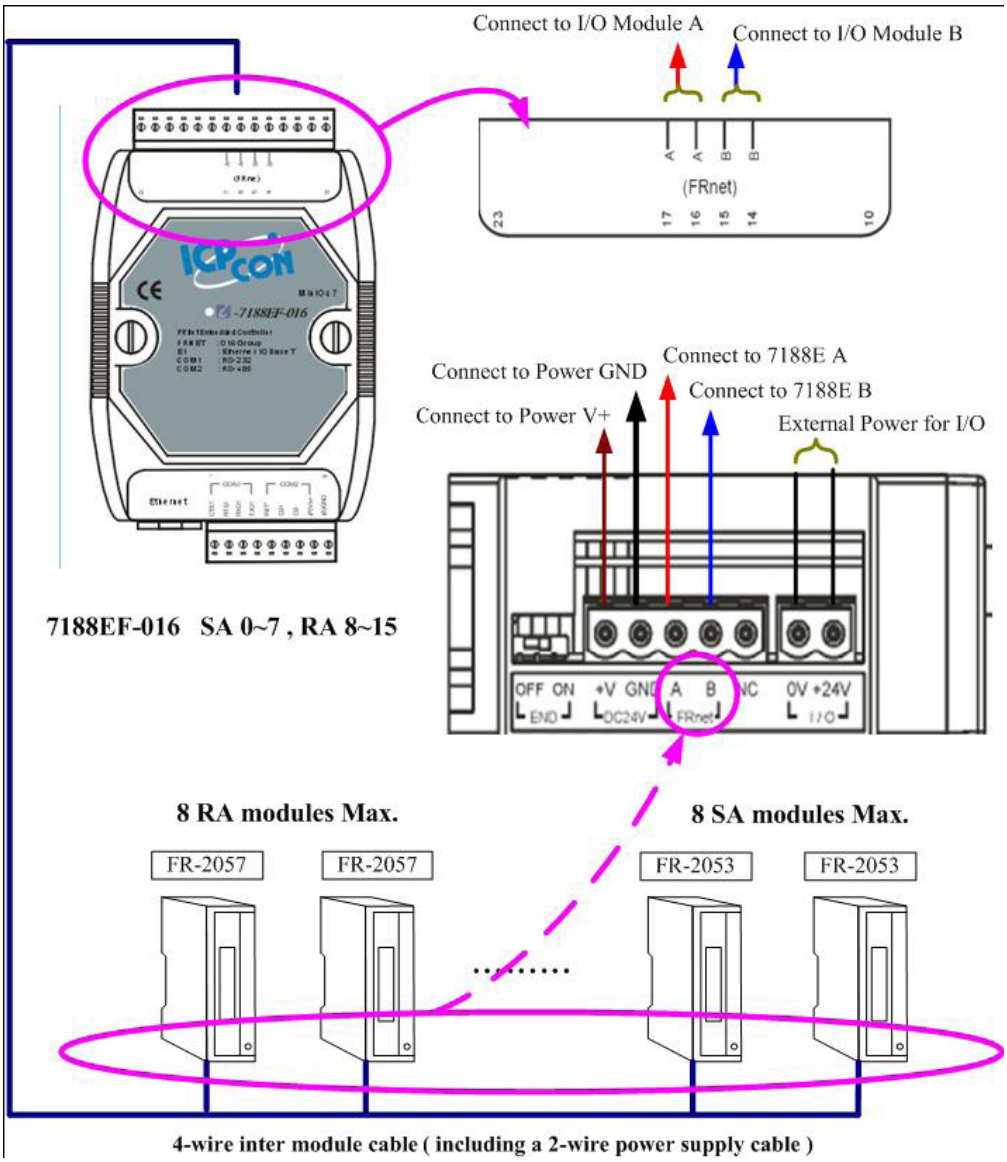
COM1 port of 7188EF-016 is used as the command port to download the firmware, and the CA0910 is the default cable between PC's COM port and COM1 port of 7188EF-016.

the wiring of CA0910 Labels must be as below:

RX ←→RXD

TX←→TXD

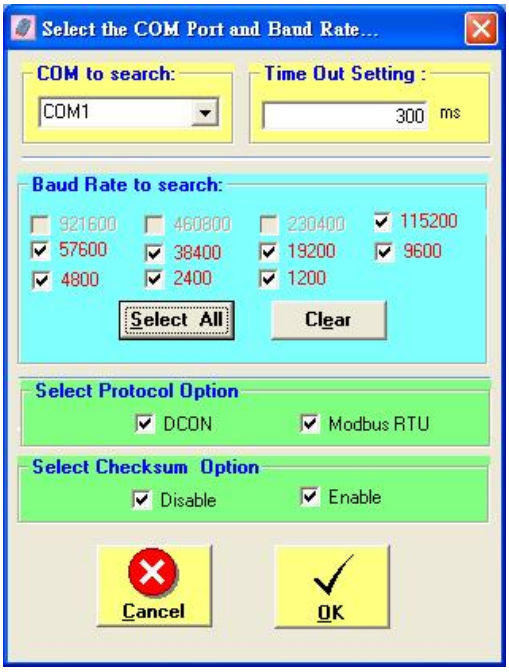
GND←→GND



For more detail about the 7188EF-016 and FR_Net I/O modules, please refer to ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/fr_net/7188ef/document/

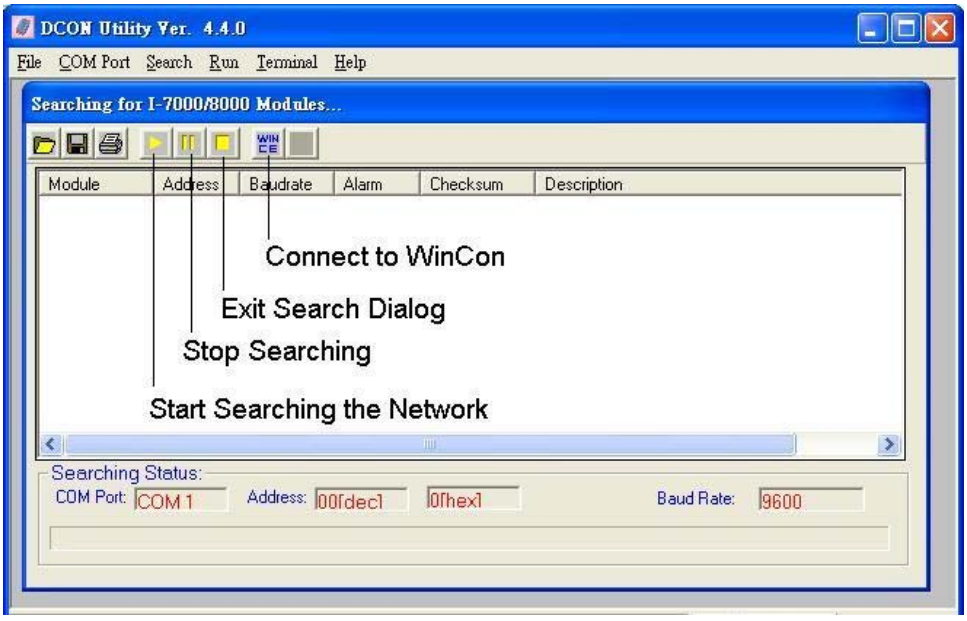
2.3 Search I/O modules:

DCON Utility is a program based on COM port interface, it can search DCON Protocol and Modbus RTU Protocol modules and support checksum disable and enable.



2.3.1 Search functions:

The buttons below show the description about the search function.



2.3.2 Search modules:

If it is the first time to search and to configure the new or unknown modules, there are rules which can help to search and configure the modules.

Step 1. Make sure the wirings are correctly connected.

Please refer to the previous sections.

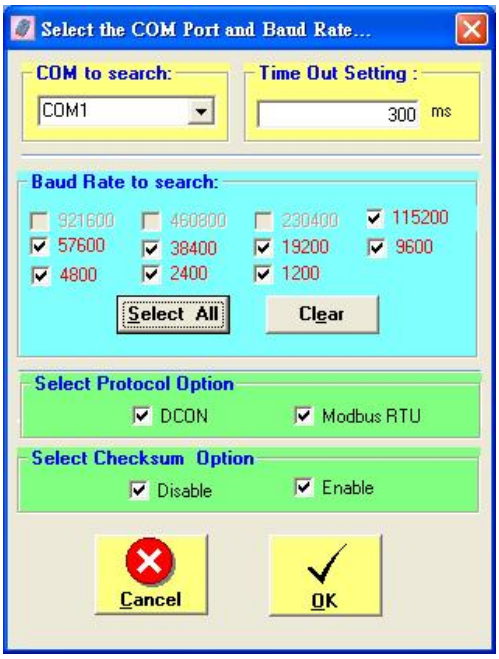
Step 2. Search and configure the modules one by one.

If the modules are new or unknown, they may have the same communication settings, and if there are two modules with the same communication settings, it will get an unexpected search result. So they must be searched and be configured one by one.

Step 3. Check the COM Port Setting.

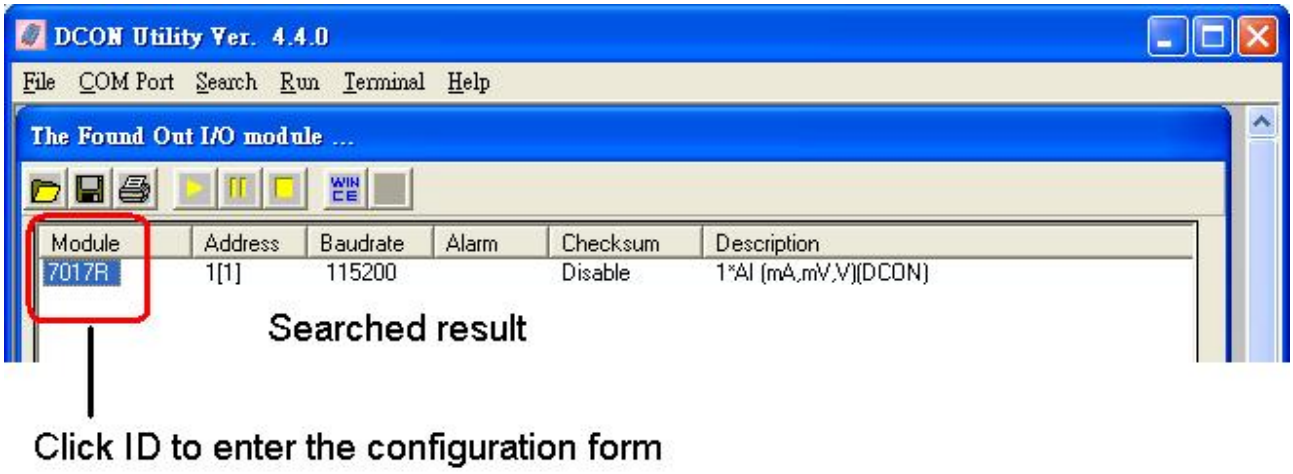
- Choose the COM port of Host PC that will connect to the module and select the searching parameters.

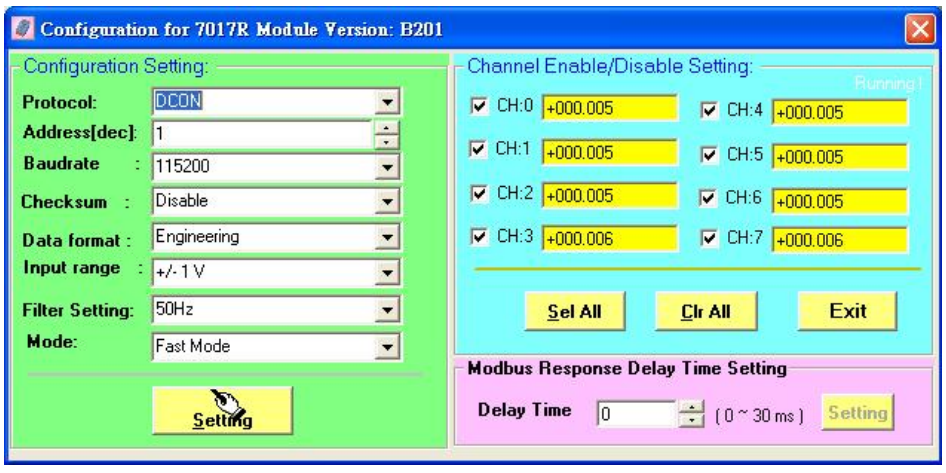
- If does not know the communication settings of modules, it can select multi-baud rate, protocol or checksum conditions, but it will spend more time to scan the network.



Step 4. Clicks  **to start searching.**

Step 5. Click Searched ID to enter the configuration form.





The Configuration form of 7017R

2.3.3 Search the unknown modules:

Sometimes, user tries to find the I/O modules and failed to do it.

Step 1. Make sure the wiring is correct.

Step 2. Search and configure the modules one by one.

Step 3. Connect the INIT* to GND and Power on the module.

If the modules are powered on with the INIT* connected to GND , it can get the initial communication settings, the initial communication settings of 7000 series and 87K series are list in the table below.

	7000 series (i-7000 and M-7000)	87K series
Address	0	0
Baud rate	9600	115200
Checksum	Disabled	Disabled
Protocol	DCON Protocol	DCON Protocol

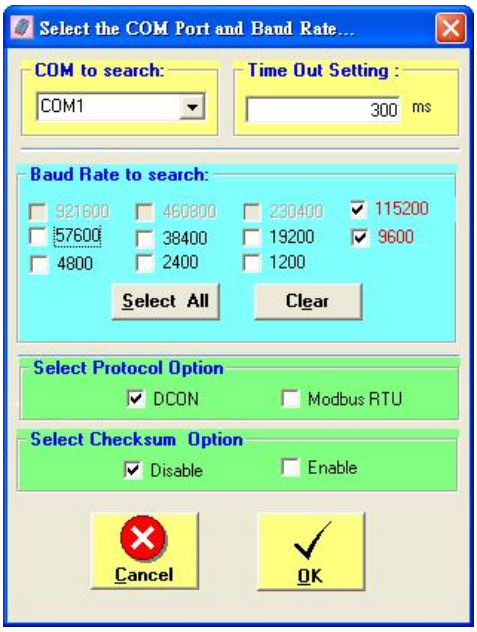
Note 1: The default settings and initial settings are different.

Note 2: If the module is a new one, it will have the default communication settings, the default communication settings of i-7K, M-7K and 87K series are list in the table below.

	i-7000	M-7000	87K series
Address	1	1	1
Baud rate	9600	9600	115200
Checksum	Disabled	Not defined	Disabled
Protocol	DCON Protocol	Modbus Protocol	DCON Protocol

Note 3: i-8000 system can not power on with INIT* connect to INIT*COM to get the default communication setting, because when INIT* connect to INIT*COM, the firmware can not be auto executed by the MiniOS7.

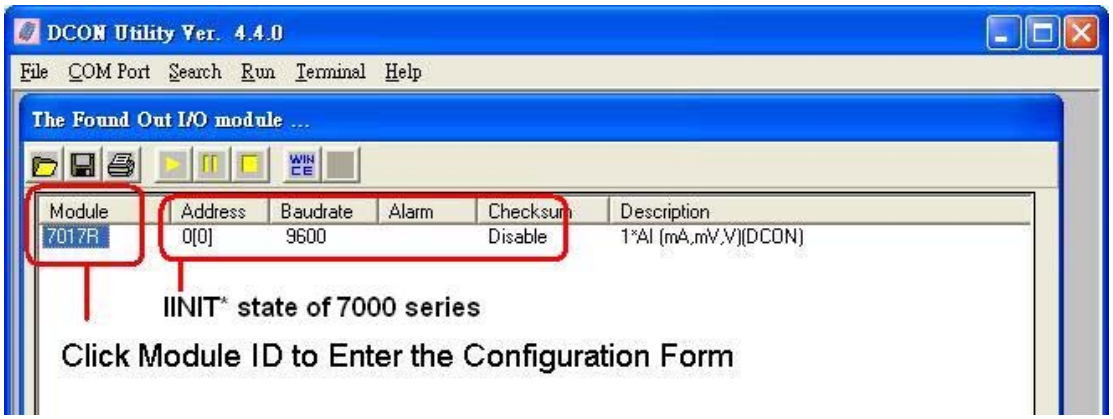
Step 4. Check the COM Port Setting.

