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High Quality Data Acquisition and Embedded Control Products

I-7565-H1/H2 FAQ

Ver 1.3

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Q01 : The Connection Issue ?

A01: If the driver installation of I-7565-H1/H2 is successful, the virtual com port will be assigned by Windows automatically. Then users can use “I-7565-H1/H2 Utility” to connect to I-7565-H1/H2 module via the virtual com port for CAN bus communication.

[Q1] ”Invalid port number” error message ? (2011/01/05)

When users open the virtual com port, if it shows the ”Invalid port number” error message like Figure 1-1, Please follow the below steps to solve this problem.

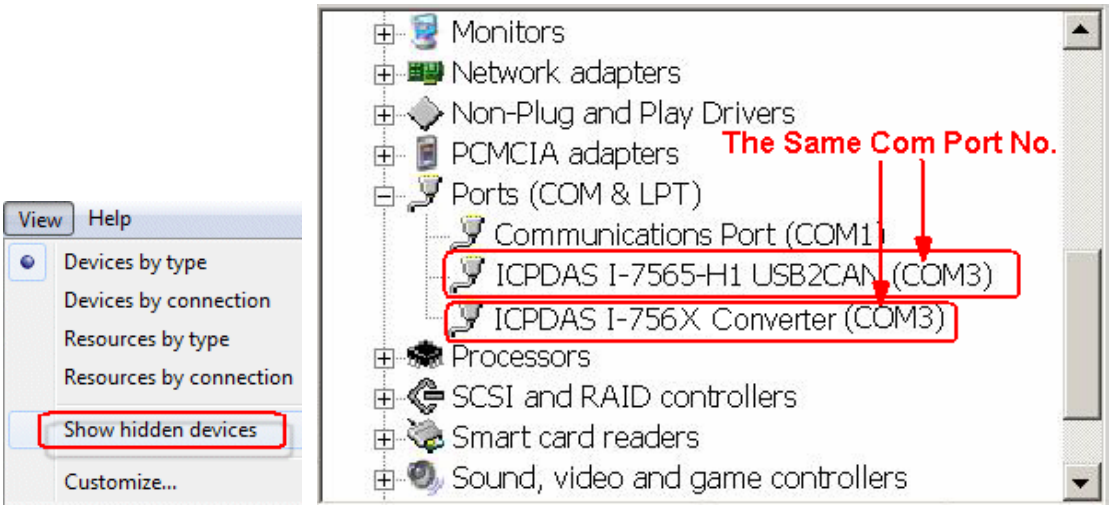


Figure 1-1: Invalid port number

(1) This com port is not existed in system and please check the com port number again.

(2) If the virtual com port number is bigger than COM16, then users need to copy the new version “**MSCOMM32.OCX**” file in I-7565-H1H2 utility folder to “C:\WINDOWS\system32\” folder to replace the old version file and then register “MSCOMM32.ocx” file again.

(3) There are other devices using the same com port number with I-7565-H1/H2 module. Please modify the com port number in “Device Manager” and then reboot PC. After that, reconnect to I-7565-H1/H2 module again. Users can execute “Show_Hidden_Device.bat” file in the I-7565-H1/H2 utility folder to open “Device Manager” tool and click “View / Show hidden devices” option. Then in “Ports (COM & LPT) item, it will show all com port of system like Figure 1-1.



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Figure 1-1-1: Show_hidden_devices

If it still failed, please check that the driver installation is completed or the virtual com port is correct for I-7565-H1/H2.

[Q2] ”The device is not open” error message ? (2011/01/05)

When users open the virtual com port, if it shows the ”The device is not open” error message like Figure 1-2, it means that the com port is occupied by other program like ICP DAS VxComm Utility. Please “UnMap” the same com port used in VxComm Utility and then click “Restart Driver” function like Figure 1-3. After that, reset I-7565-H1/H2 and try to connect to I-7565-H1/H2 again.



Figure 1-2: The device is not open

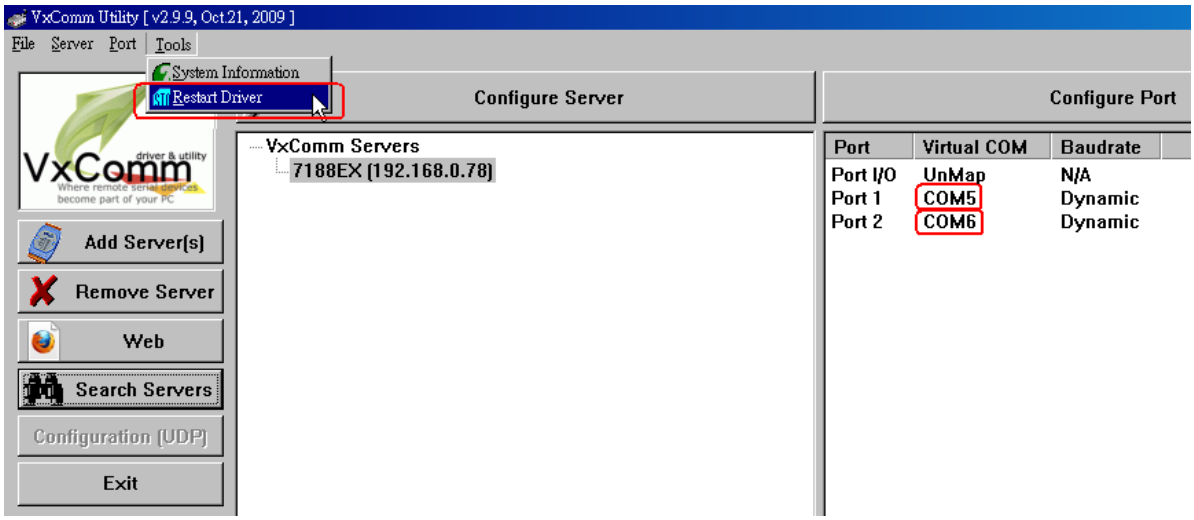


Figure 1-3: Virtual COM of VxComm Utility

[Q3] ”Device doesn’t Exist” error message ? (2012/01/31)

When users open the virtual com port, if it shows the ”Device doesn’t Exist !! Please Check Port No. !!” error message like Figure 1-4, it means that the com port is occupied by other program. Please modify the com port number in “Device Manager” and then reboot PC. After that, reconnect to I-7565-H1/H2 module again.

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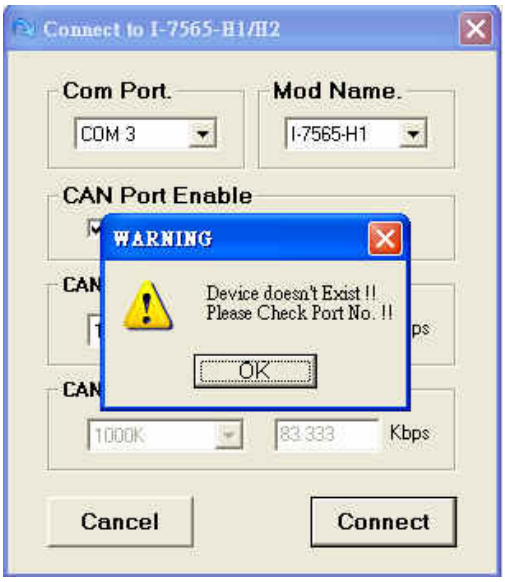


Figure 1-4: Device doesn't Exist

[Q4] "Could not set comm state" error message ? (2012/01/31)

When connecting to I-7565-H1/H2 via I-7565-H1/H2_Utility, it shows the "Could not set comm state" error message like Fig 1-5. Please execute the "Reset CANFID Flash" function in "Extra Config" function screen (refer to section 4.4.3 of User Manual) to clear the Filter-ID Flash data of CAN1/2. Then the problem will be resolved. Note, please check the I-7565-H1/H2 firmware version is v1.06 or newer and utility version is v1.10 or newer to support the "Reset CANFID Flash" function.

