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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.



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

o VxComm Utility [ v2	2.9.9, Oct.2	1, 2009 ]						
<u>File</u> Server Port <u>T</u> o	ools							
	<u>S</u> ystem In Restart Dr	formation	Co	nfigure Server			Configure Po	ort
driver	8 utility		ers		Port	Virtual COM	Baudrate	
VxCom	n	7188EX (19	2.168.0.78]		Port I/O	UnMap	N/A	
become part of your P	C C				Port 1	COM5	Dynamic	
January Add Serve	er(s)				Port 2	СОМЕ	Dynamic	
🔀 Remove S	erver							
🥑 Web								
Search Se	rvers							
Configuration (	UDPj							
Exit								

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.

Com Port.	Mod Name.
CAN Port Enabl	e
CAN	ice doesn't Exist !! se Check Port No. !! ps
CAN	OK 83.333 Kbps

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

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.

Connect to I-7565-H1/H2
Com Port. Mod Name.
CAN Port Enable  Port 1 ( Listen Only Mode )  Port 2 ( Listen Only Mode )
CAN1 Baud Rate
CAN2 Baud Rate
Cancel Connect

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.

BTR0(hex)	BTR1(hex)	Samples	Spl%	(TSEG1)	TSEG2	BRP	(SJW)	Max.Bus(m)	Kbps	Osc.Tol(%)▲
OF	12	1	66	3	2	16	1	516	83.3333	.2809
OB	14	1	75	5	2	12	1	652	83.3333	.2101
07	18	1	83	9	2	8	1	788	83.3333	.1397
05	10	1	87	13	2	6	1	856	83.3333	.1046
OB	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
<b></b> ∎¶	20	1	01	12	<b>1</b>	C	-	700		1040

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:

- 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.

Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
C:\Documents and Settings\patrick\Desktop\H1H2
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

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.

Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
CICPDAS I-7565-H2 USB2CAN
This driver is not digitally signed!       Have Disk         Tell me why driver signing is important       Have Disk
< <u>B</u> ack <u>N</u> ext > Cancel

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

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

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

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 <b>= 440</b>	220
11-bit Group ID	440/2 = <b>220</b>	110
29-bit Single ID	440/2 = <b>220</b>	110
29-bit Group ID	440/4 = <b>110</b>	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

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

<ul> <li>▶ ■ 處理器</li> <li>▶ ● 通用序列匯流排控制器</li> <li>▲ 灣 連接埠 (COM 和 LPT)</li> <li>■ ICPDAS I-7565-H2</li> <li>■ 通訊連接埠 (COM)</li> </ul>	USB2CAN (COM3)
<ul> <li>▷····································</li></ul>	<ul> <li>usbser.sys - 內容</li> <li>一般 數位簽章 安全性 詳細資料 以前的版本</li> <li>簽章清單</li> <li>簽署人的名稱: 時間戳記</li> </ul>
	ICP DAS Co., LID. 2011年3月17日 F4 02:09:48 詳細資料(D)

Fig 11-2 With Driver Signature Certificate

🥑 I-7565-H1H2, L	tility	2011/1/31
I-7565-H1H2	開啟(O)	4
S MSCOMCTL.	👂 以系統管理員身分執行	(A) F
SCOMM32	疑難排解相容性(Y)	F
🚳 MSFLXGRD.C	(病送到(NI)	
🚳 msvbvm60.dl	147223-3(14)	·
🚳 msvcrt.dll	剪下(T)	-
🚳 oleaut32.dll	複製(C)	-
🚳 olepro32.dll	貼上(P)	-
🚳 Reg	建立捷徑(5)	-
🚳 scrrun.dll	₩ (D)	
🚳 tabctl32.ocx	重新会之(M)	E E
🚳 VB6STKIT.DLI	王利 青(11)	
Version	內容(R)	

Fig 11-3 Execute by "System Administrator" Authority



Fig 11-4 Component not correctly registered

## [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 => <u>ftp://ftp.icpdas.com/pub/cd/fieldbus\_cd/can/converter/i-7565-h1h2/software/library/wi</u> <u>n2k\_xp/</u>