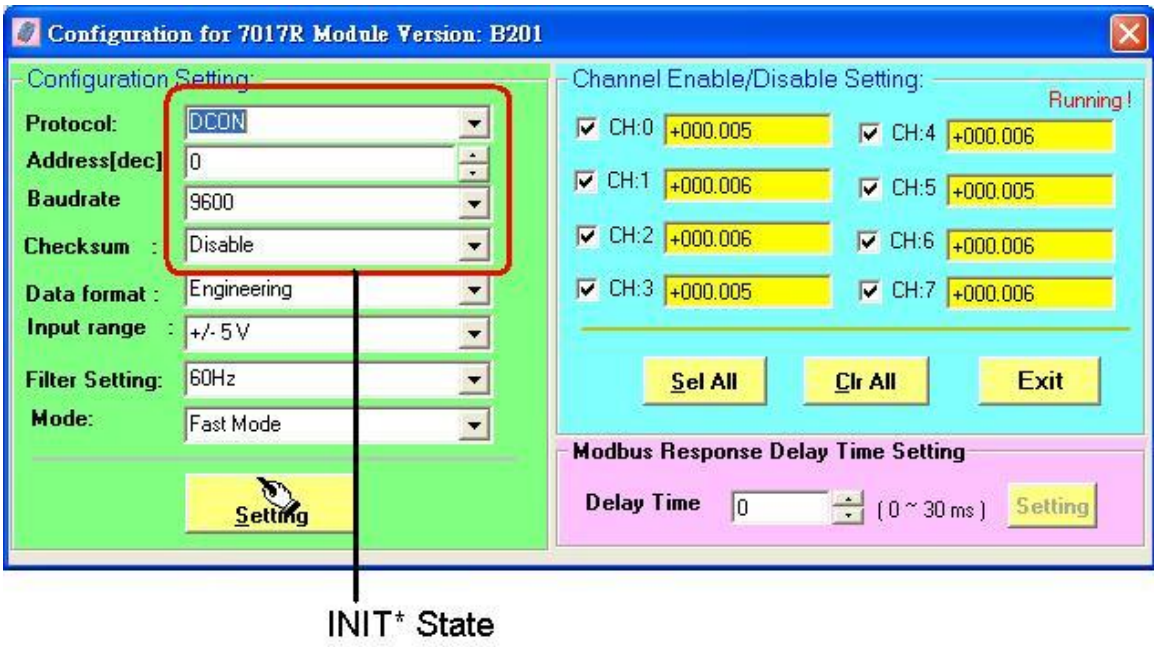


Note: When module is powered on with INIT* connects to GND, it can just choose baud rate 115200, and 9600 as searching condition.

Step 5. Clicks  **to start searching.**

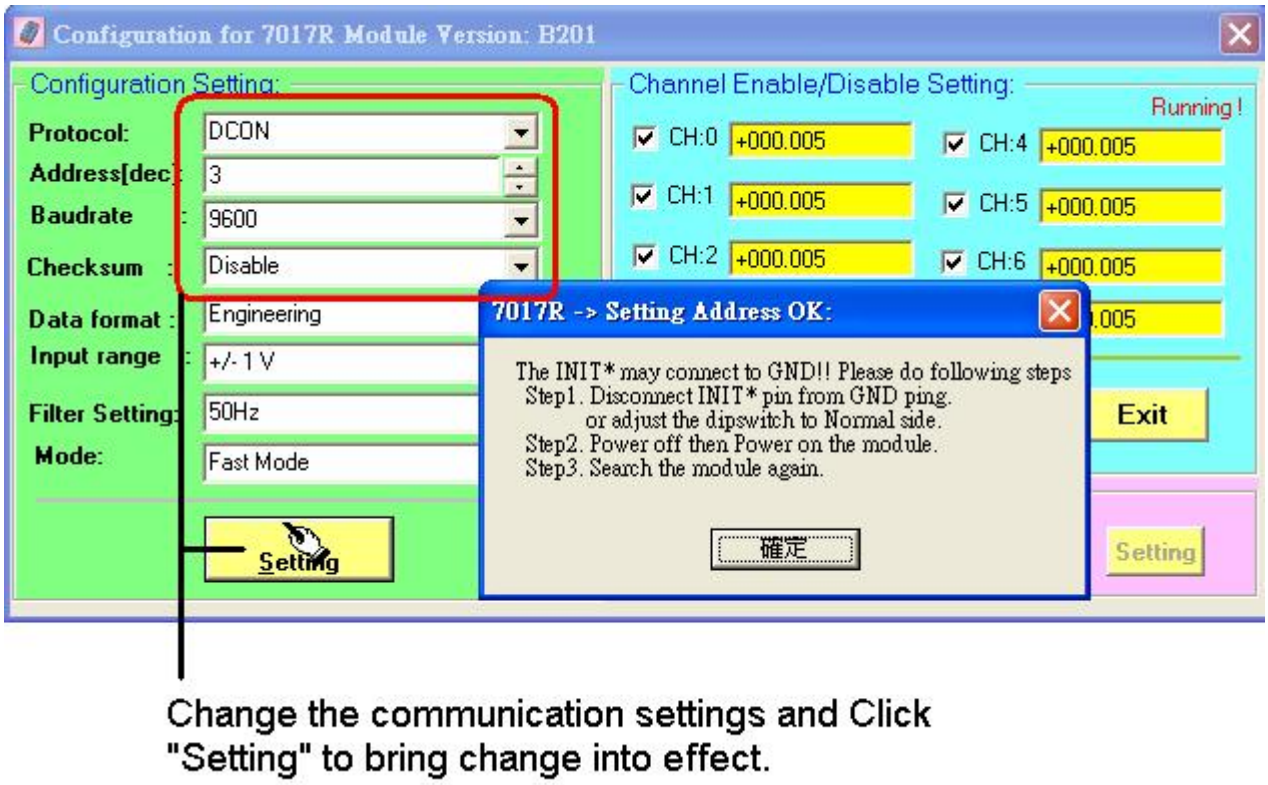
Step 6. Click Module ID to Enter the Configuration form.





Step 7. Change and Save the Communication Settings to EEPROM.

When module is powered on with INIT* connected to GND, the module will use initial settings as its communication parameters, but the real communication settings which save on EEPREOM are not changed. The better way is to connect the INIT* to GND and click “Setting” to save the initial settings to EEPROM.



Change the communication settings and Click "Setting" to bring change into effect.

Step 8. Reset the Power and Release the INIT* to Normal state then Search again.

When successfully set the communication settings, it must release the INIT* to normal state and reset the power then search again, the module now use the new communication settings and the settings are the same as those which save at EEPROM.

Chapter3. Configure I/O modules

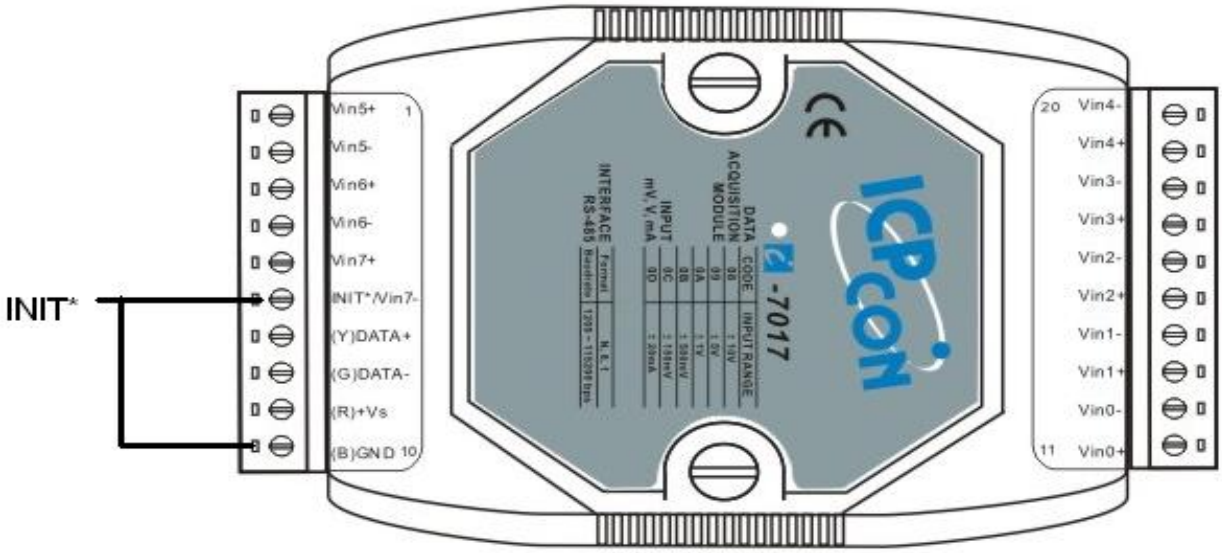
3.1 To Configure i-7K, M-7K and i-87K I/O modules:

There are DCON Protocol and Modbus Protocol I/O module, for most general settings, they need to choose the wanted property and click setting to make it effect.

3.1.1 Change Baud rate, Checksum and Protocol:

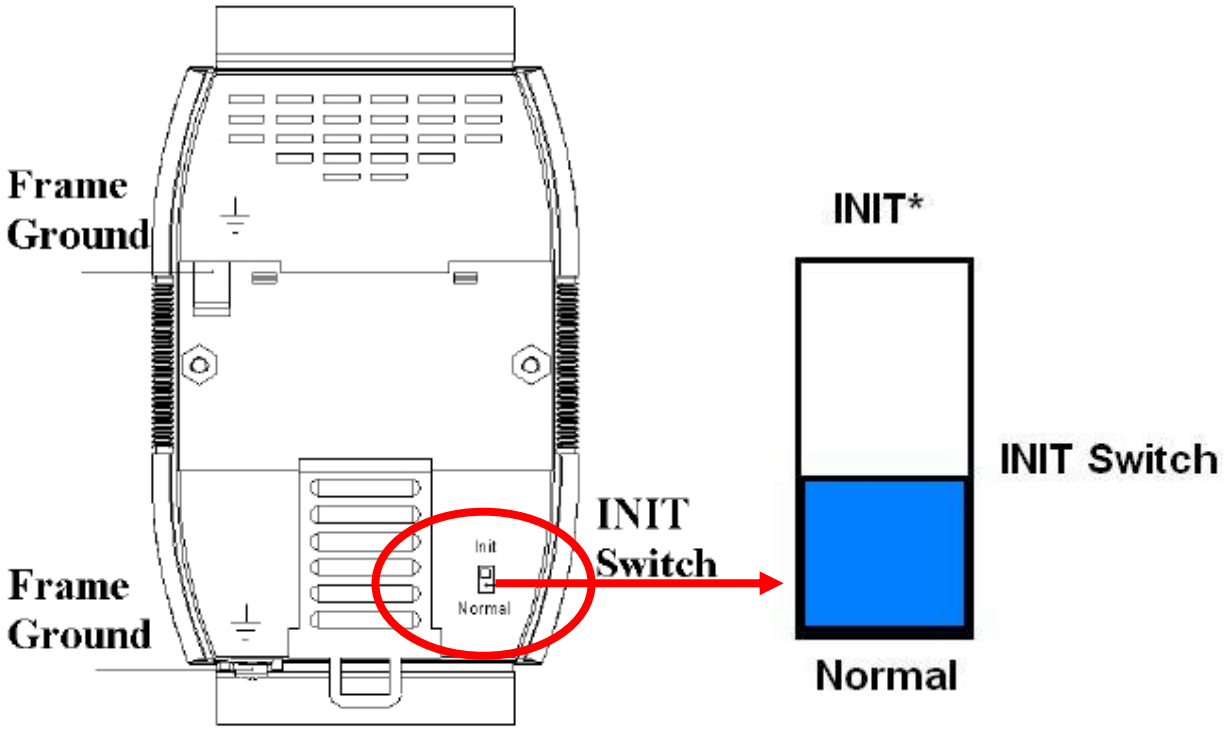
If attempted to change the Baud Rate, Checksum and Protocol, the INIT* pin needs to connect to GND. After successfully configuring these properties, the I/O modules must be reset the Power to bring the settings into effect.
There are some different styles of INIT* pin, and they are at different position.

- Old style INIT* pin of 7000 series:



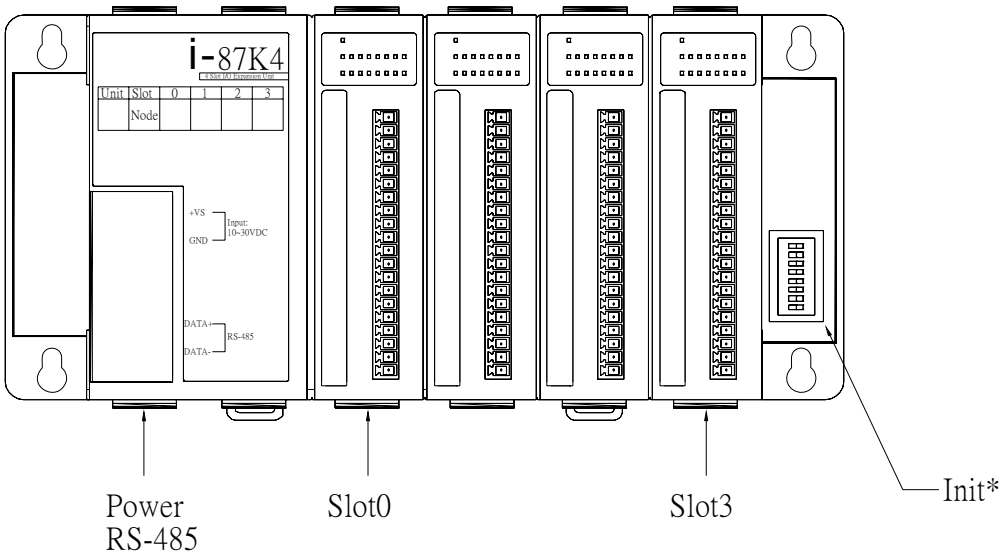
The old style of INIT* needs to use a wire to connect to the GND

➢ New style INIT* pin of 7000 series:



The new style of INIT* pin is a dip switch and located at back side

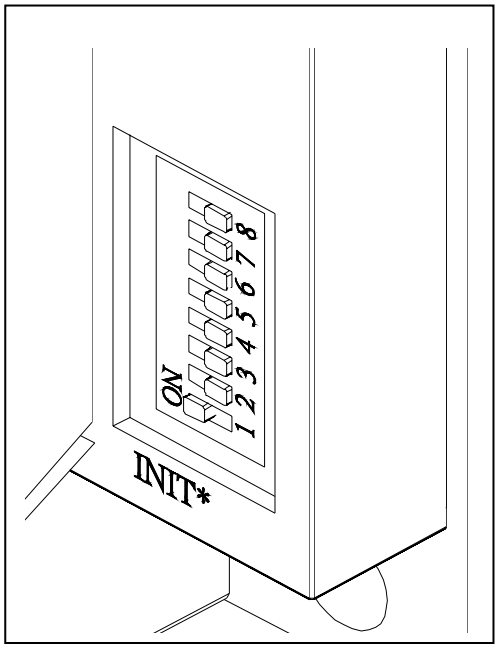
➢ i-87K1, i-87K4, i-87K8 I/O Expansion:



The INIT* pins of Slot0 to Slot7 are located at the right edge of i-87K I/O Expansion.

Note 1: When power on i-87K I/O Expansion, only one INIT*-Switch can be set to ON (INIT* pin connects to GND) at the same time.