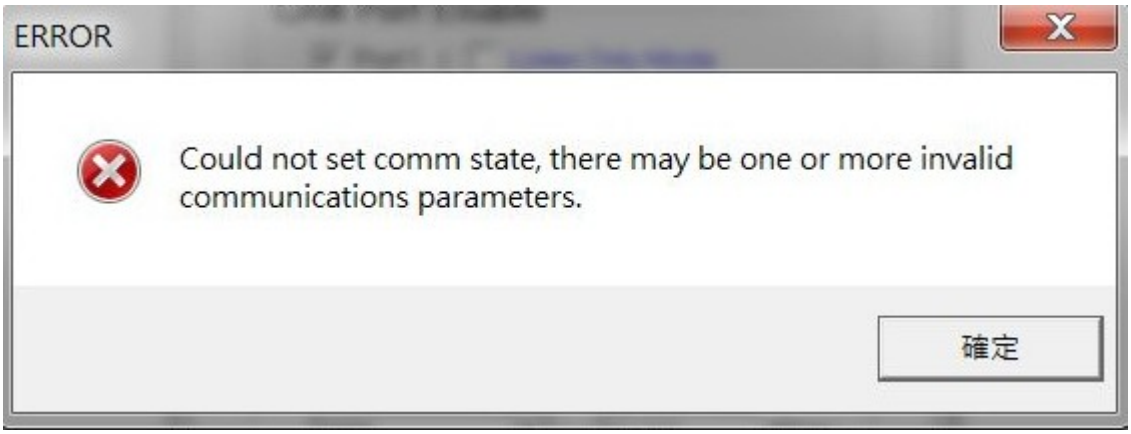


Fig 1-5 "Could not set comm state" Error Message

Q02 : The CAN Baud Rate Issue ?

A02: (1) The CAN baud rate mismatch:

If the I-7565-H1/H2 CAN baud rate is not the same as the CAN baud rate on the CAN bus network, the RUN LED on the I-7565-H1/H2 will flash per 100ms because the I-7565-H1/H2 cannot send any CAN message to the CAN bus network. Users can get the CAN status of I-7565-H1/H2 by using "I-7565-H1/H2 Utility" to help users

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understand what is going in the module.

(2) The user-defined CAN baud rate setting:

If users want to use the user-defined CAN baud rate, in the “Connect to I-7565-H1/H2” screen of “I-7565-H1/H2 Utility”, users can choose the “Defined” item and input the user-defined CAN baud rate value (for example: 83.333) in the right field of the “Baud Rate” frame like Figure 2-2. Then click “Connect” button to connect to I-7565-H1/H2.

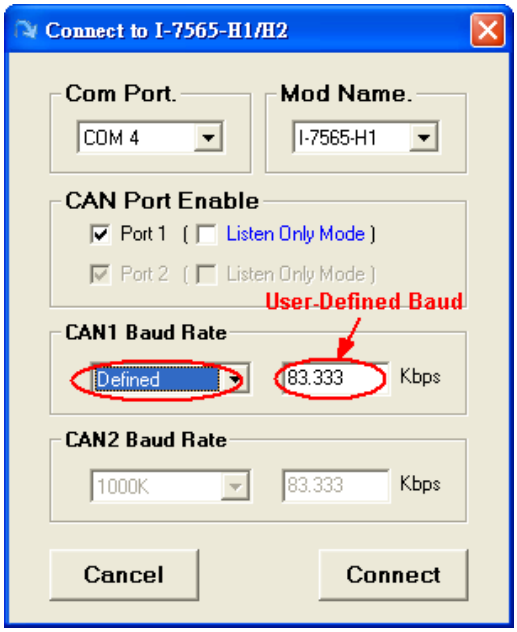


Figure 2-2: User-defined CAN Baud Rate for I-7565-H1/H2

(3) The rule of user-defined CAN baud rate setting in the SJA1000 CAN devices for communication compatible with I-7565-H1/H2:

If users use I-7565-H1/H2 to communicate with SJA1000 CAN devices and CAN baud rate is user-defined CAN baud rate. Then in SJA1000 CAN devices, users need to choose a set of proper CAN parameter (BTR0 & BTR1) for communication compatible with I-7565-H1/H2 and the rule is as follows:

(1) The “**Samples**” value is 1.

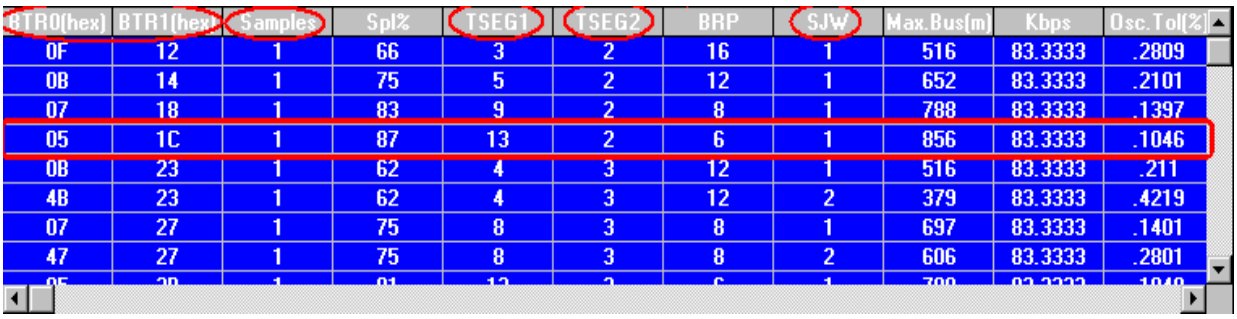
(1) The “**SJW**” value is as small as possible. (1 is the best).

(2) The “**Tseg2**” value is as small as possible. (1 is the best)

(3) The “**Tseg1**” value is as large as possible.

According to the above four rules, users can choose the proper BTR0 and BTR0. For example, if uses want to use the CAN baud rate is 83.333 Kbps, according to the above rules, users should choose BTR0=05 and BTR1=1C for the CAN parameter of SJA1000 CAN devices like Figure 2-3.

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BTR0(hex)	BTR1(hex)	Samples	Spl%	TSEG1	TSEG2	BRP	SJW	Max.Bus(m)	Kbps	Osc.Tol(%)
0F	12	1	66	3	2	16	1	516	83.3333	.2809
0B	14	1	75	5	2	12	1	652	83.3333	.2101
07	18	1	83	9	2	8	1	788	83.3333	.1397
05	1C	1	87	13	2	6	1	856	83.3333	.1046
0B	23	1	62	4	3	12	1	516	83.3333	.211
4B	23	1	62	4	3	12	2	379	83.3333	.4219
07	27	1	75	8	3	8	1	697	83.3333	.1401
47	27	1	75	8	3	8	2	606	83.3333	.2801

Figure 2-3: User-defined CAN Baud Rate for SJA1000 Device

Q03 : The Same CAN-ID Conflict Issue ?

A03: If the same CAN-ID conflict condition in CAN bus network happened frequently, it may cause CAN bus communication failed in I-7565-H1/H2 module. Users should solve the CAN-ID conflict condition and reset I-7565-H1/H2 module for the later CAN bus communication.

Q04 : The PC Rebooting Issue ?

A04: If using I-7565-H1/H2 for a while, the PC reboots automatically. Please update the newest “Service Pack of Windows” to your PC platform. For example, if users use Windows XP, please update the service pack to SP3 or newer version to solve this problem.

Q05 : The Max Data Transfer Rate (fps) Issue ?

A05: The max CAN bus data transfer rate in I-7565-H1/H2 is up to 3000 fps and it can be adjusted by I-7565-H1/H2 Utility. If users’ PC performance is not good enough, the data loss condition may happen. In this time, users can use “Advanced Config” function to adjust hardware transfer rate of “CAN to USB” in I-7565-H1/H2 and it may improve the data loss problem. Remember that hardware data transfer rate can not be lower than the current CAN bus flow, or the data loss will happen in I-7565-H1/H2 module.