#### 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.

Connect to 1-7505-H1/HZ	Value Advanced Config
Com Port.       Mod Name.         CDM 20       I-7565-H2         CAN Port Enable         ✓ Port 1 ( Listen Only Mode)         ✓ Port 2 ( Listen Only Mode)         ✓ Port 2 ( Listen Only Mode)         CAN1 Baud Rate         Defined (T2=2)         83.333         Kbps         600K         00K         00K         00K         0efined (T2=3)         Defined (T2=4)         Defined (T2=6)         Connect	Hardware Setting <ul> <li>Get CAN2USB Current Flow ( Trend )</li> <li>Get CAN2USB Hardware Speed</li> <li>Set CAN2USB Hardware Speed</li> <li>Set CAN2USB Hardware Speed</li> <li>Clear CAN1/2 HWRecv / BufLost Num</li> <li>Get CAN1/2 HWRecv / BufLost Num</li> <li>Get CAN1/2 HWRecv / BufLost Num</li> <li>Set CAN Error Frame Function</li> <li>Get CAN Error Frame Function</li> <li>Get CAN1/2 Baud Bit-Timing Parameter</li> </ul> Response [CAN1] T1=15; T2=2; SJW=1 Send

Figure 14-1 Adjust "T2" value

#### 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.





CAN Error Frame Info												X			
CAN Message No : 2099 Previous Next													]		
	[Kind] [Status] [Dir] [Type] [Frame Bit]														
	Arbi Lost OFF X X X														
	Bu	s Err	or	ON		S	end		c	Othe	ər		A	ck-Slot	
Tx Error Count : 128 Rx Error Count : 0 Bus-Off : OFF															
	Tx 1 Re	Erroi ecvMs	r Count	. 12	.0	roll I			Over	Write	. v				
	Tx 1 Re		sg	BTB	• S	croll I	Mode	0	Over <sup>4</sup>	Write	Mode	DZ	DB	Scrolli	ng
			sg ID(hex) EEEEEEE	. 12	• So DLC 8	croll 1	Mode D2	D3 D9	0ver*	Write	Mode	D7 00	D8 E1	✓ Scrolli      TimeStamp(sec) 233.2411	ng
209	Tx 1 Re 94	Error ecvMs MODE 1 1	iD(hex) EEEEEEE EEEEEEE	. 12	• So DLC 8 8	<b>croll 1</b> D1 80	Mode D2 00	0 03 09 09	0veň D4 00	Write	Mode D6 80	D7 00 00	D8 E1 E1	✓ Scrolli TimeStamp(sec) 233.2411 233.2412	ng
209 209 209	Tx 1 Re 94 95 96	Error ecvMs MODE 1 1 1	ID(hex) EEEEEEE EEEEEEEEEEEEEEEEEEEEEEEEEEEE	. 12 RTR 0 0	• So DLC 8 8 8	<b>croll I</b> D1 80 80 80	Mode D2 00 00	D3 D9 D9 D9	0ver <sup>1</sup> 04 00 00	Write D5 00 00	Mode D6 80 80	D7 00 00	D8 E1 E1 E1	✓ Scrolli TimeStamp[sec) 233.2411 233.2421 233.2421	ng 
209 209 209 209 209	Tx 1 Re 94 95 96 97	MODE 1 1 1 1	ID(hex) EEEEEEE EEEEEEE EEEEEEEE EEEEEEEE	RTR 0 0 0	• So DLC 8 8 8 8 8	<b>Troll I</b> D1 80 80 80 80	<b>Mode</b> D2 00 00 00	03 D9 D9 D9 D9 D9	0ver <sup>1</sup> D4 00 00 00	Write D5 00 00 00 00	Mode D6 80 80 80 80	D7 00 00 00	D8 E1 E1 E1 E1 E1	✓ Scrolli TimeStamp(sec) 233.2411 233.2421 233.2421 233.2422	ng
209 209 209 209 209 209 209	Tx 1 Re 94 95 96 97 98	MODE 1 1 1 1 1 1	ID(hex) EEEEEEE EEEEEEE EEEEEEE EEEEEEEEEEEE	. I 2 <u>RTR</u> 0 0 0 0 0	• So DLC 8 8 8 8 8 8 8	<b>croll I</b> <b>D1</b> 80 80 80 80 80	Mode D2 00 00 00 00	D3 D9 D9 D9 D9 D9 D9 D9	0veň 04 00 00 00 00 00	Write D5 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80	D7 00 00 00 00 00	D8 E1 E1 E1 E1 E1 E1 E1	✓ Scrolli TimeStamp(sec) 233.2411 233.2421 233.2421 233.2422 233.2422	ng
209 209 209 209 209 209 209 209 209	Tx 1 Re 94 95 96 97 98 99	MODE 1 1 1 1 1 1 1	ID(hex) EEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEEE	. 12 RTR 0 0 0 0 0 0 0	• So DLC 8 8 8 8 8 8 8 8 8 8 8	<b>D1</b> 80 80 80 80 80 80 80	<b>Mode</b> D2 00 00 00 00 00 00	D3 D9 D9 D9 D9 D9 D9 D9 D9 D9	0veň D4 00 00 00 00 00	Write D5 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80	D7 00 00 00 00 00 00	D8 E1 E1 E1 E1 E1 E1 E1	✓ Scrolli TimeStamp(sec) 233.2411 233.2421 233.2422 233.2424 233.2424 233.2424	