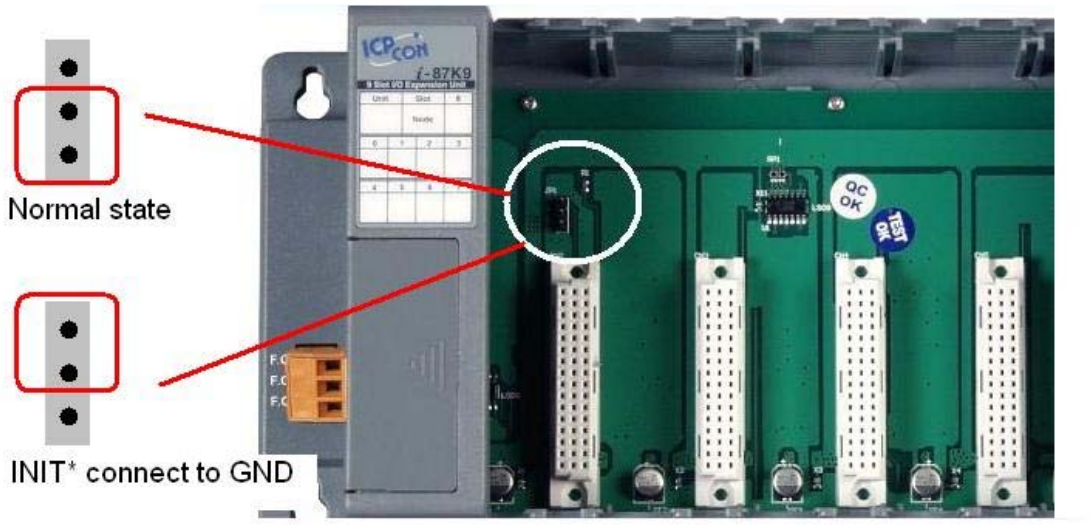
The table below shows how to map the INIT* pins to the slot I/O on i-87K I/O Expansion.



i·

	1	2	3	4	5	6	7	8
Slot-0=INIT*	**ON**	Off	Off	Off	Off	Off	Off	Off
Slot-1=INIT*	Off	**ON**	Off	Off	Off	Off	Off	Off
Slot-2=INIT*	Off	Off	**ON**	Off	Off	Off	Off	Off
Slot-3=INIT*	Off	Off	Off	**ON**	Off	Off	Off	Off
Slot-4=INIT*	Off	Off	Off	Off	**ON**	Off	Off	Off
Slot-5=INIT*	Off	Off	Off	Off	Off	**ON**	Off	Off
Slot-6=INIT*	Off	Off	Off	Off	Off	Off	**ON**	Off
Slot-7=INIT*	Off	Off	Off	Off	Off	Off	Off	**ON**

Note 2: The INIT* pin of i-87K5 is located at Slot4, and i-87K9 is at Slot8. The diagram below shows the INIT* pin location and how to use the jumper to short the INIT* to GND. If the module at this slot needs to connect the INIT* to GND, it will be better to do this job at another Slot

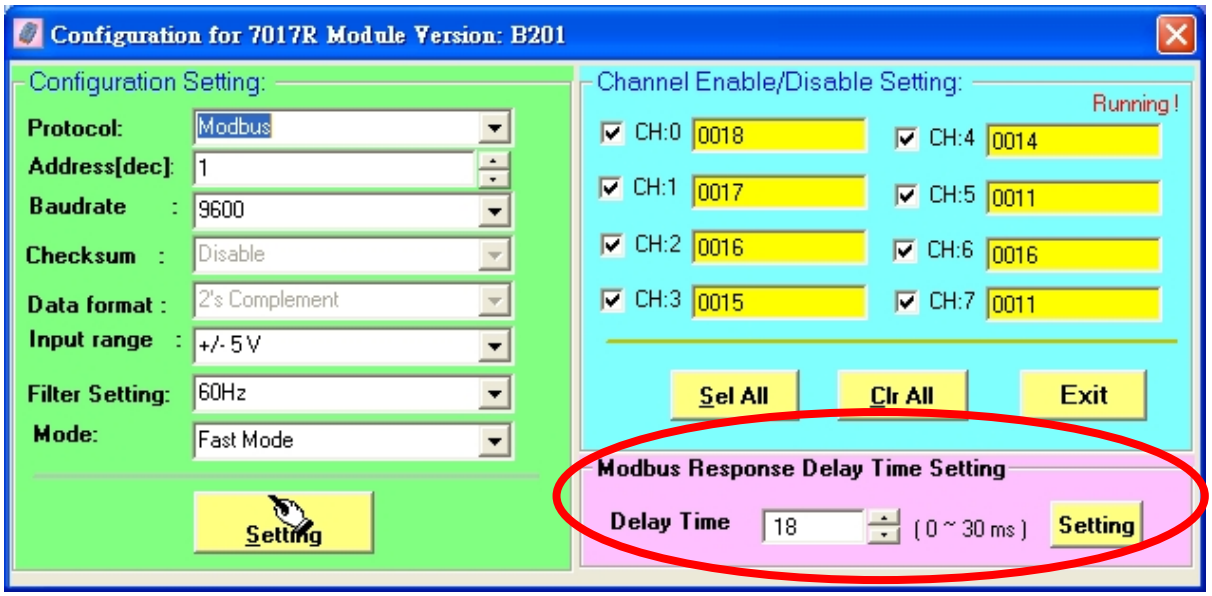


The location of INIT* pins are located at slot4 of i-87K5 and slot8 of i-87K9

Note 3: The Slot location (index of Slot) is not related to the Net Address of I/O modules, it only indicates the relative position of module on i-87K I/O Expansion.

3.1.2 Modbus Response Delay Time:

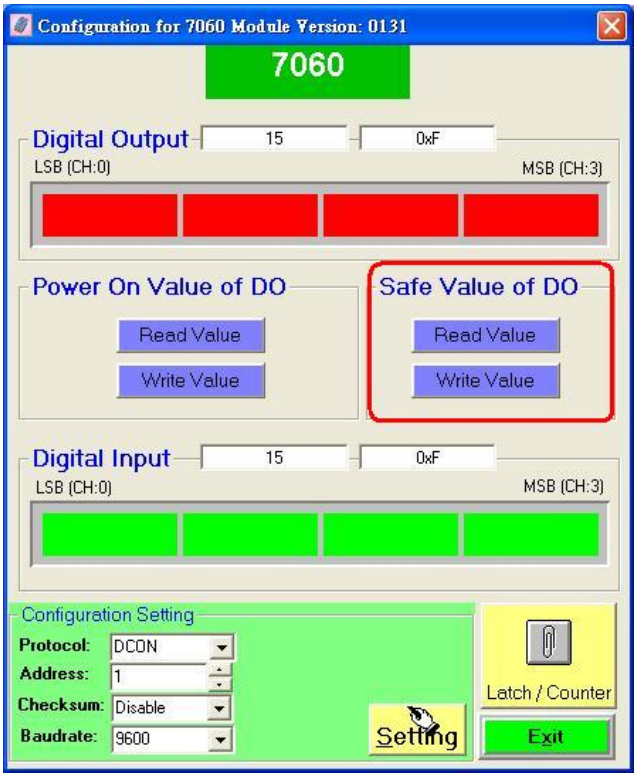
Sometimes the Modbus modules need to set the Modbus Response Delay time, For Modbus RTU mode, messages start with a silent interval of at least 3.5 character times, some PLC or SCADA software can not totally receive the response data from the Modbus modules for the quick response time.



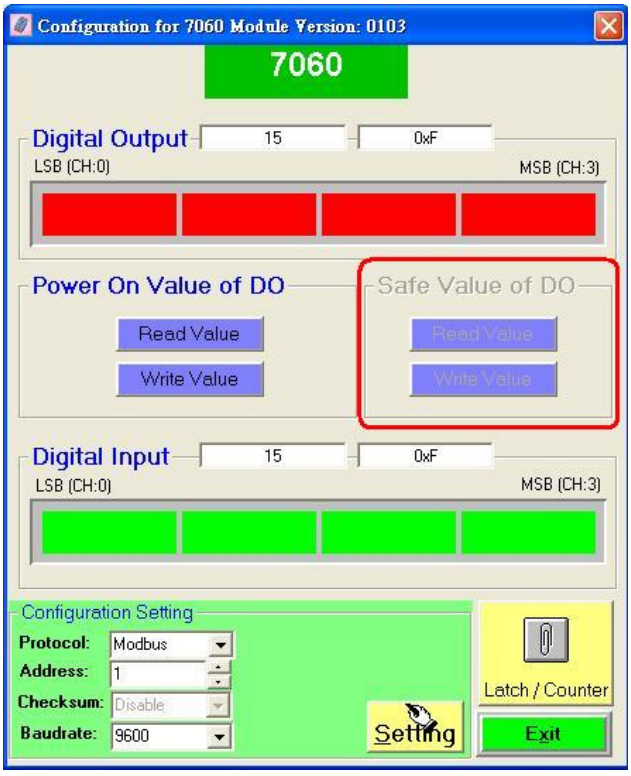
The Response Delay Time settings of Modbus Protocol I/O modules

3.1.3 To Configure Digital I/O modules:

The Modbus DO modules don't support safe value function, but the DCON modules do.



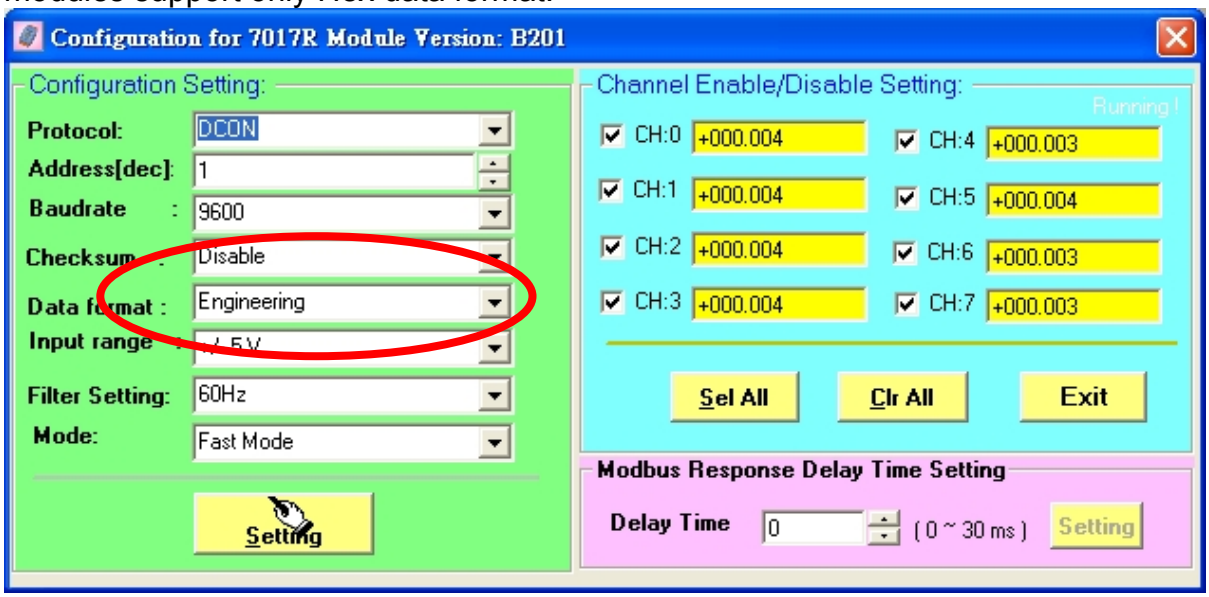
7060 is set to DCON Protocol



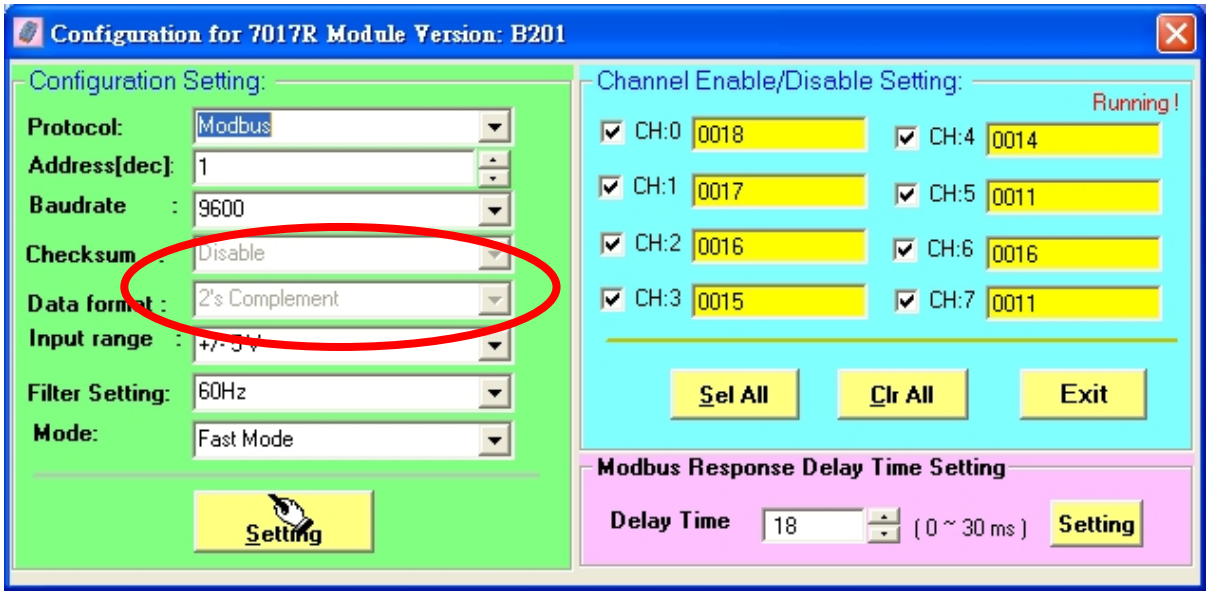
7060 is set to Modbus Protocol

3.1.4 To Configure Analog Input modules:

The DCON modules support Engineering, Percent, Hex, Ohm data formats; the Modbus modules support only Hex data format.



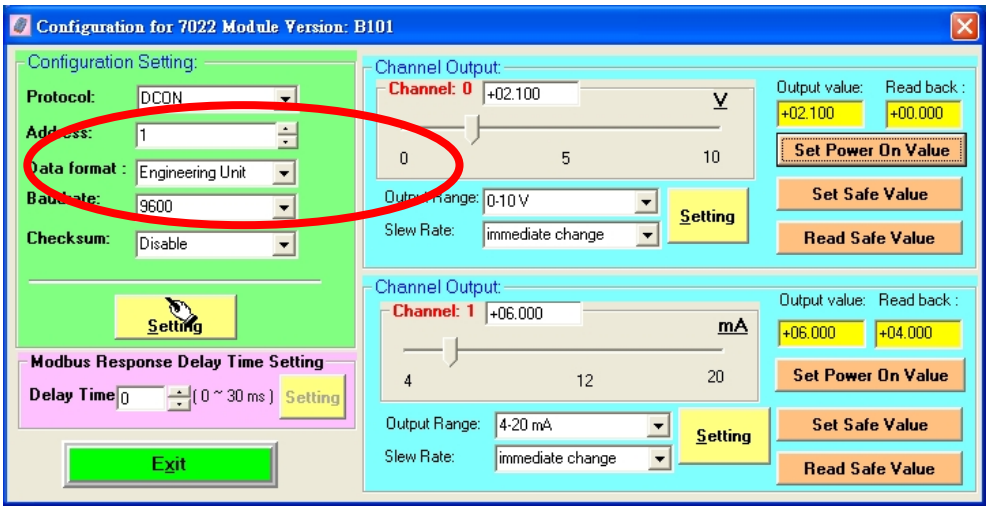
7017R is set to DCON Protocol



7017R is set to Modbus Protocol

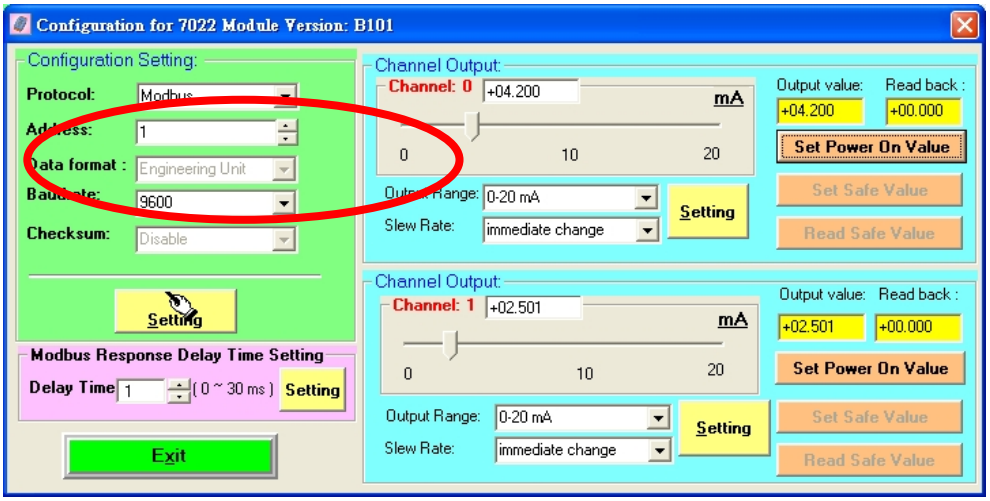
3.1.5 To Configure Analog Output modules:

The DCON AO modules support Engineering, Percent, Hex data formats; the Modbus modules support only Hex data format.



7022 is set to DCON Protocol

The modbus AO modules do not support the safe value function also.



7022 is set to Modbus Protocol

The differences between DCON modules and Modbus modules.