Q06 : The Data Loss Issue ?

A06: There are two possible causes for the data loss problem. They are described as follows:

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(1) Software receiving buffer provided by API library overflow.
It means that the users' program could not receive the CAN messages from software buffer in time. Therefore, users should optimize the communication strategy.

(2) Hardware receiving buffer overflow.
A large delay of the interrupt happened in the receiving-end PC and it can be solved by enhancing the PC hardware performance or properly slowing down the transmitting speed for the other CAN bus nodes.

Q07 : The Module Number Applied to One PC Issue ?

A07: In theory, there is no the limitation. It supports synchronous operation in a PC with more than one I-7565-H1/H2 modules but the total communication efficiency depends on the PC hardware performance.

Q08 : The Long Driver Installation Time Issue ?

A08: If users install the driver of I-7565-H1/H2 followed by the steps of chapter 3 and it takes more than 2 minutes, please follow the below steps to solve this problem.

(1) Copy "I-7565-H1H2.inf" file to C:\WINDOWS\inf\ folder.

(2) Copy the file, "usbser.sys", to the path: C:\WINDOWS\system32\drivers\.

(3) Please follow the steps in chapter 3 to install the I-7565-H1/H2 driver by manual again. In the below step like Figure 8-1, please choose "Don't search. I will choose the driver to install" option and then click "Next" button.

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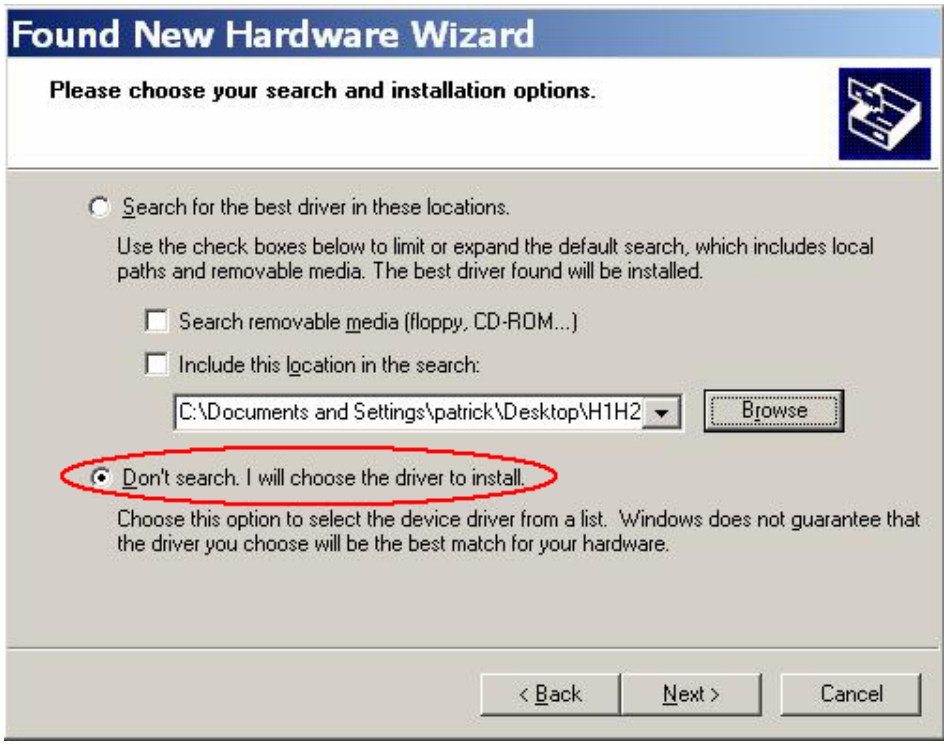


Figure 8-1: Driver Installation of I-7565-H1/H2 (1)

(4) When the Figure 8-2 shows, click “Next” button and the other steps are the same with those in chapter 3.

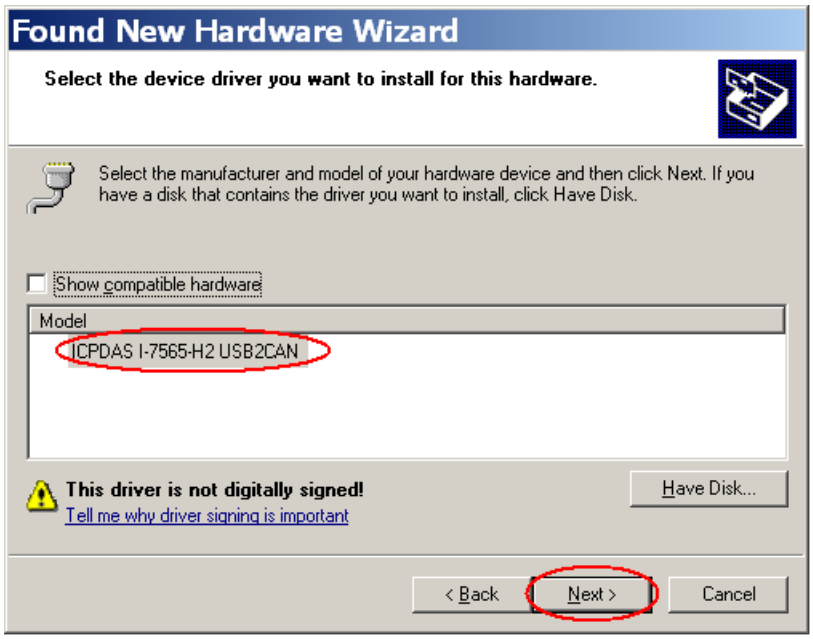


Figure 8-2: Driver Installation of I-7565-H1/H2 (2)

Q09 : The Supported CAN Filter-ID Number Issue ?

A09: The total capacity for CAN Filter-ID provided by I-7565-H1/H2 is 440 WORD. The

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following table describes the size of every different type CAN Filter-ID.

	Size (Unit: WORD)
11-bit Single ID	1
11-bit Group ID	2
29-bit Single ID	2
29-bit Group ID	4

Table 9-1: Size of Every Different Type CAN Filter-ID

According to the Table 9-1, the following table describes the supported CAN Filter-ID number of I-7565-H1/H2.

	I-7565-H1 (CAN Port)	I-7565-H2 (Each CAN Port)
11-bit Single ID	440/1 = **440**	**220**
11-bit Group ID	440/2 = **220**	**110**
29-bit Single ID	440/2 = **220**	**110**
29-bit Group ID	440/4 = **110**	**55**

Table 9-2: size of every different type CAN ID

Q10 : Other Issue ?

A10: In general, the following errors could also occur. For example, CAN media connection problem, terminal resistor problem, different baud rate configuration with CAN network and so on.

Q11 : Windows 7 Issues ?

A11:

[Q1] In Windows 7 64-bit (x64) OS, how to install I-7565-H1/H2 Driver and run I-7565-H1/H2 Utility correctly ? (2012/01/31)

(1) In Windows 7 64-bit (x64) OS, users must install I-7565-H1/H2 driver by manual. Please follow the below steps **:**

[1] Execute "**ICPUsbConverter_DrvInst_v1.2.exe**" (**driver signature certificate**

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is supported in v1.2 or newer) to install necessary files to “C:\WINDOWS\inf”.

[2] Connect I-7565-H1/H2 module to PC and follow the steps in chapter 3.2 to install driver by manual.

(2) After driver installation successfully, if without driver signature certificate, there will be an “**!**” icon on I-7565-H1/H2 Virtual COM driver like Fig 11-1. If users install I-7565-H1/H2 driver version older than v1.2, then this problem will happen. Please uninstall driver first, then install the v1.2 or newer driver again. After that, the I-7565-H1/H2 driver will work well like Fig 11-2.