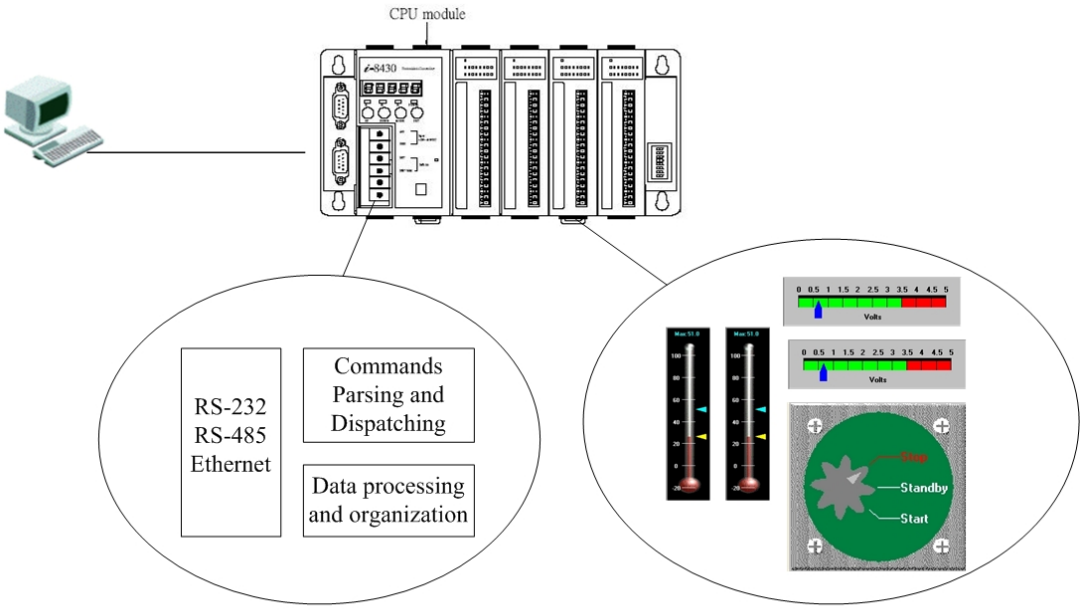
	DCON Protocol	Modbus
Checksum setting	Yes	No
Modbus response delay time	No	Yes
DO safe value	Yes	No
AO safe value	Yes	No
Data format(Engineering)	Yes (AI, AO)	No
Data format(Hex)	Yes (AI, AO)	Yes
Data format(Percent)	Yes (AI, AO)	No
Data format(Ohm)	Yes (RTD, Thermistor)	No

3.2 To Configure i-8410, i-8810, i-8411, i-8811, i-8430, i-8830, i-8431, i-8831, i-8KE4 and i-8KE8 I/O Units:

i-8000 system includes CPU module and the I/O modules on its slots.

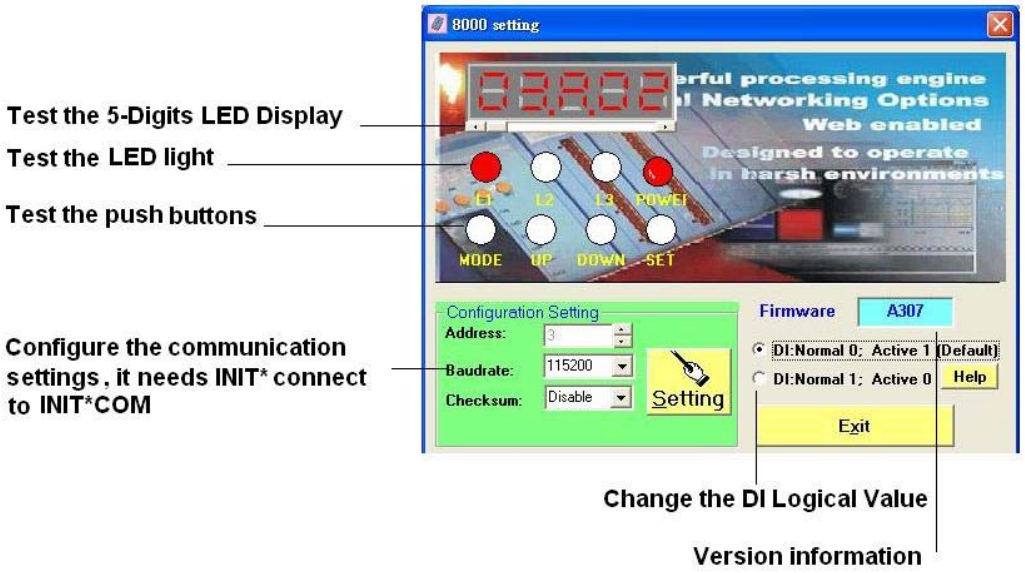
3.2.1 Configure the CPU module:

1. The CPU module is the communication and control center of i-8000 system.
2. DCON Utility communicates with this CPU module.
3. CPU module can get data from I/O modules.
4. CPU module can save the configuration settings of I/O modules.
5. CPU module can control the LED Display and Push Button function.



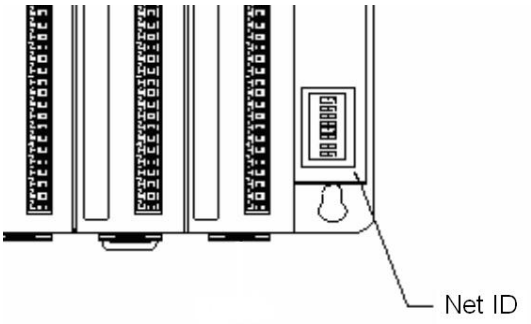
Access and Control the I/O module Digital and Analog Measurement

For CPU module, the most important is to configure the communication Settings and DI Active State Reverse function.

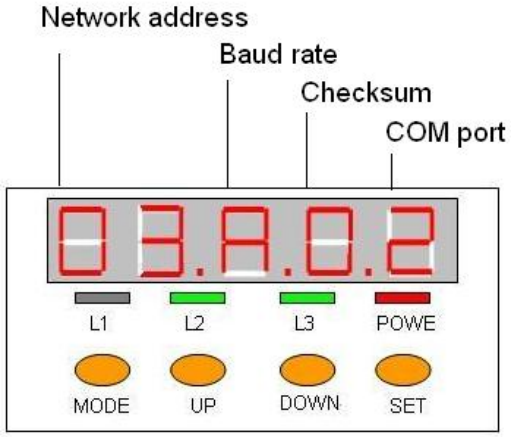


- **The Net Address of i-8000 system:**

The Net address of i-8410, i-8810, i-8411, i-8811, i-8430, i-8830, i-8431, i-8831 are determined by the dip switch at the right edge of plastic housing.



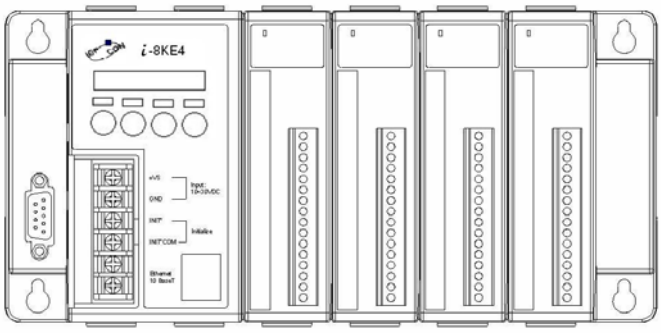
For Serial Interface, the communication settings will show on the 5-digital LED menu.



Baudrate Table:

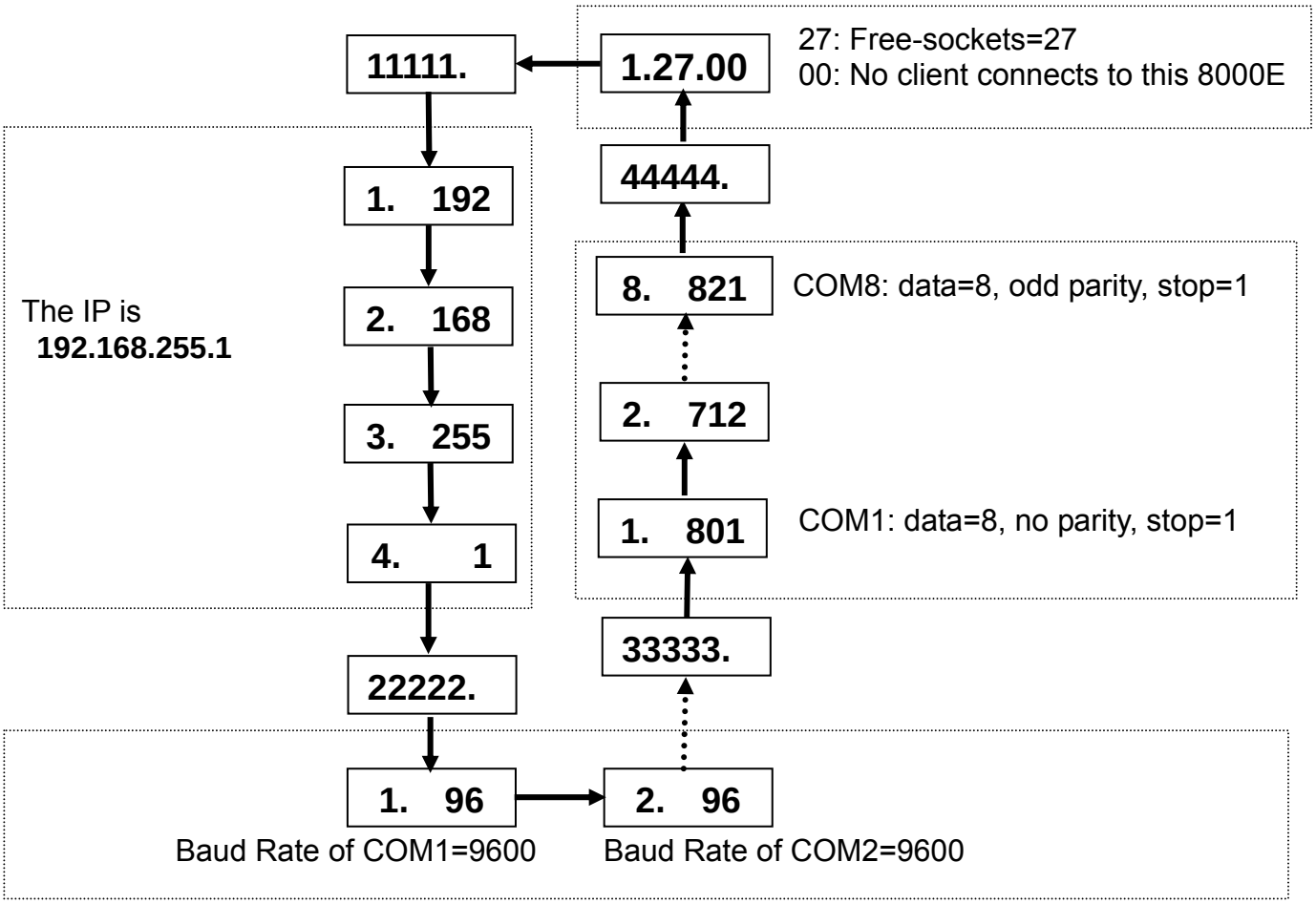
0x3	0x4	0x5	0x6	0x7	0x8	0x9	0xA
1200	2400	4800	9600	19200	38400	57600	115200

i-8KE4, i-8KE8 Ethernet I/O units do not have Net ID dip switch at the right edge of plastic housing, the **Net Address is fixed to 1**.



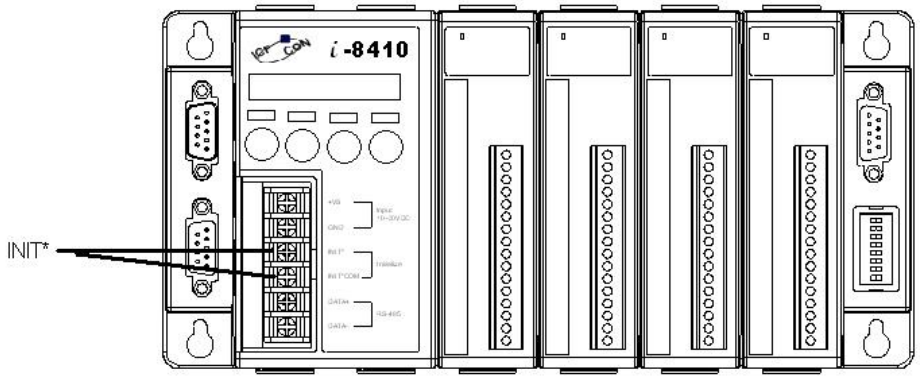
I-8KE4 and i-8KE8 series Ethernet I/O Unit

For Ethernet version, the LED menu is controlled by XServer that constantly shows IP address, Baud Rate, Data Bit Format ...etc as following sequences.



3.2.2 Change Baud rate and Checksum:

If attempted to change the Baud Rate, Checksum; **the INIT* pin needs to connect to INIT*COM**.



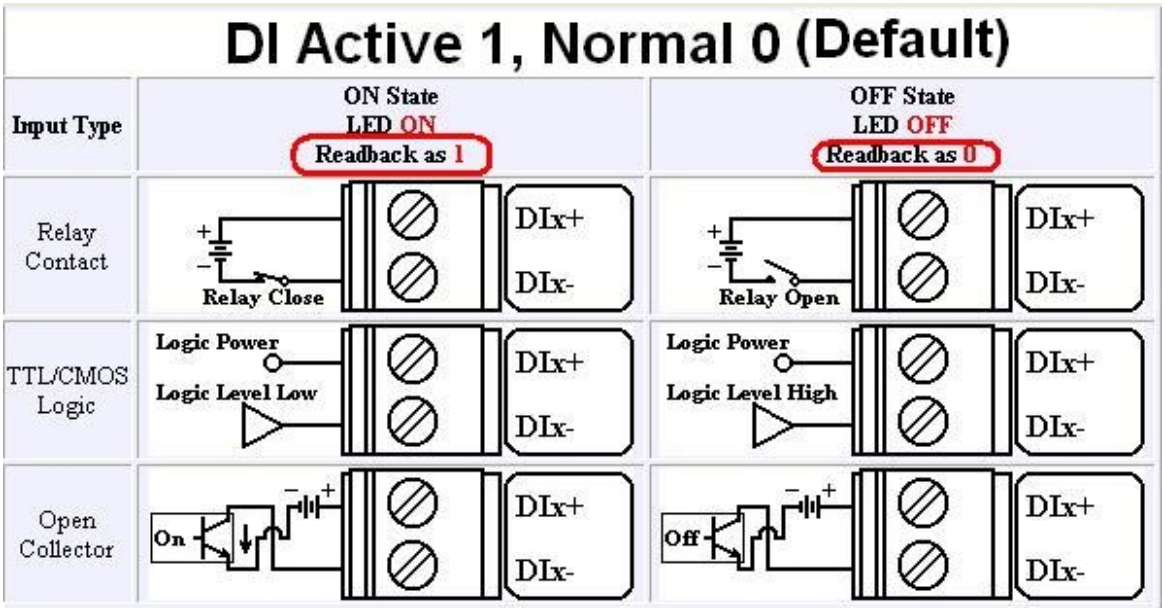
The INIT* pin position

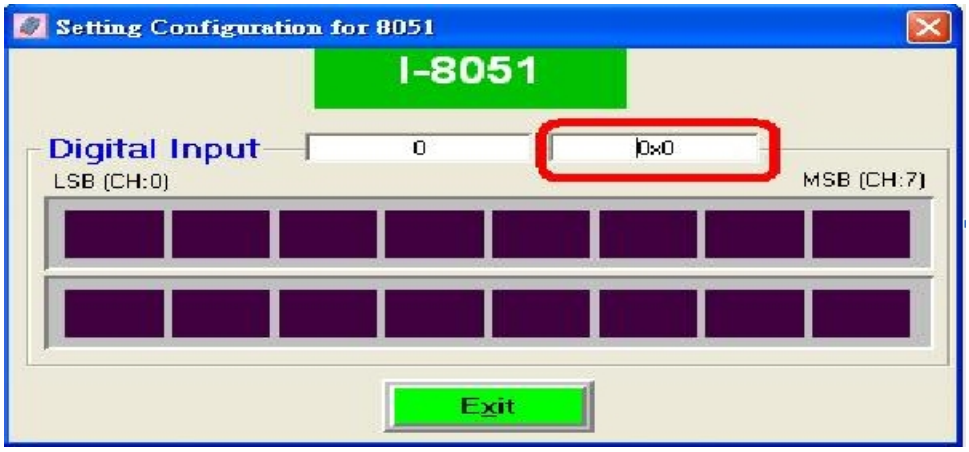
Note: There is no need to configure the Baud rate and checksum for I/O modules on slots, for all the I/O modules are at INIT states and controlled by the CPU of MCU.

3.2.3 Change the DI Logical Value:

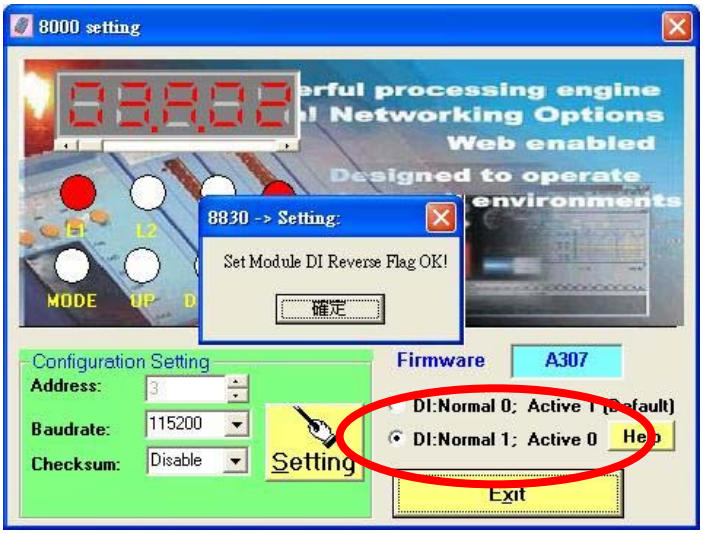
There are two applications about the DI signal.

Default is “DI: Normal 0; Active 1”. When DI modules detect the input signal, the LED will be turned on (Green color) and will get logical value 1, otherwise the LED will be turned off (become Dark) and get logical value 0.

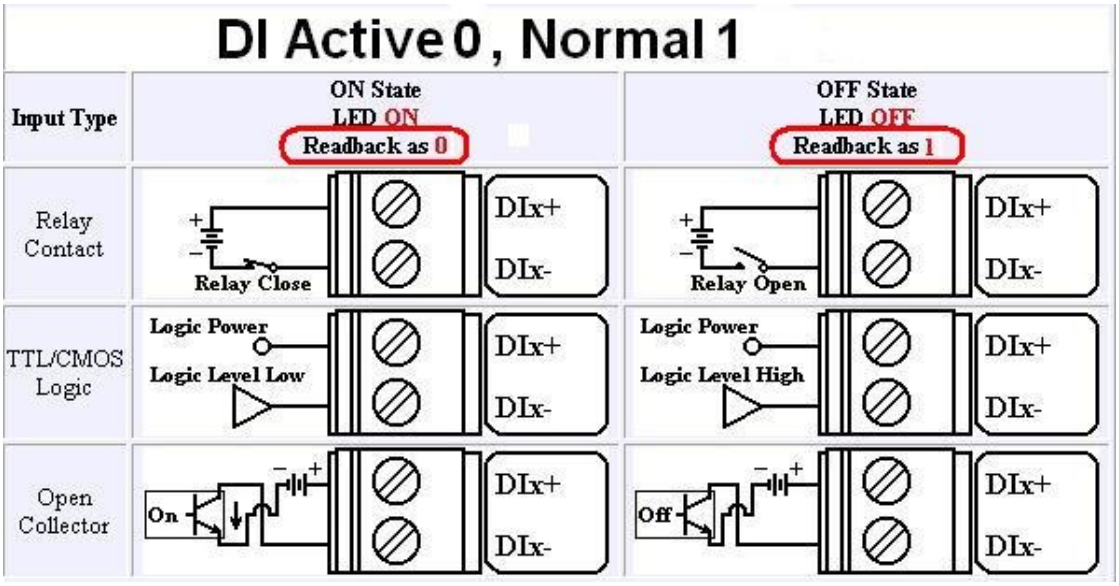


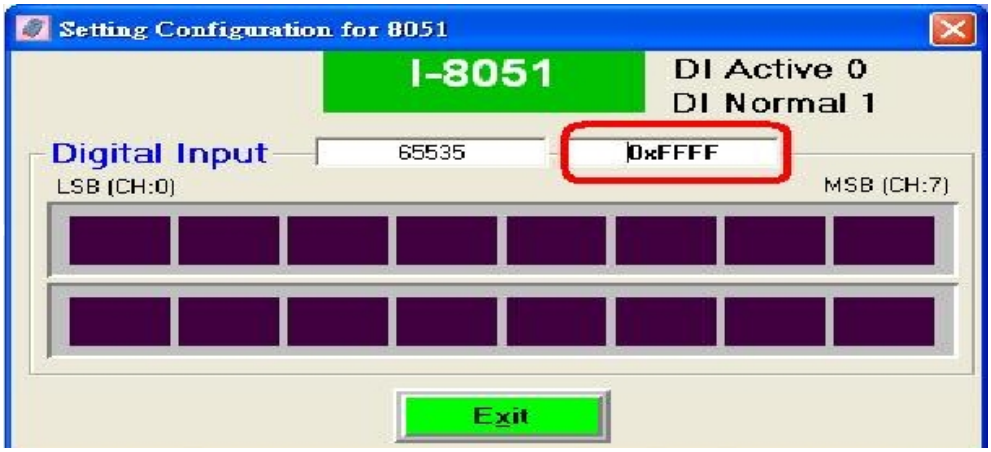


Choose “DI: Normal 1; Active 0” will reverse the Logical input value of DI modules.



In this case, when there is no DI input signal detected, the LED is off, but the logical value is 1; otherwise, the LED will be on and the logical value is 0.



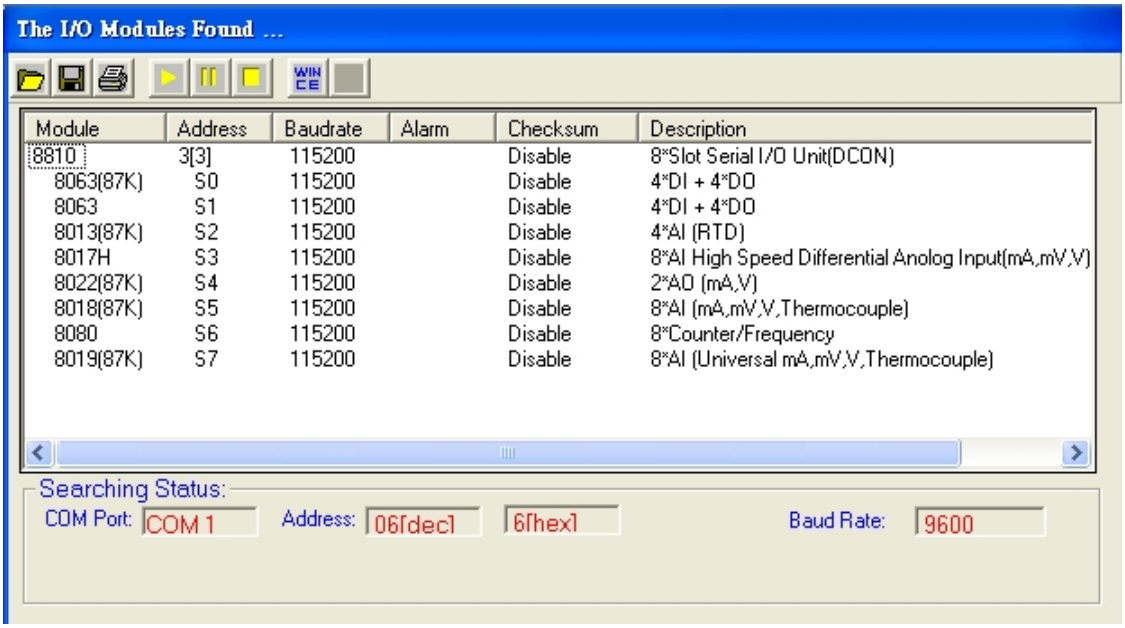


3.2.4 The differences between i-8K and i-87K I/O modules:

The DCON firmware (DCON_nnn.exe,E10M_nnn.exe) supports both 8K and 87K series I/O modules. The two series I/O modules can be plug in same I-8000 MCU. The modules for DI, DO, DIO, AI, AO and Counter/Frequency are supported. Other modules such as multi-serial port (8112, 8144, 8142, 8144), MMC(8073), motion (8090, 8091) are not supported. The file in the shipped CD lists details.

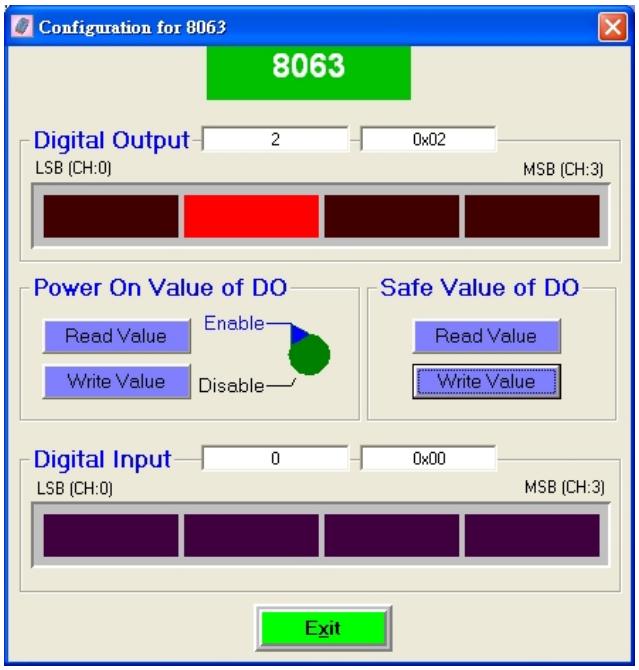
CD:\Napdos\Driver\DCON_Utility\DCON_Utility_Module_List.htm

The DCON firmware only accepts 4 digits numbers. Thus both 8K and 87K series are recognized as 4 digits numbers. When using the DCON Utility to search I/O modules, the screen shown as following:

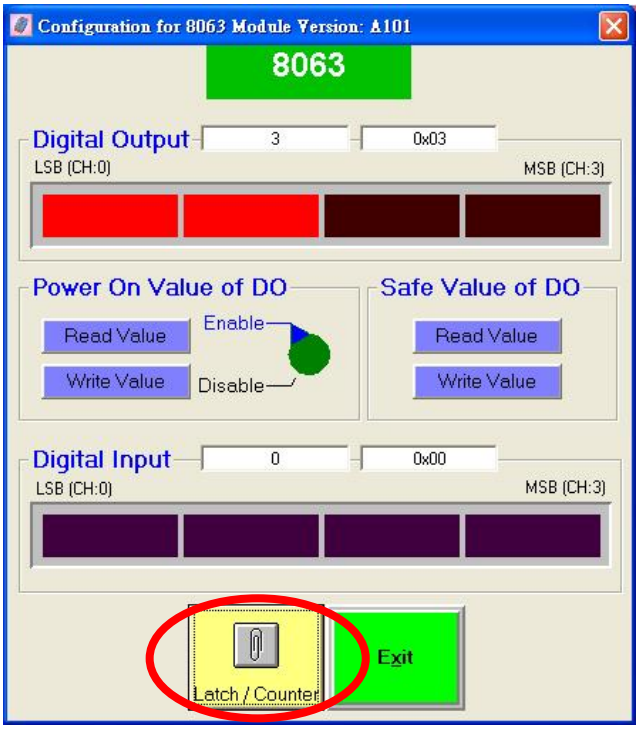


3.2.5 To Configure Digital I/O modules on i-8000 system:

Both i-8K DO modules and i-87K DO modules have DO Power On value and Safe value and they are all controlled by the CPU module of i-8000 system.



i-8063 on i-8000 system



i-87063 on i-8000 system

But DI module of i-87K have DI counter and DI latch functions and i-8K DI modules do not.

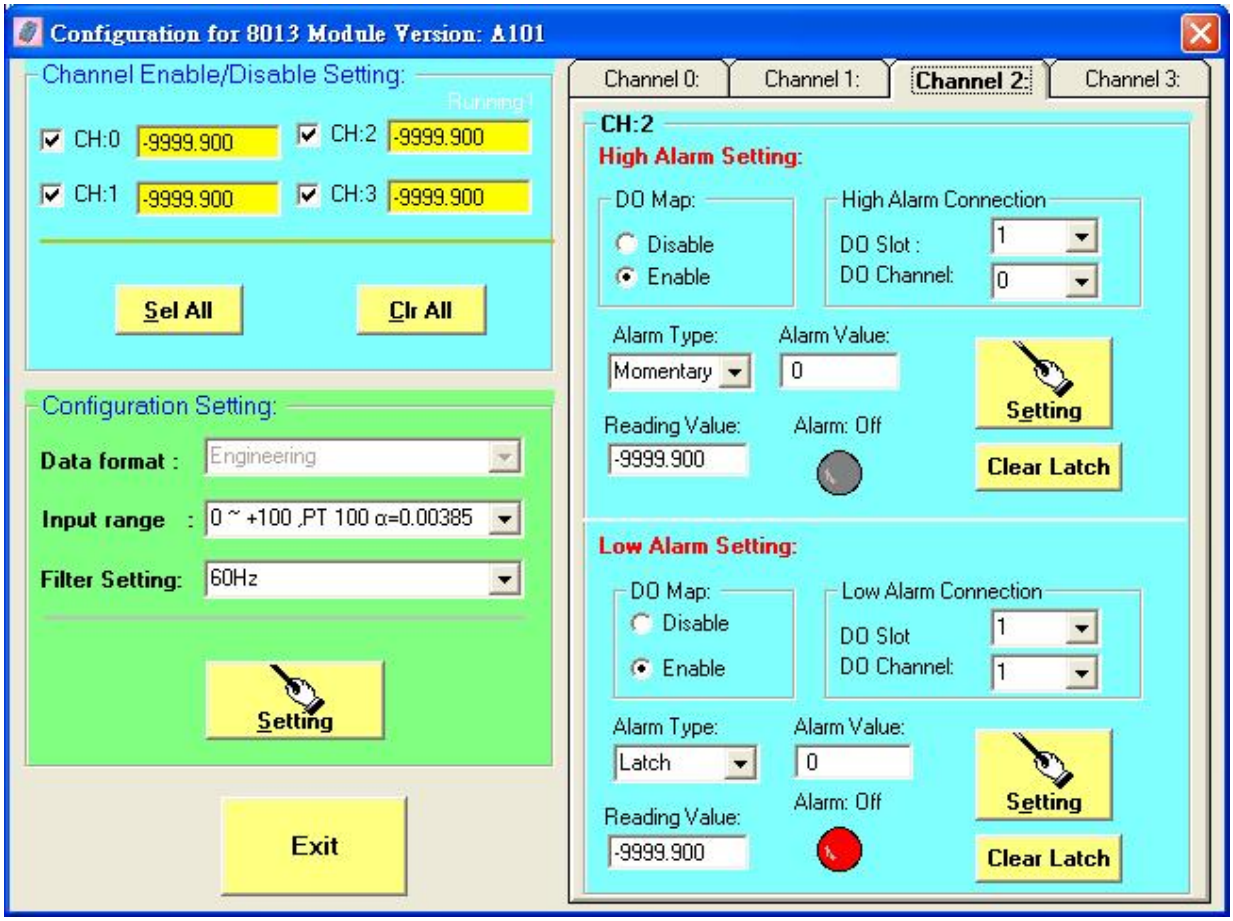
The DI counter and latch functions of i-87063 on i-8000 system.

Note 1: There is a DI Counter value (0 ~ 65535) for each channel of 87K DI modules.

Note 2: When the Clear Latch function is applied, the Latch Low and Latch High values are reset to 0.