(3) When execute “I-7565-H1/H2 Utility” first, remember to execute it by “System Administrator” authority like Fig 11-3. Or there will be an error message – “Component not correctly registered” shown like Fig 11-4.

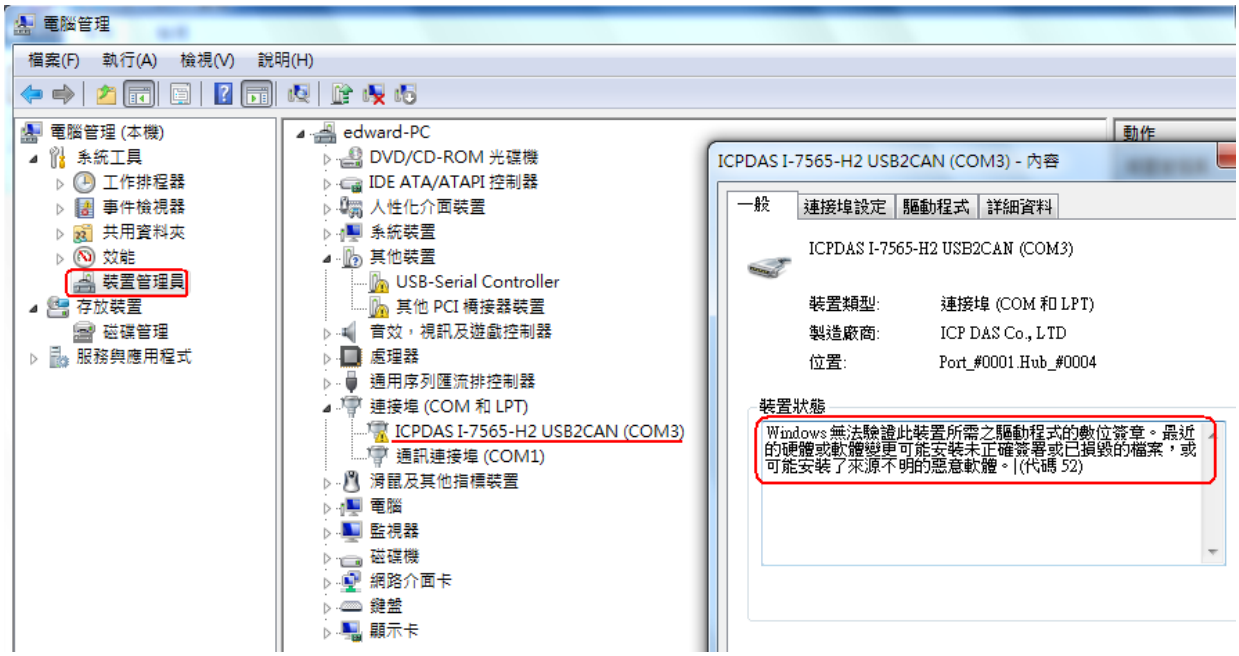


Fig 11-1 Error Without Driver Signature Certificate

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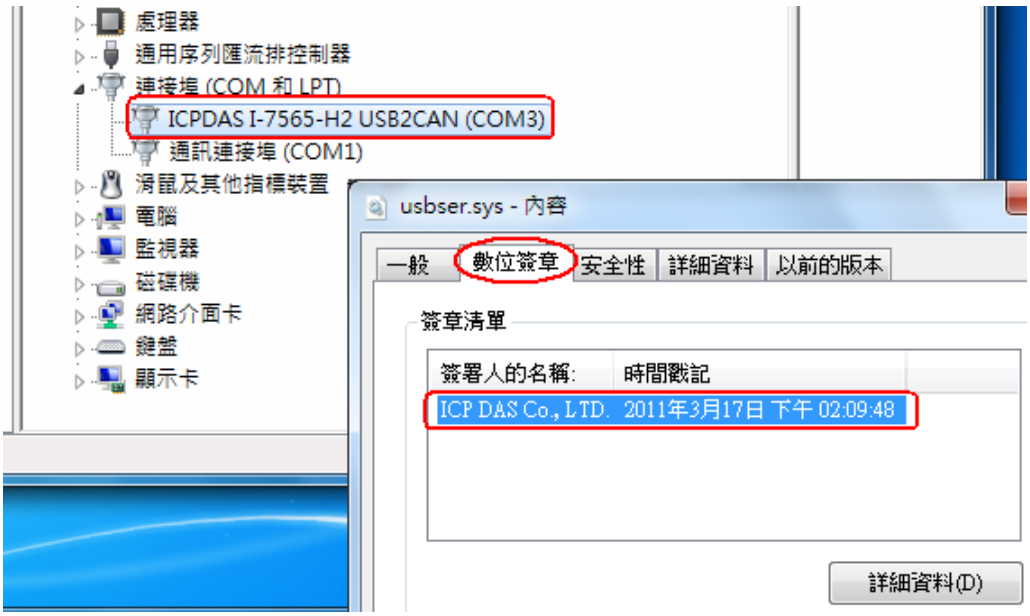


Fig 11-2 With Driver Signature Certificate



Fig 11-3 Execute by ”System Administrator” Authority

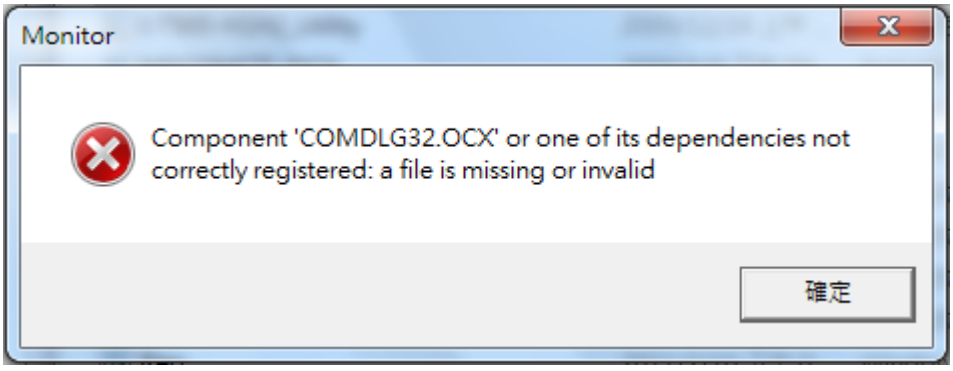


Fig 11-4 Component not correctly registered

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[Q2] When connecting to I-7565-H1/H2 module via utility in Win7 x64, it will show "invalid property value" error message ? (2012/01/31)

(1) Please copy “MSCOMM32.OCX” file in I-7565-H1/H2 utility folder to the path - “windows\SysWOW64” to solve this problem.

Q12 : Why I-7565-H1/H2 can’t receive CAN message ?

A12: Please check the following items in I-7565-H1/H2 module.

(1) Check CAN_H and CAN_L pins if they are wired to CAN device correctly.

(2) Check CAN bus baud if it is the same with CAN device.

(3) Check CAN Filter-ID setting if it is enabled already.

Q13 : Does I-7565-H1/H2 support LabVIEW Driver ?

A13: Yes, users can download LabVIEW 8.x library and Demo from ICP DAS web site => ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/can/converter/i-7565-h1h2/software/library/win2k_xp/

Q14 : How to adjust the Bit-Timing parameters of I-7565-H1/H2 ?

A14: In firmware v1.07 and utility v1.13 or newer, I-7565-H1/H2 module has supported the following functions.

(1) Adjustable Bit-Timing parameter, Tseg2 value, of CAN baud rate like Figure 14-1.

(2) Show the Bit-Timing parameters including T1, T2 and SJW values used in I-7565-H1/H2 module like Figure 14-2.