3.2.6 To Configure Analog Input modules on i-8000 system:

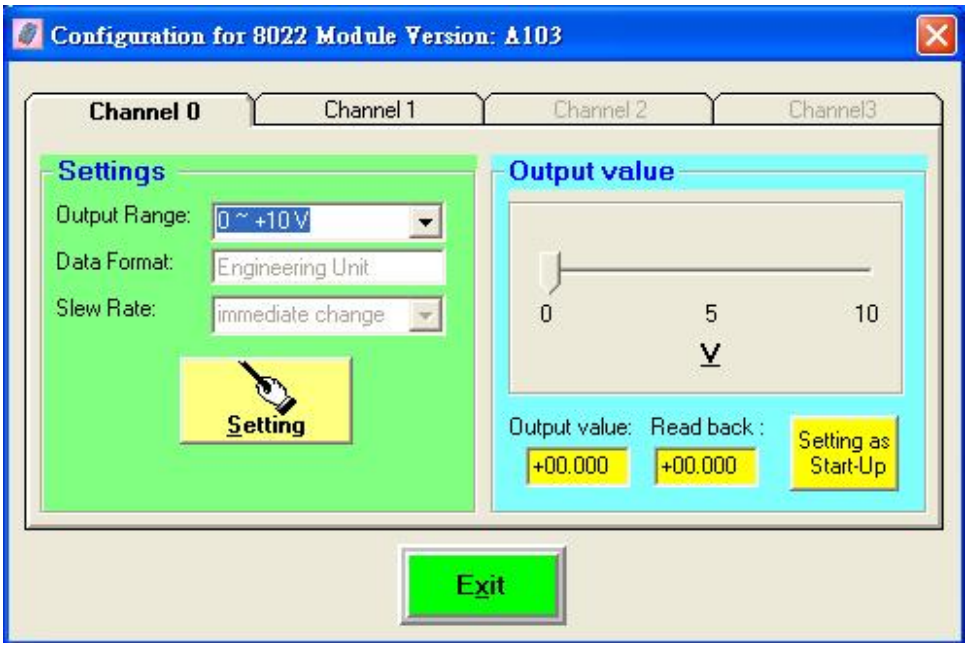
The analog input modules on i-8000 system have advantages on DO Alarm mapping, they can have their alarm output map to any slot of DO module (must less then or equal to16 bits DO) for each channel of Analog input, the firmware will auto scan the Analog input modules and auto trigger the DO alarm output.
The data format of the Analog input modules on i-8000 system only support engineering format, i-8000 system does not support hex format and percent format.



i-87013 RTD input on i-8000 system

3.2.7 To Configure Analog Output modules on i-8000 system:

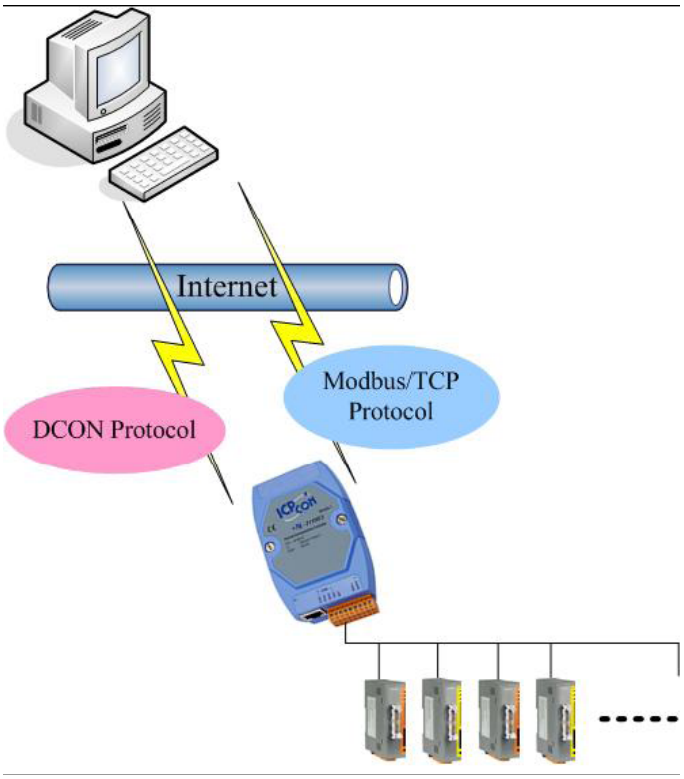
The analog output modules on i-8000 system can change their type codes and setup their Power On value, but do not have Safe value.
The data format of analog output modules on i-8000 system only support engineer format.
The slew rate function also be disabled,

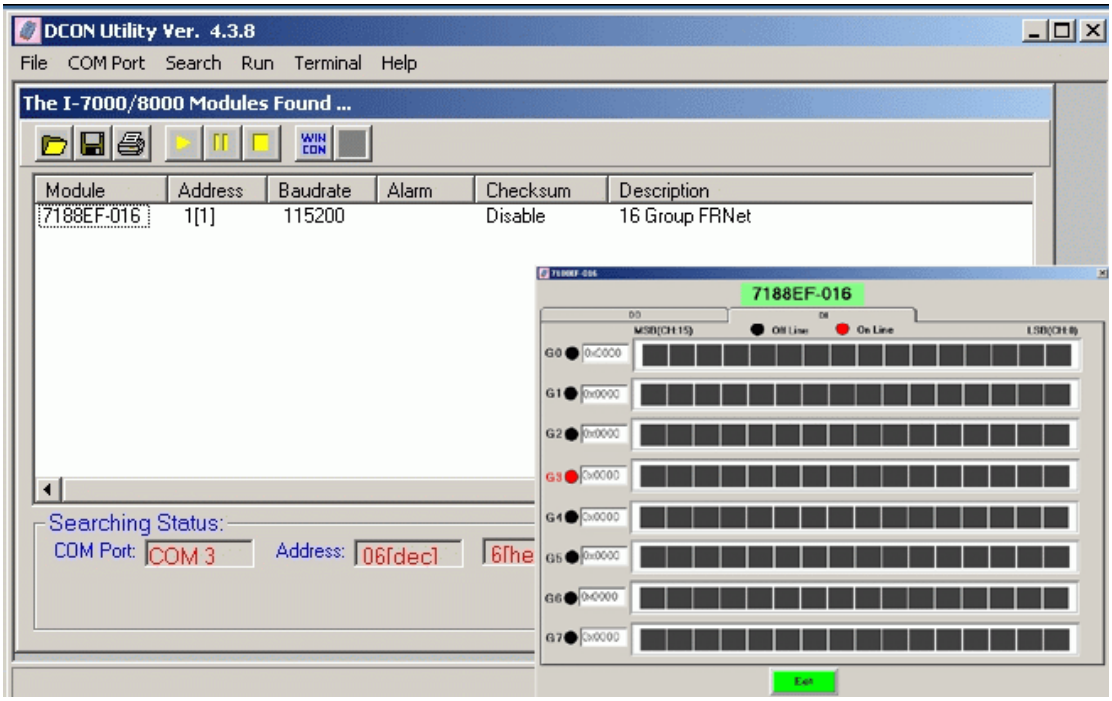


i-87022 on i-8000 system

3.3 Configure i-7188EF-016:

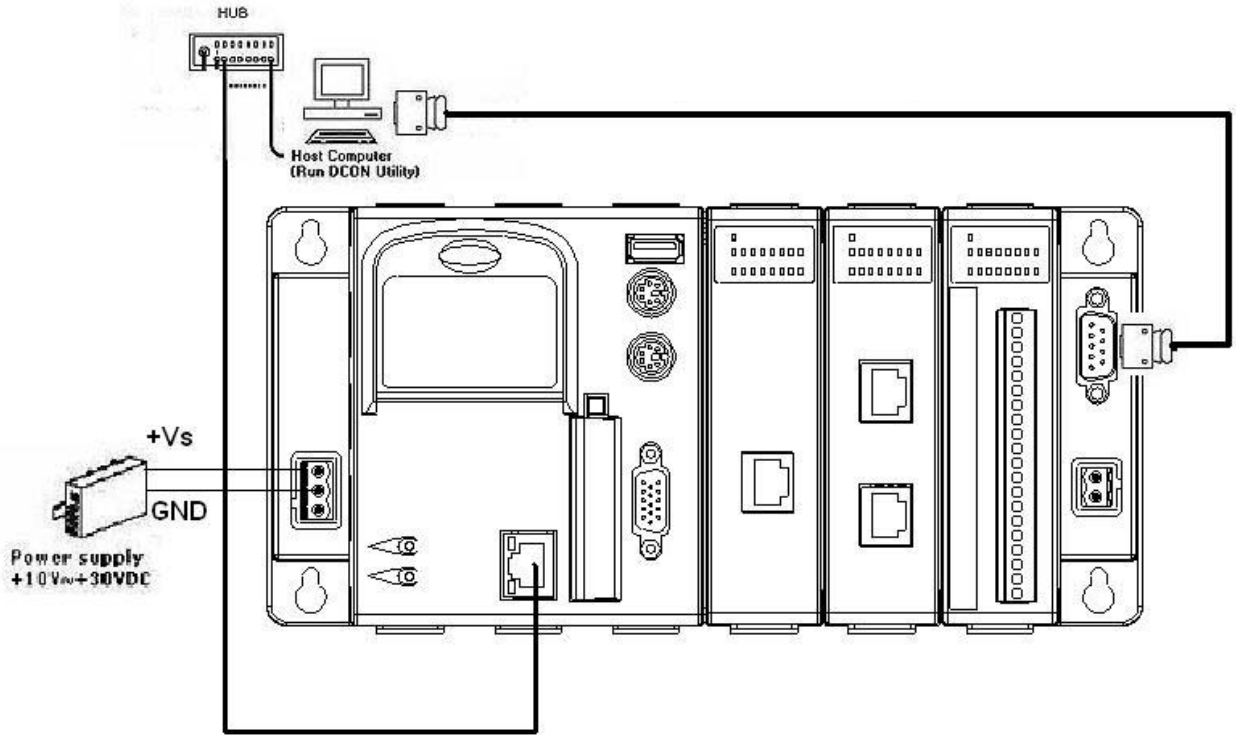
i-7188EF-016 is an Ethernet I/O units running DCON Firmware **EF016nnn.exe**, it can support maximum 128 bits DI and 128 bits DO, the **Net Address is fixed to 1** and there is no need to configure the i-7188EF-016 Ethernet I/O unit.



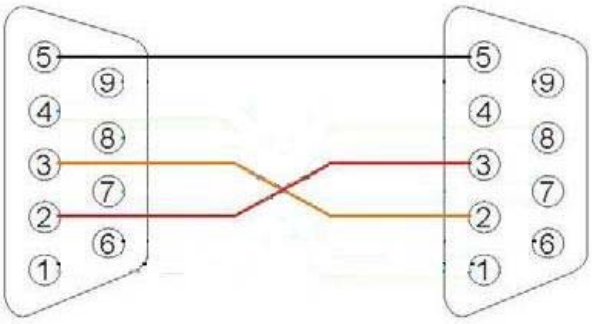


3.4 Configure i-87K I/O modules on WinCon:

When i-87K I/O modules applied to the WinCon system, DCON Utility can also help user to configure the I/O especially for AI, AO and Counter/Frequency modules.



Note : The wire connection between WinCon's COM2 and PC's COM port is the most asked question when using DCON Utility to configure i-87K I/O modules which are inserted into the WinCon.



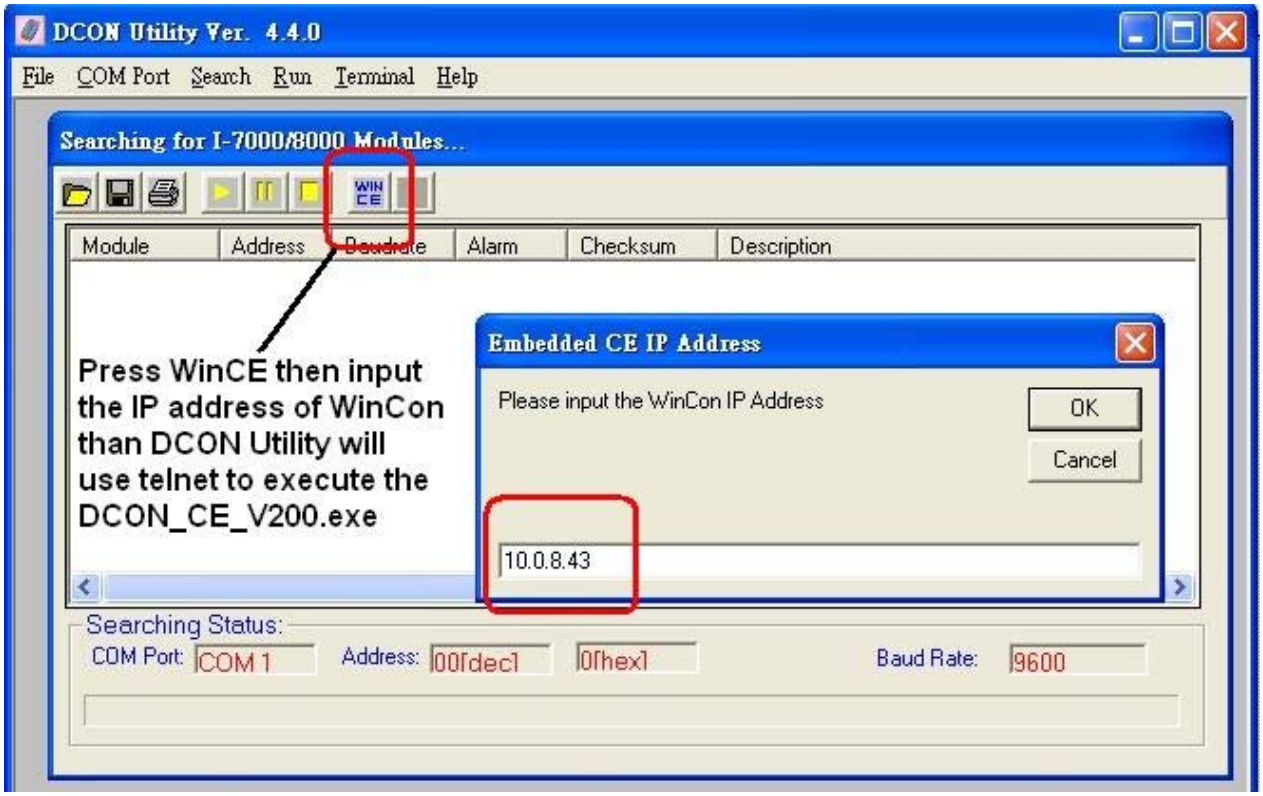
Please note the crossover between
pin2 and pin3 of the COM port connecter

DCON Utility can not search WinCon directly, it needs some steps to achieve the mission.

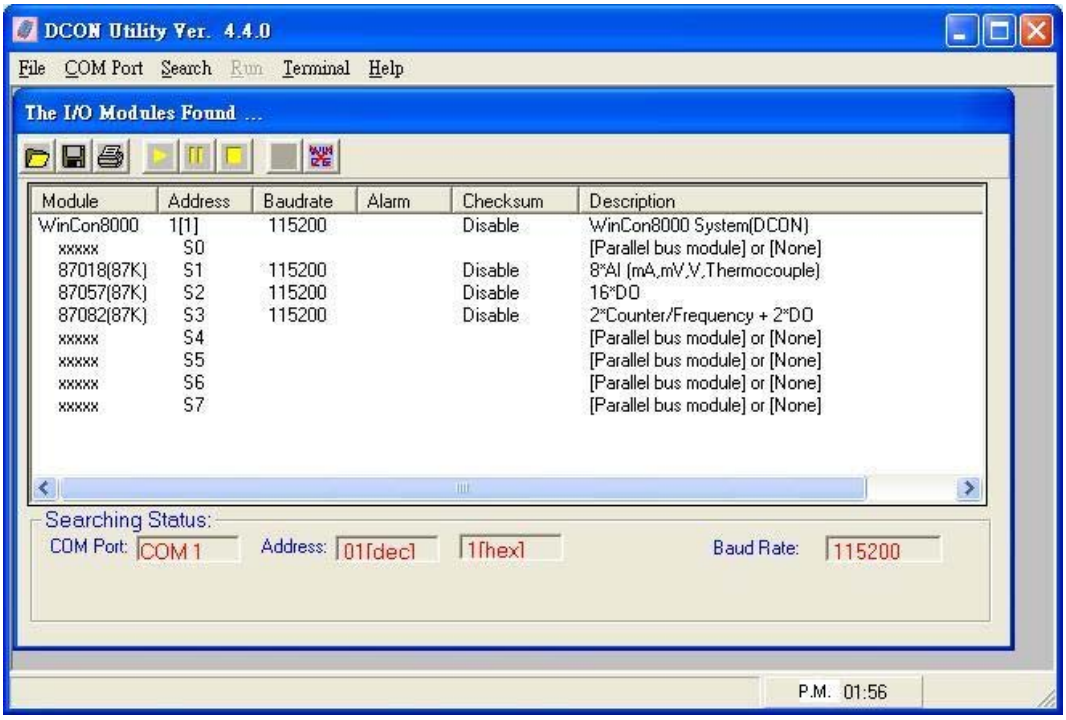
Step 1: Check Compact Flash Card of the WinCon Controller and make sure the DCON_CE_V200.exe is located at the path **CompactFlash\ICPDAS\Tools** or **Compact Flash\ICPDAS\Tools\.**

Note: If there is no such a file at the Flash Card, it can download from the web site below.
http://www.icpdas.com/products/PAC/wincon-8000/Download/download_Compact%20Flash.htm

Step 2: Click  button and input the IP address of the WinCon.
It needs to use telnet protocol to execute the **DCON_CE_V200.exe** and to configure i-87K I/O module.