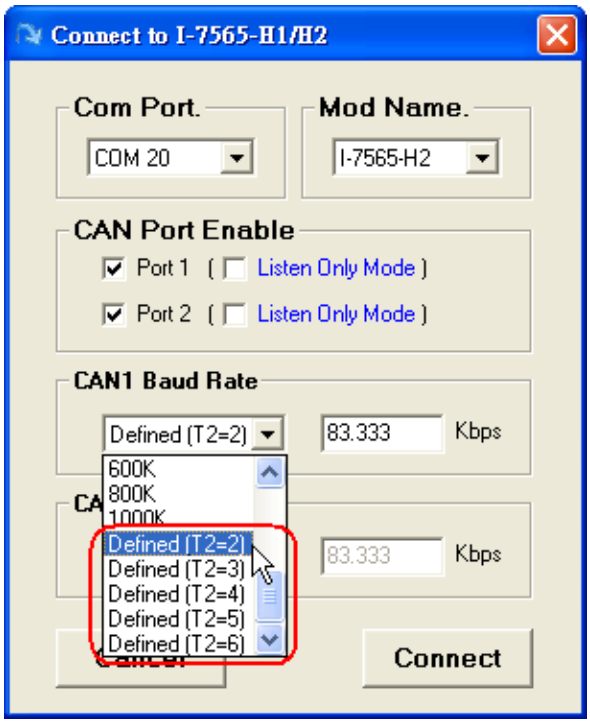


Figure 14-1 Adjust “T2” value

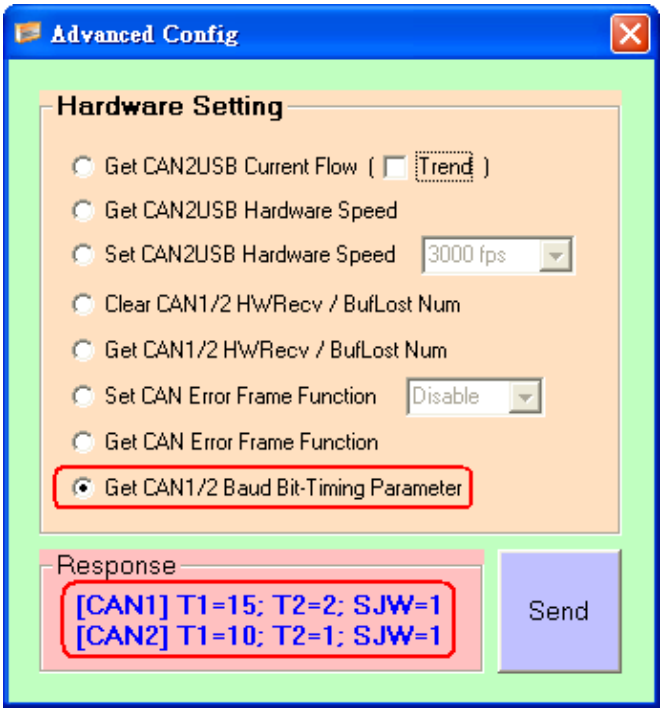


Figure 14-2 “T1, T2 and SJW” values

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Q15 : How to enable “CAN Error Frame” function of I-7565-H1/H2 ?

A15: In firmware v1.07 and utility v1.12 or newer, I-7565-H1/H2 module has provided the “CAN Error Frame” information function. Please refer the below steps to enable it.

(1) Run “I-7565-H1/H2” utility and connect to I-7565-H1/H2 module.

(2) In ”**Advanced Config**” screen, click the ”**Set CAN Error Frame Function**” item and choose ”**Enable**” option. Then click ”**Send**” button to enable the function like Figure 15-1.

(3) If CAN error has happened, the CAN error information will be shown in “**CAN RecvMsg**” field. Users can click the error column to see the detailed error information like Figure 15-2.

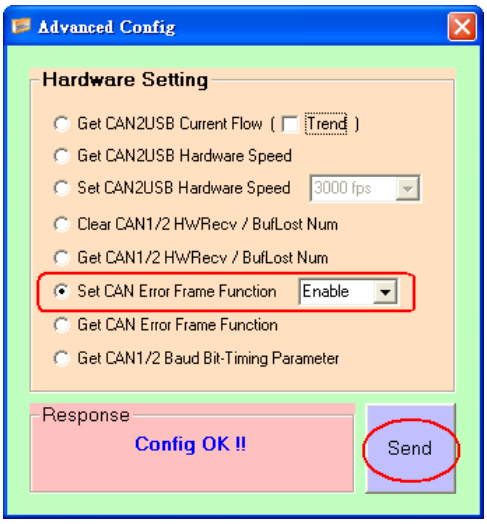


Figure 15-1 Enable “CAN Error Frame” Function

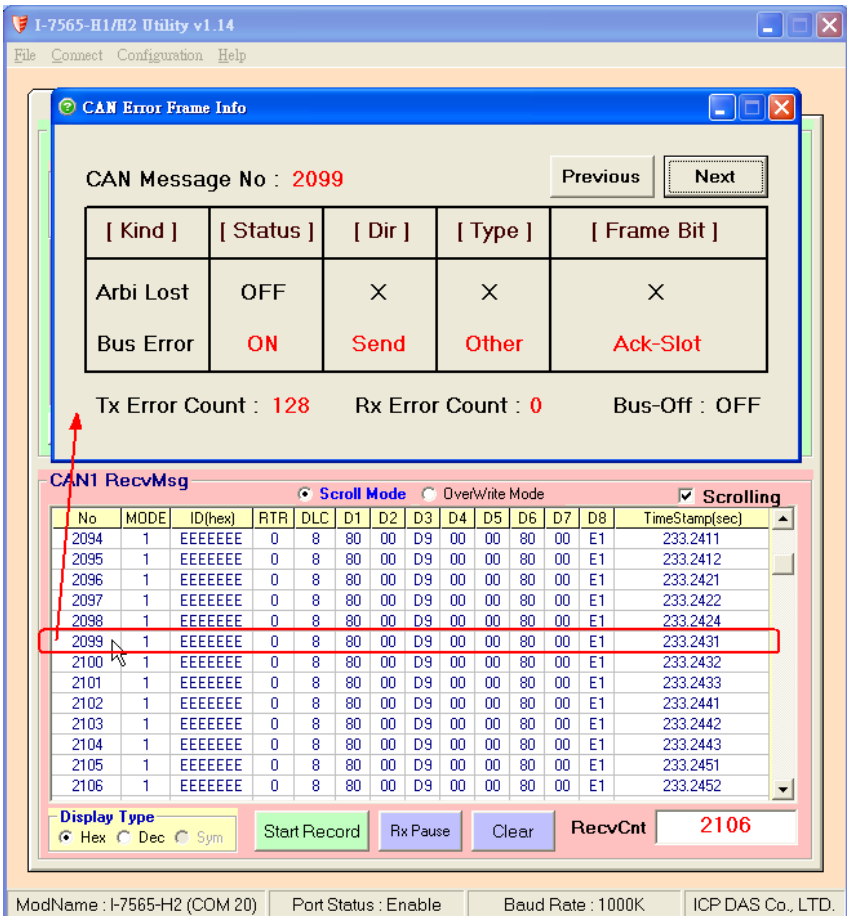


Figure 15-2 The detailed CAN Error Information

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Q16 : New function - “OverWrite” supported in Utility v1.09 ?

A16: In utility v1.09 or newer, the ”**OverWrite**” function option is added in “RecvMsg” field. It is used to assign the received CAN messages with the same “Mode” and “ID” value to the same row. The “**Num**” field is the total number and the “**CycleTime**“ field is the period for the received CAN messages with the same “Mode” and “ID” value.

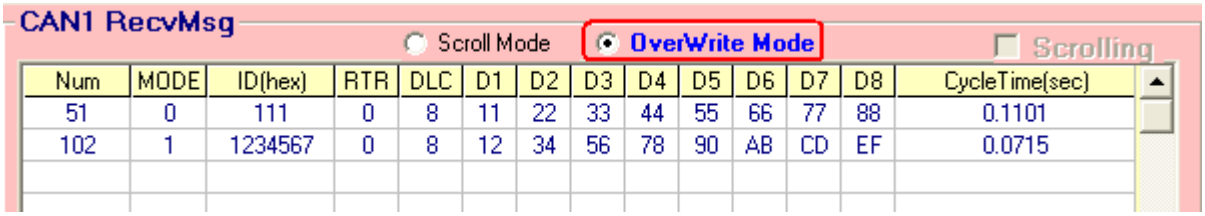


Figure 16-1 “OverWrite” Screen

Q17 : New function - “Symbolic” supported in Utility v1.10 ?

A17: In utility v1.10 or newer, the ”**Sym**” function option is added in ”**Display Type**” area of the “RecvMsg” field. The “Sym” function just supports in “OverWrite” mode. It is used to replace the ID value with the assigned string like Figure 17-1. (Run “Load Symbol File” first)

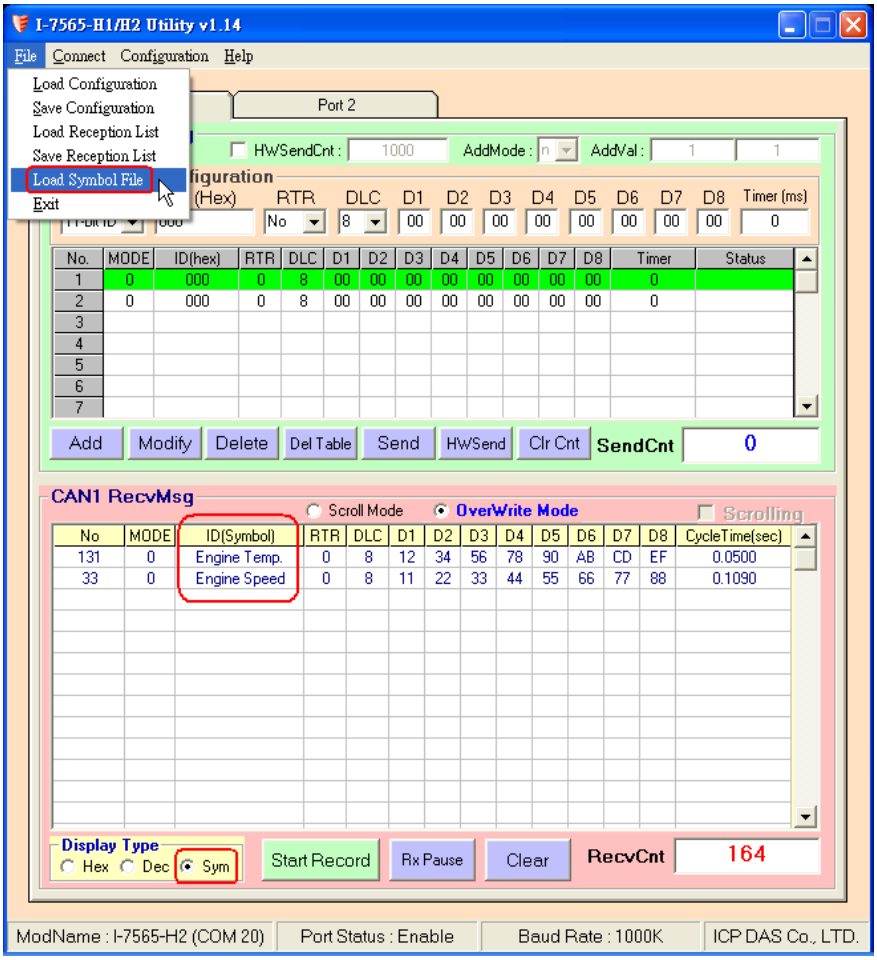


Figure 17-1 “Symbolic” Screen

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Q18 : How to send the CAN messages precisely ?

A18:

(1) Using **I-7565-H1/H2 Utility :**

First, add the assigned CAN message for sending. Then users can click “HWSend” button to send the assigned CAN message permanently with the precise hardware timer. If users just want to send the assigned count, please check the “HWSendCnt” item and input the count for sending.

(2) Using **I-7565-H1/H2 API Library :**

In I-7565-H1/H2 library, users can use **VCI_EnableHWCyclicTxMsgNo()** function (v1.08 or newer support) to send the assigned CAN message with the precise hardware timer.

Q19 : How to listen CAN messages without affecting CAN network communication ?

A19: Users can use the ”Listen Only” function to do that.

(1) Using **I-7565-H1/H2 Utility :**

In “Connection” screen, please check ”Listen Only Mode” item like figure 19-1 and then click the ”Connect” button to connect to I-7565-H1/H2 module. After the connection is successful, the execution screen will be like figure 19-2.