Step 3: Click  button to Search the i-87K modules.
When DCON_CE_V200.exe has been executed, DCON Utility needs to use COM port cable to connect to the WinCon's COM2 (RS-232) in order to search and to configure i-87K I/O modules.

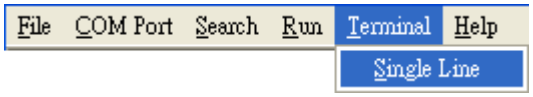


Note: DCON Utility only support i-87K I/O modules on WinCon, i-8K modules will not be shown by DCON_CE_V200.exe and DCON Utility.

For using DCON_CE_V200.exe and wire connection of WinCon's COM2 with PC, please refer to
ftp://ftp.icpdas.com/pub/cd/winconcd/napdos/WinCE/User%20Manual/ or
WinCon CD:\Napdos\WinCE\User Manual\WinCON Getting Started 1.4.pdf
(2.3 I-87K Module Settings)

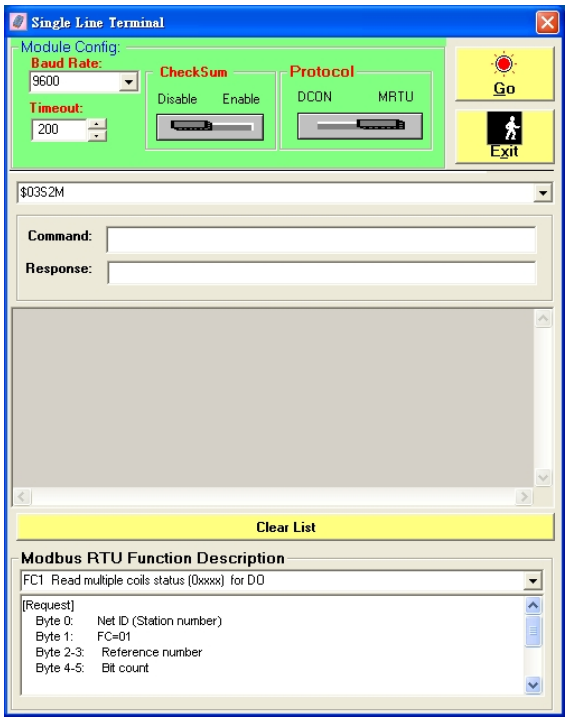
Chapter4. Tools of DCON Utility

4.1 Terminal Single Line function:



This is a basic tool for user to test and debug the command.

It supports both DCON Protocol and Modbus RTU Protocol.



The first step user must know the communication settings of target module.

The second step is to look for the commands on user manual.

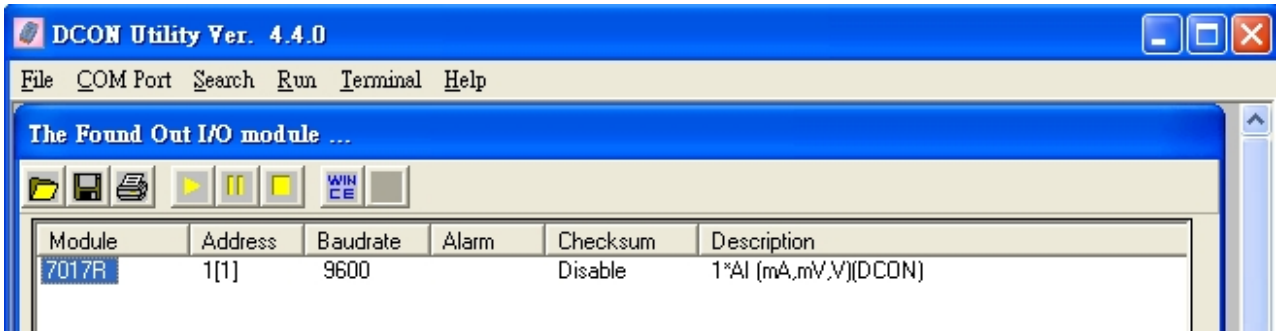
For I-8000 series modules the files are located at:
CD:\ Napdos\DCON\IO_Module\hw_dcon_on_8KUnit\8k_modules.htm
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/dcon/io_module/8k_modules.htm

For I-87K series modules the files are located at:
CD:\ Napdos\DCON\IO_Module\87k_modules.htm
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/dcon/io_module/87k_modules.htm

For i-7K and M-7K series modules, please refer to
CD:\ Napdos\7000\Manual\
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/7000/manual/

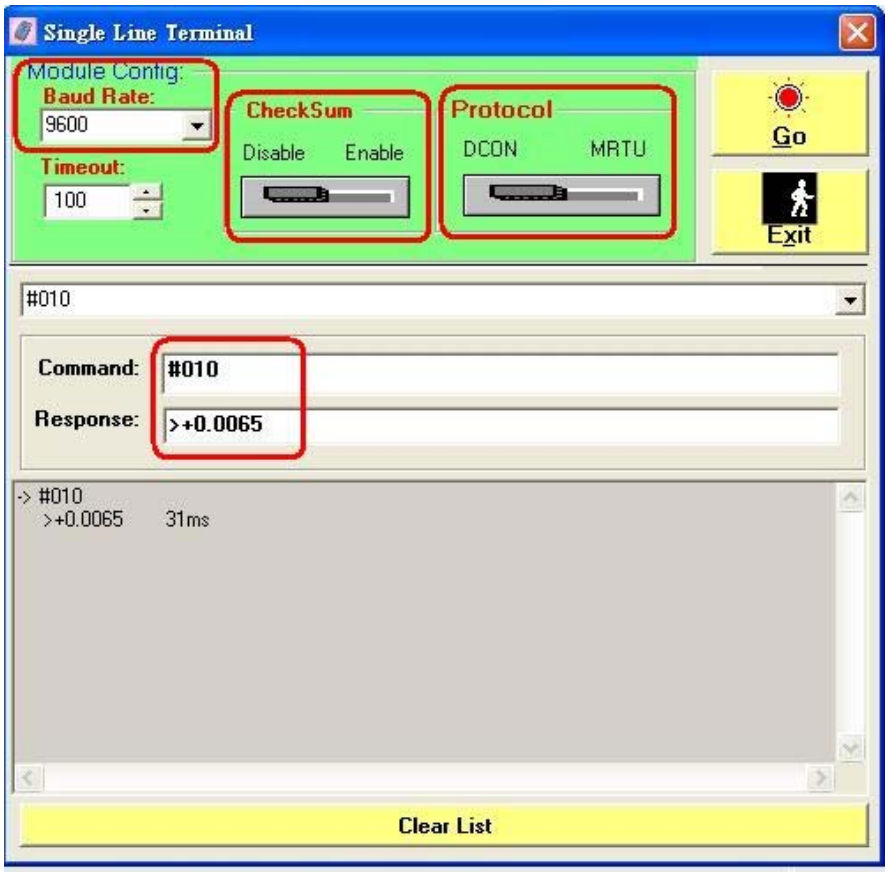
Example 1:

If there is a 7017R with the net address 01, baud rate 9600, checksum disable and DCON protocol.



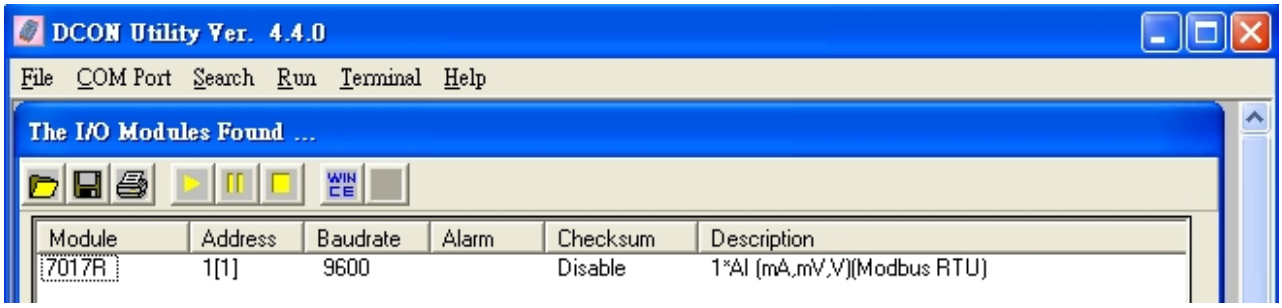
It can use #010 to read the AI values of channel 0.

The response of i-7017R is “>+0.0065”



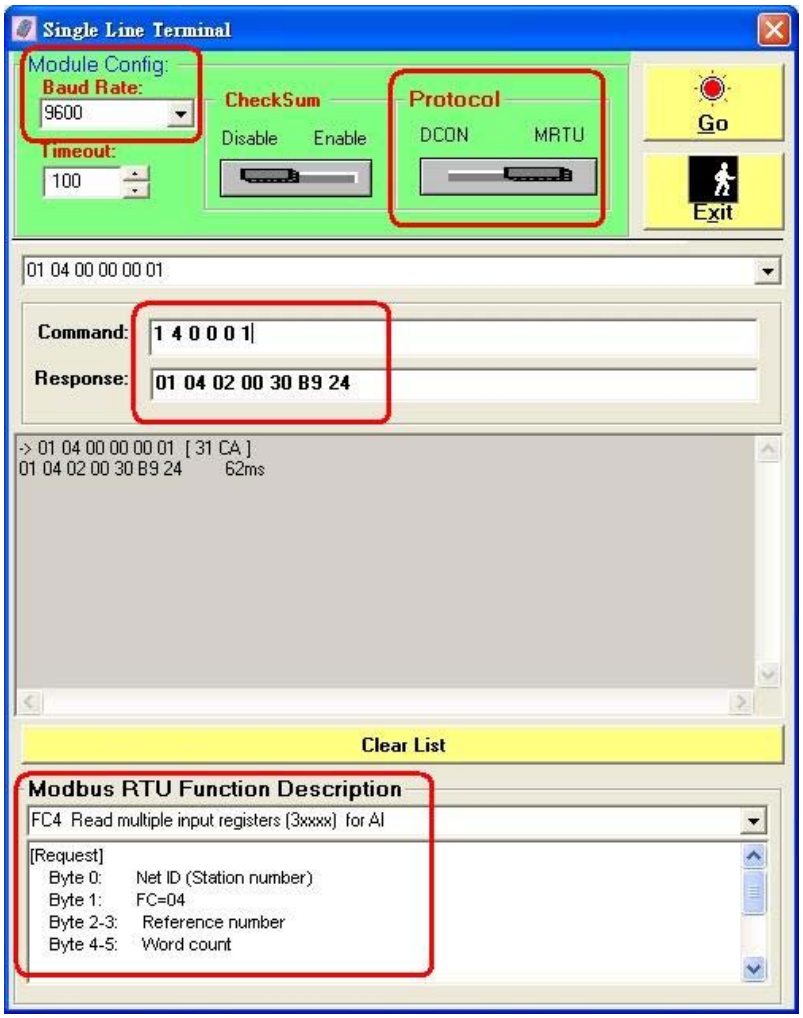
Example 2:

If there is a 7017R with the net address 01, baud rate 9600 and Modbus protocol.



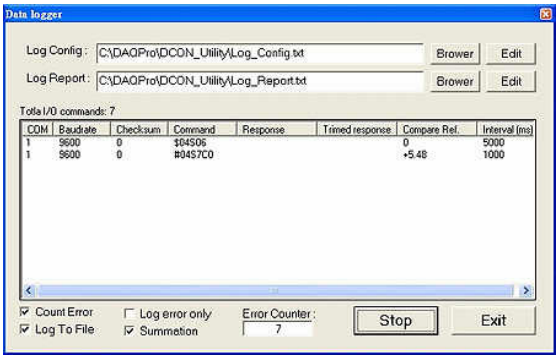
If wants to read AI value of channel 0, then it can look up to the description of Modbus command.

Then it can use 1 4 0 0 0 1 to read the AI value of channel 0 and
get the value 01 04 02 **00 30** B9 24



4.2 Data Log function:

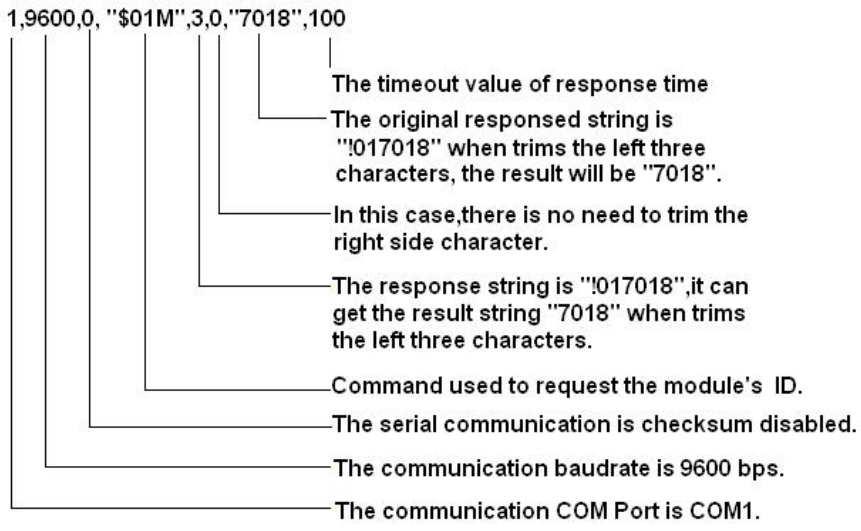
This function is a simple tool to have data log report.

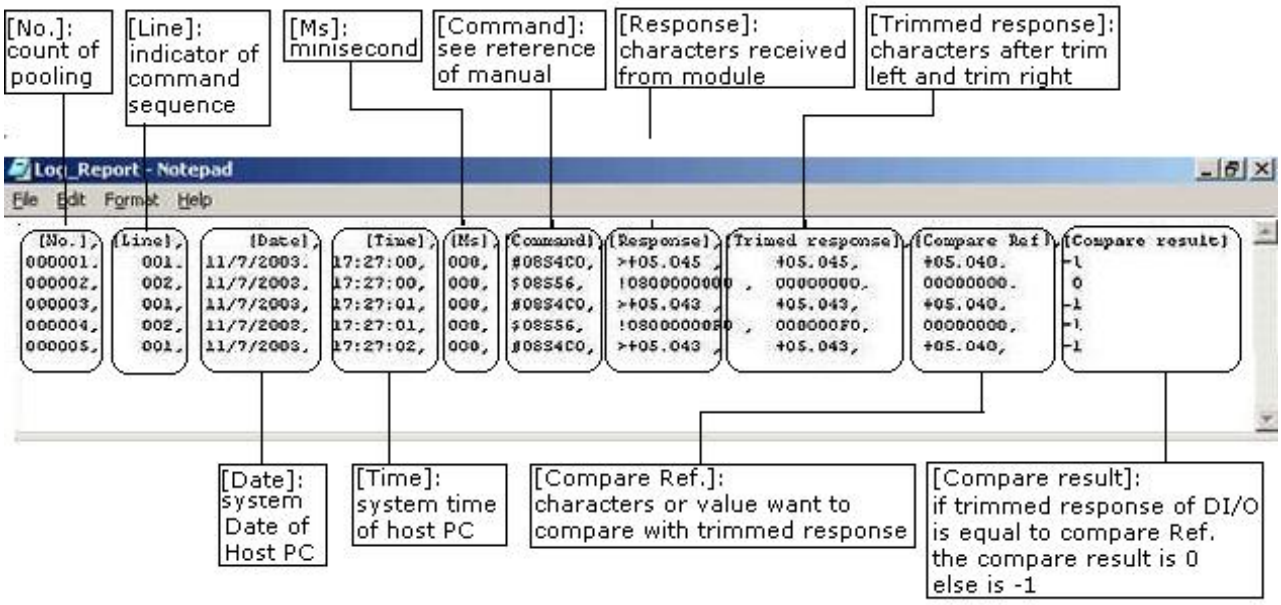


4.2.1 Edit the Log_Config.txt

```
/*
The documet is a configure file to let the Utility send specific
command string to the moudles and log the communication packages
to the report file.
The parameters are:
[COM],[Baudrate],[Checksum],[Command],[Left trim],[Right trim],[Compare Ref.],[Time interval]

[COM]:           1 ~ 255
[Baudrate]:      1200,2400,4800,9600,19200,38400,57600,115200
[Checksum]:      0 ==> disable
                 1 ==> enable
[Command]:       command string that will be sent to the I/O modules.
[Left trim]:     trims how many bytes of the left of the received string.
[Right trim]:    trims how many bytes of the right of the received string.
[Compare Ref.]:  referance string used to compare the trimmed response string.
[Time interval]: time interval to run the command.
                 unit: ms

Please change it to suit your hardware configuration.
[Oct,9,2003] by Kevin

Note 1: The config file is used from DCON Utility 4.2.7.
Note 2: The document is termniated by one '*' and one '/'.
*/
  1,9600,0, "$01M",0,0,"!017018",100
```

It needs to put right parameters to get right response records from modules,





Example 1.

If we have an i-8810 MCU at Address 08 and an i-8041 DI module at Slot 05 on MCU

We use $08S56 to read I/O Status and get response !0800000000

All we want from the response is the I / O Status 00000000

so we have to trim left 3(!08) from !0800000000 to get 00000000

Example 2.

If I/O status has been changed we can use Compared Ref. 00000000

If I/O status has been changed to 000000F0 then Compared result is -1

If no change then Compared result is 0

Example 3.

If we have an i-8810 MCU at Address 08 and an i-8017H AI module at Slot 04 on MCU

We use #08S4C0 to read Analog input at channel 0 and the response format is >+05.048

if we want to trim off the ">" character

then we set Left trim 1 and Right trim 0 to get +5.048 format

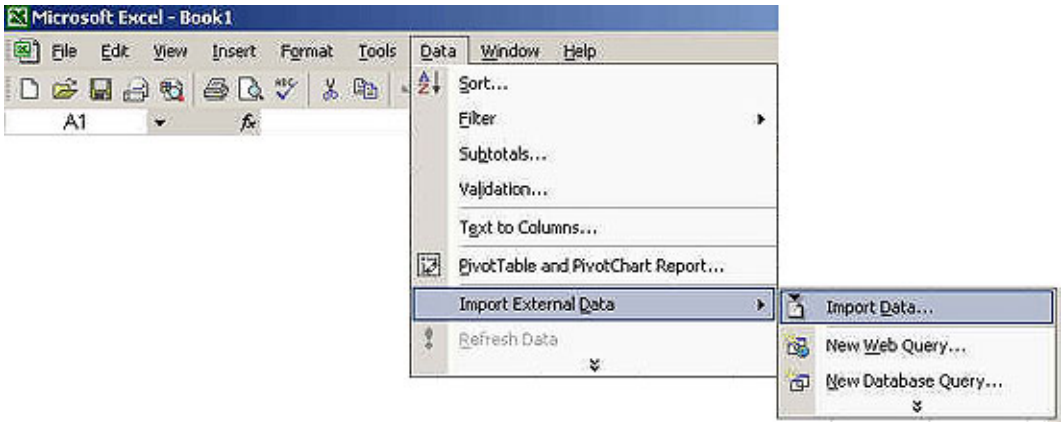
4.2.2 Use EXCEL to Import the data of Log_Report.txt

In some situation user would want to transfer Log_Report to excel file

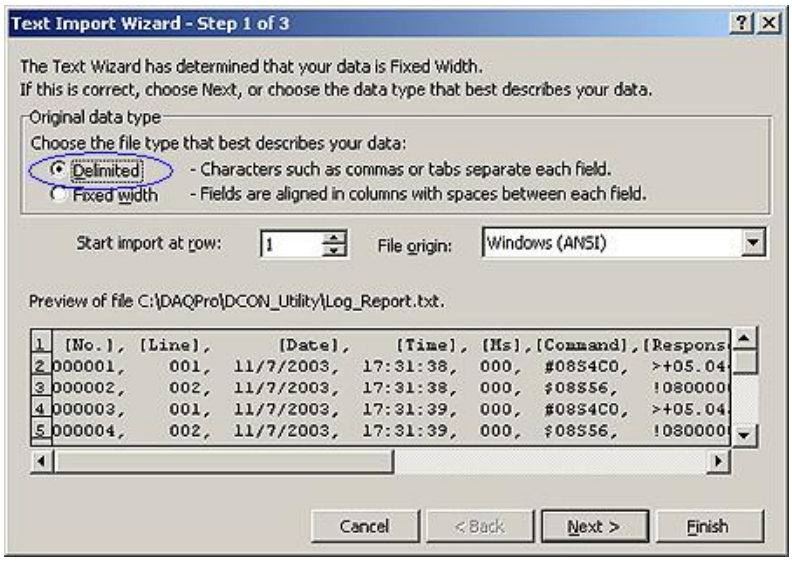
The procedure below will show how to do it

Step 1. Execute Excel.exe

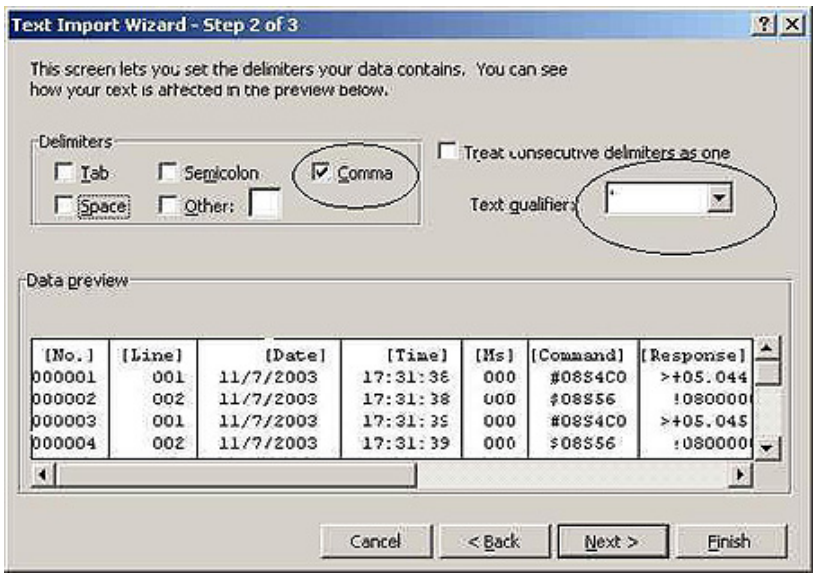
Step 2. Data ->Import External Data ->Import Data



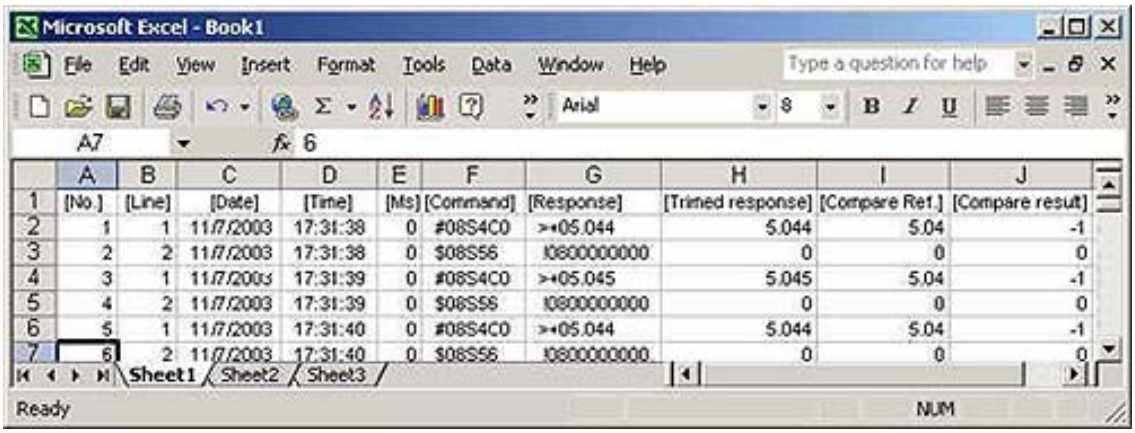
Step 3. Select **"Delimit"**



Step 4. Select **"Comma"** as delimit

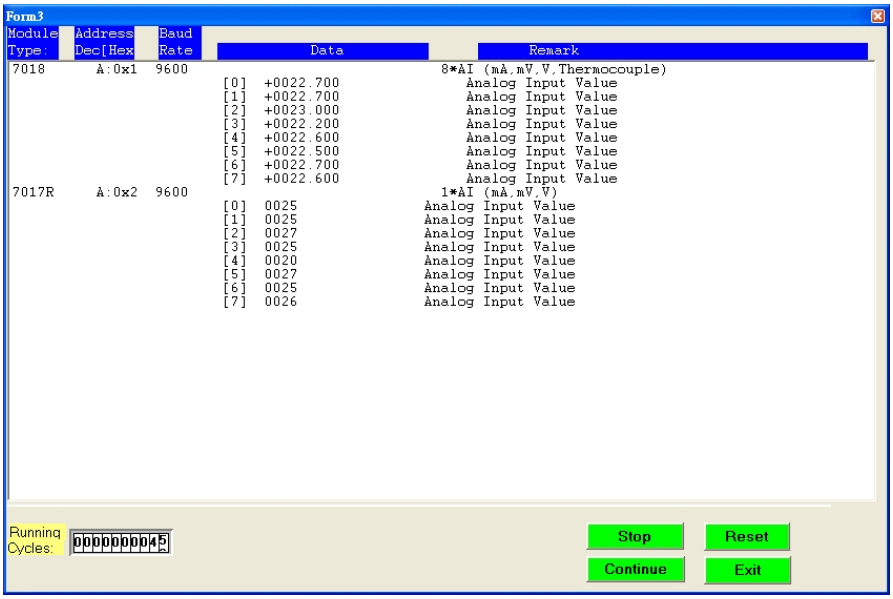


Step 5. Click **"Finish"** and get the result



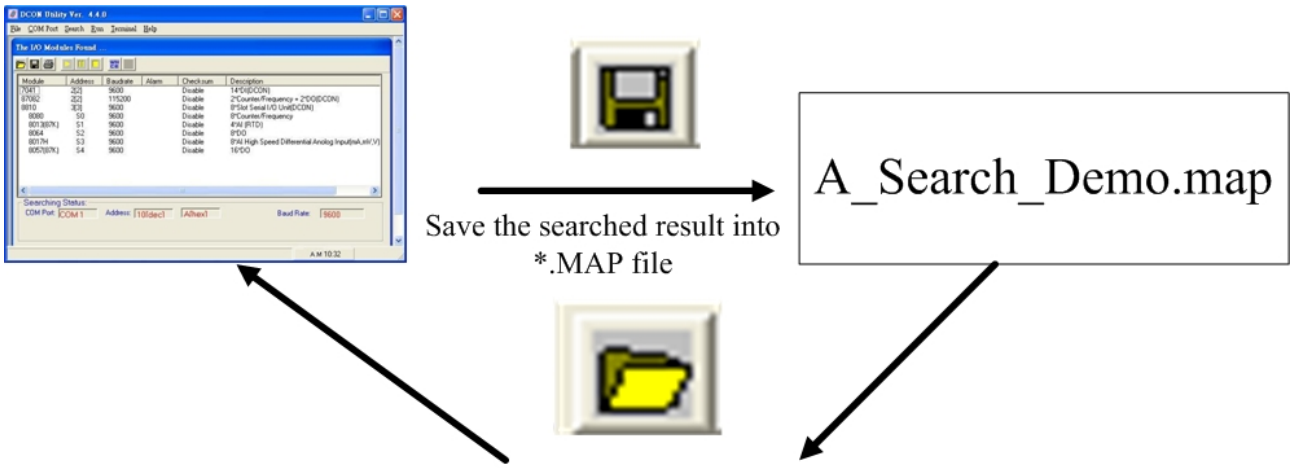
4.3 Monitoring function:

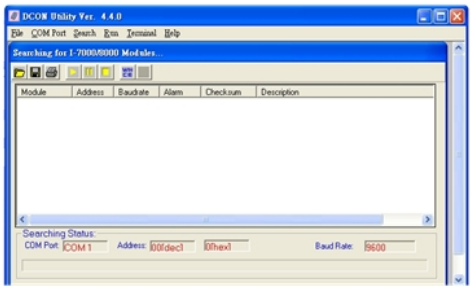
When finish searching and configuring the module, the monitor function can pooling every module one by one and show the results.



4.4 Save Map, Open Map and Print Map function:

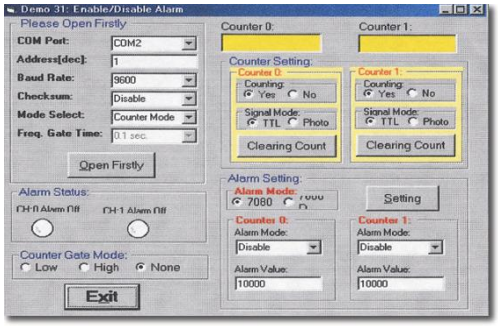
When the network contents many modules and need long time to search, it can save the search result into a map file, it will be very convenient to open map directly to load the previous result to searched form without searching time.





It also can print the searched result by using Print Map function. 

Chapter5. DCON Protocol and Software Development ToolKit (free)



DCON DLL

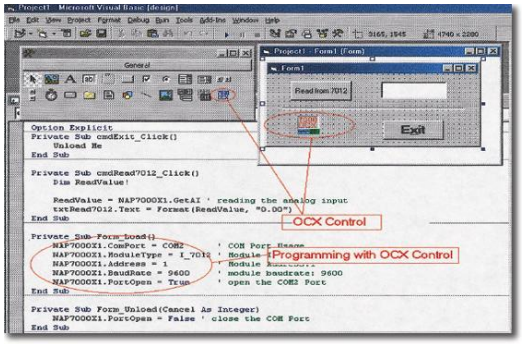
DLL library

Supported modules:
i-7000/8000/87K series
(with DCON protocol)

Supported demos:
VB/VC/BCB/Delphi

Supported OS:
Windows 98/NT/2K/XP

File location:
CD:\Napdos\Driver\DCON_DLL



DCON ActiveX

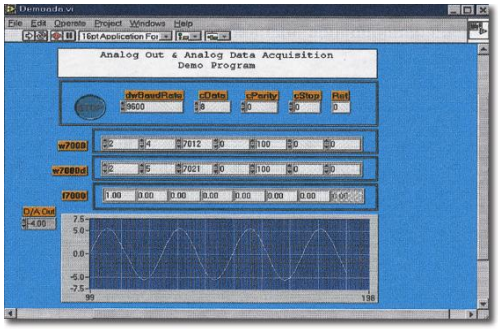
ActiveX (ocx) component

Supported modules:
i-7000/8000/87K series
(with DCON protocol)

Supported demos:
VB/VC/BCB/Delphi

Supported OS:
Windows 98/NT/2K/XP

File location:
CD:\Napdos\Driver\DCON_ActiveX



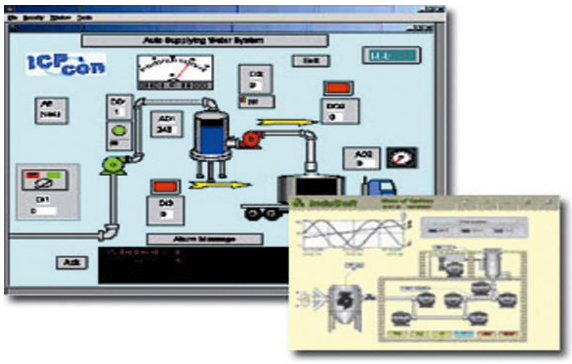
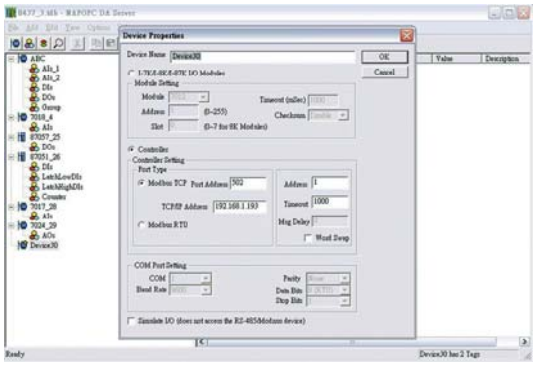
DCON LabVIEW

Bundled driver for LabVIEW

Supported modules:
i-7000/8000/87K series
(with DCON protocol)

Supported OS:
Windows 98/NT/2K/XP

File location:
CD:\Napdos\Driver\DCON_Labview

<table>
<tr>
<td>  </td>
<td>DCON Indusoft
Supported Module:
i-7000/8000/87K series
(with DCON protocol)
Supported OS:
Windows 98/NT/2K/XP/CE
File location:
CD:\Napdos\Driver\DCON_Indusoft</td>
</tr>
<tr>
<td>  </td>
<td>NAP OPC server
Supported module:
i-7000/8000/87K series
(with DCON protocol)
Modbus embedded controller
ISaGRAF embedded controller
Supported OS:
Windows 98/NT/2K/XP/CE
File location:
CD:\Napdos\NapOPCSvr</td>
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