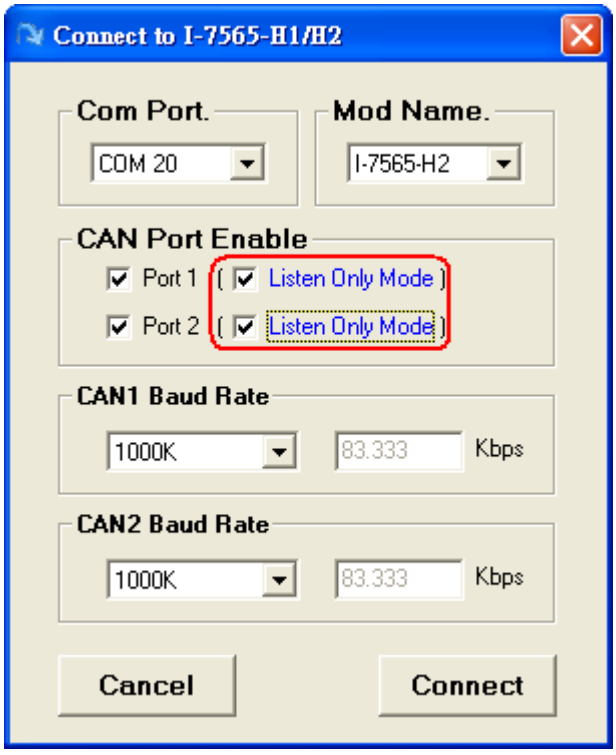


Figure 19-1 ”Listen Only Mode” option screen

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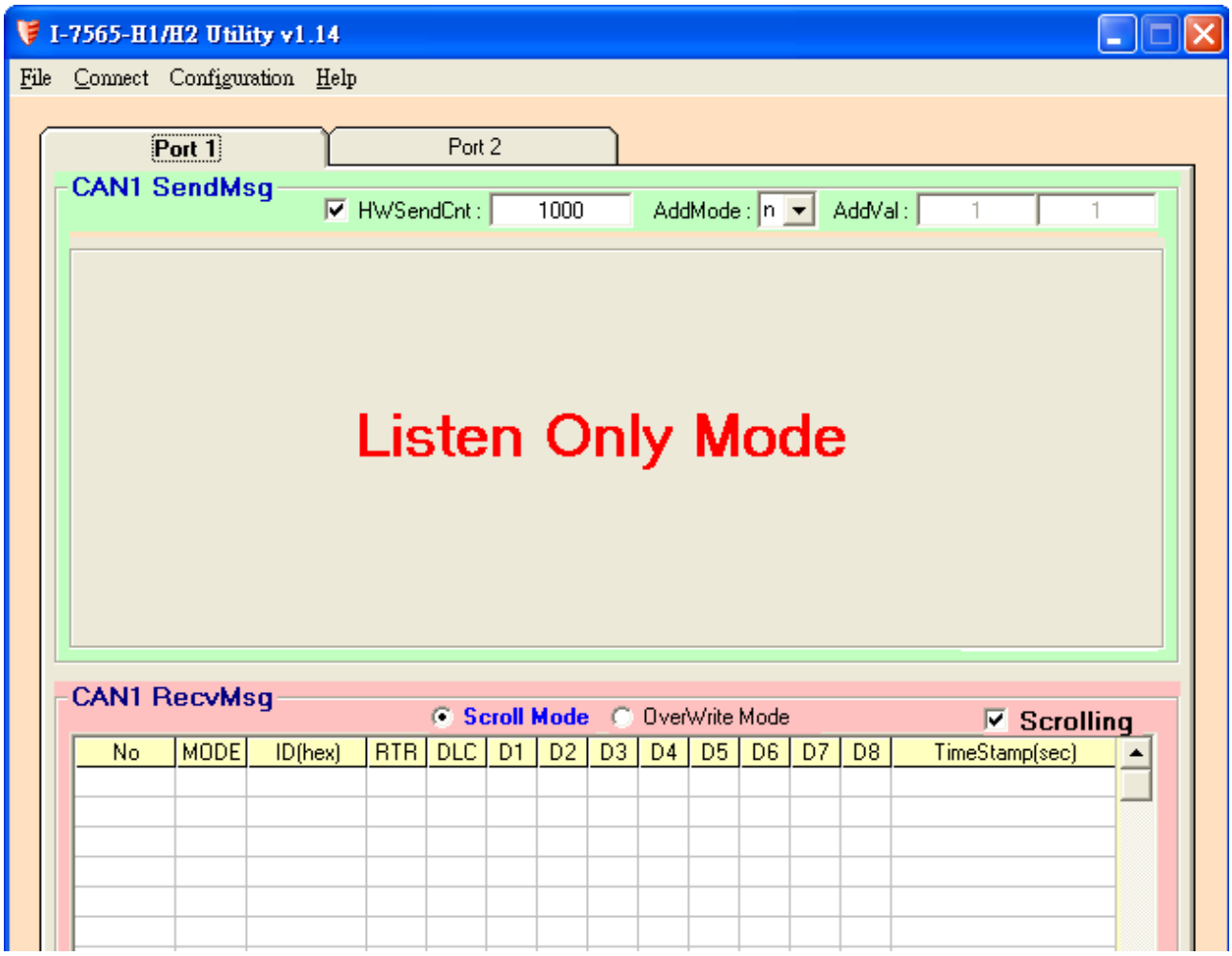


Figure 19-2 ”Listen Only Mode” Execution Screen

(2) Using **I-7565-H1/H2 API Library :**

In I-7565-H1/H2 library, users can use the **VCI_Set_MOD_Ex()** function (v1.10 or newer support) to set the ”Listen Only Mode” function.

Q20 : How to get the current CAN bus data flow ?

A20: In the ”Advanced Config” screen of I-7565-H1/H2 utility, users can click “Get CAN2USB Current Flow” option like figure 20-1 and then click the ”Send” button to open the “CAN bus DataFlow” screen to show the current CAN bus data flow like figure 20-2.

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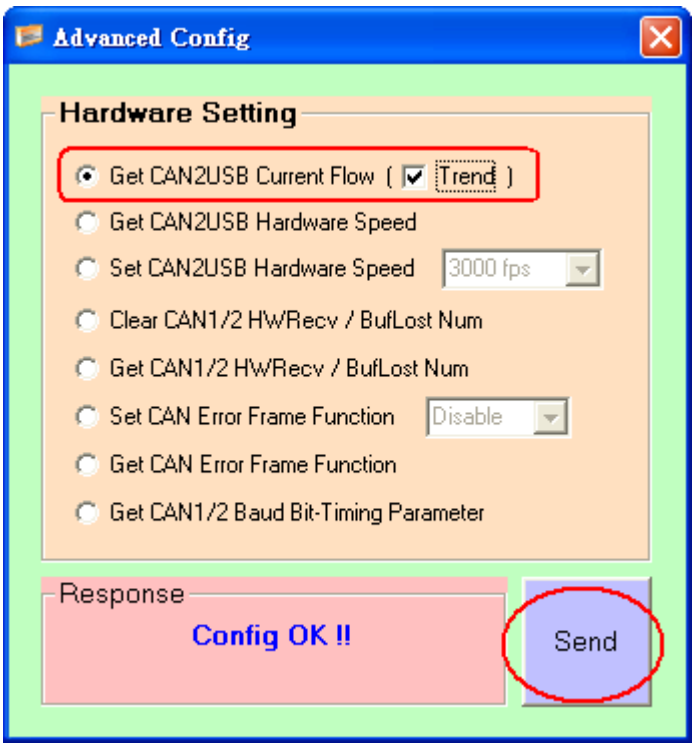


Figure 20-1 ”Get CAN2USB Current Flow” Option

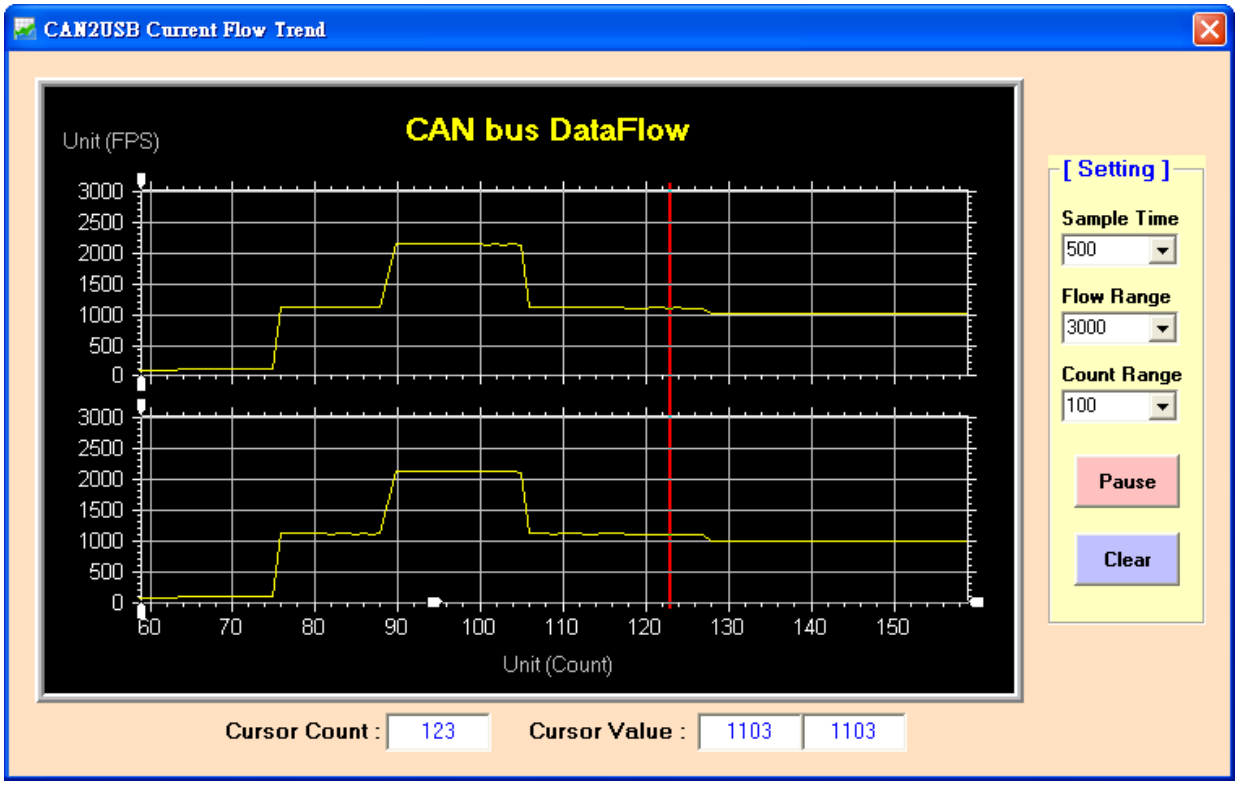


Figure 20-2 ”CAN bus DataFlow” Screen

Q21 : How to make I-7565-H1/H2 become a CAN data logger ?

A21: In I-7565-H1/H2 utility, users can use the “Start Record” button function in “RecvMsg” field to do that like figure 21-1. When users click the “Start Record” button, it will produce a

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record file automatically named by date and time like “CAN1_20130102_100339.txt” in the same folder of I-7565-H1/H2 utility. It can also choose how many the received CAN data saved in the record file like figure 21-2.

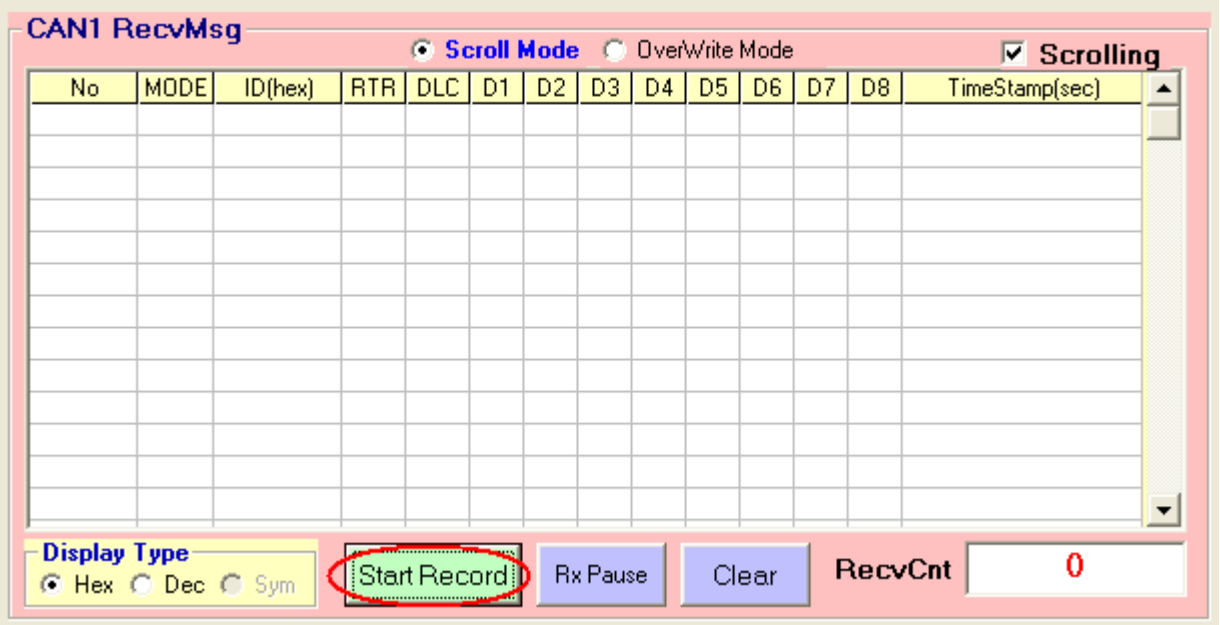


Figure 21-1 ”Start Record” button

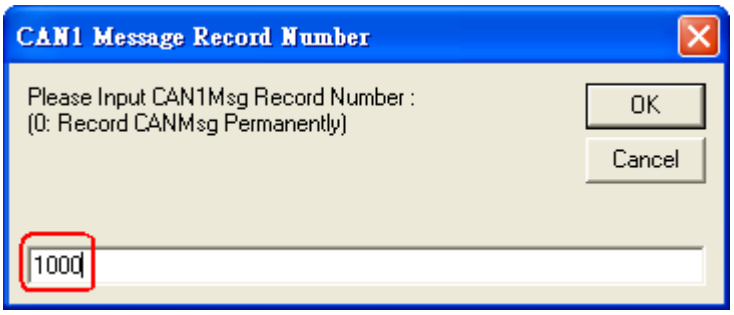


Figure 21-2 CAN Message Record Number

Q22 : How to receive the assigned CAN-ID data immediately ?

A22: In I-7565-H1/H2 API library, the “VCI_Set_UserDefISR” function is used to do that. For example, users want to receive the CAN1 data with Mode=11bit, ID=0x100. Please see the below example code.

(1) Execute “**VCI_OpenCAN**()” function first to open CAN port of I-7565-H1/H2.

(2) Execute **VCI_Set_UserDefISR**(1, CAN1, MODE_11BIT, 0x100, MyTestISR1) function.

(3) When received the assigned CAN message, the program will run “MyTestISR1” function once. Therefore, in “MyTestISR1” function, users can execute “**VCI_Get_ISRCANData**()” function to get the assigned CAN message data.

[Note]

1. The time spent in “MyTestISR1” function should be the shorter the better, otherwise it may cause the assigned CAN data loss.

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Q23 : Does the API Library of I-7565-H1/H2 support Visual Studio Express ?

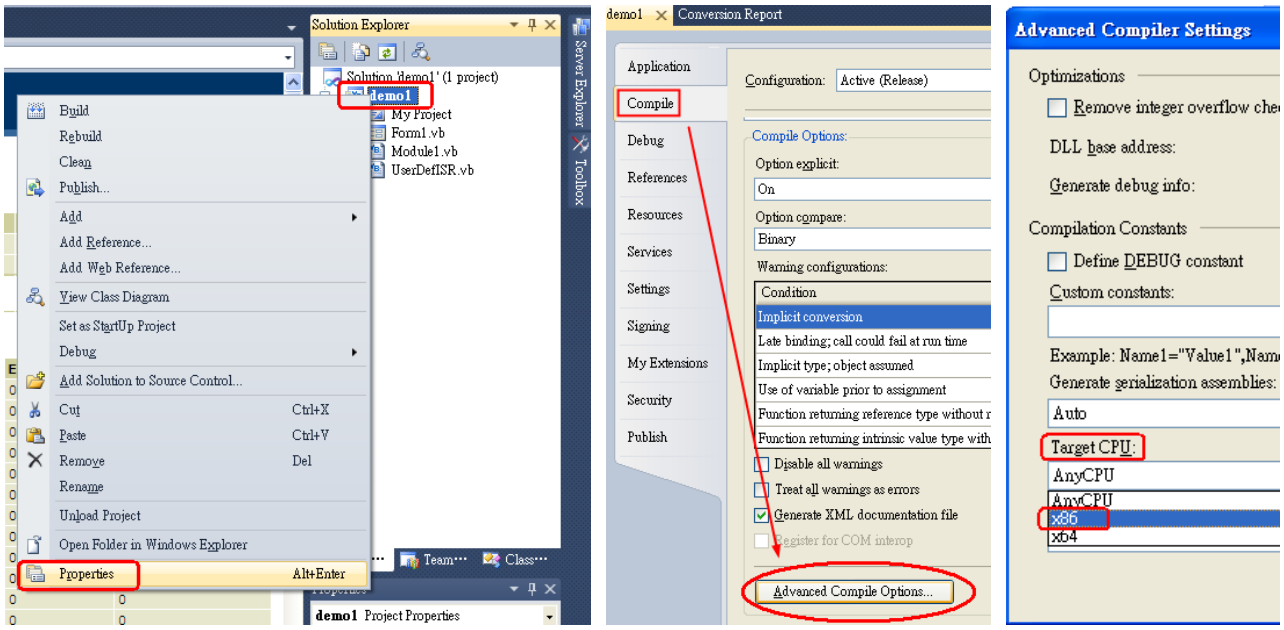
A22: (2013/12/08)

Yes, it supports. The usage is all the same with the .Net demo of I-7565-H1/H2.

Q24 : When .Net Demo runs in Win 7 64bit OS, it will show the "0x8007000B" or "System.NullReferenceException" error message ?

A24: (2013/12/08)

Please modify the CPU option of I-7565-H1/H2 .Net Demo from "AnyCPU" to "x86" and then re-compile the demo again. After that, the .Net demo will run well.



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