209 209 209 209 209 209 209 209 209 209	Tx 1 Re 94 95 96 97 98 99 00	Errol MODE 1 1 1 1 1 1 1 1 1 1 1 1 1	g ID(hex) EEEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEE	RTR 0 0 0 0 0 0	• So DLC 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	<b>Eroll I</b> <b>D1</b> 80 80 80 80 80 80	<b>Mode</b> D2 00 00 00 00 00 00	03 09 09 09 09 09 09 09 09	0veň D4 00 00 00 00 00 00	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00	D8 E1 E1 E1 E1 E1 E1 E1 E1	✓ Scrolli TimeStamp(sec) 233,2411 233,2421 233,2421 233,2422 233,2424 233,2431 233,2431 233,2432	
209 209 209 209 209 209 209 209 209 210 210	Tx 1 Re 34 35 36 37 38 39 N 30 N 30 1	Error MODE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	BEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	. 12 RTR 0 0 0 0 0 0 0 0 0	• So DLC 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	<b>Froll 1</b> 80 80 80 80 80 80 80 80	Mode D2 00 00 00 00 00 00 00	D3 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9	0ver* D4 00 00 00 00 00 00 00 00 00 00 00 00 00	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00	D8 E1 E1 E1 E1 E1 E1 E1 E1 E1 E1 E1	✓ Scrolli TimeStamp[sec] 233.2411 233.2412 233.2421 233.2422 233.2424 233.2431 233.2432 233.2432 233.2432 233.2432	ng 
209 209 209 209 209 209 209 209 209 209	Tx 1 Re 34 35 36 37 38 39 00 K 30 10 12 20	Errol MODE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>10(hex)</b> <b>29</b> <b>10(hex)</b> EEEEEEE EEEEEEEE EEEEEEEE EEEEEEEE	. 12 RTR 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Sc</li> <li>DLC</li> <li>8</li> <li>9</li> </ul>	<b>Froll I</b> <b>D1</b> 80 80 80 80 80 80 80 80 80 80	<b>Node</b> <b>D2</b> 00 00 00 00 00 00 00 00 00 0	D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D	0ver* D4 00 00 00 00 00 00 00 00 00 0	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00	D8         E1           E1         E1	✓         Scrolli           TimeStamp(sec)         233.2411           233.2412         233.2421           233.2424         233.2421           233.2424         233.2422           233.2431         233.2432           233.2433         233.2433           233.2443         233.2443	
209 209 209 209 209 209 209 209 209 209	Tx 1 Re 34 35 36 37 38 39 10 10 10 10 10 10 10 10 10 10	Errol MODE 1 1 1 1 1 1 1 1 1 1 1 1 1	ID(hex) EEEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEE	. 12 RTR 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Sc</li> <li>DLC</li> <li>8</li> <li>9</li> </ul>	roll   D1 80 80 80 80 80 80 80 80 80 80 80 80 80	Mode D2 00 00 00 00 00 00 00 00 00 0	0 03 09 09 09 09 09 09 09 09 09 09 09 09 09	0ver* 04 00 00 00 00 00 00 00 00 00	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00 00 00	D8         E1           E1         E1	✓ Scrolli           TimeStamp(sec)           233.2411           233.2412           233.2422           233.2424           233.2424           233.2424           233.2431           233.2432           233.2433           233.2431           233.2432           233.2431           233.2432           233.2432           233.2433           233.2441           233.2442           233.2441           233.2442	
209 209 209 209 209 209 209 209 209 209	<b>1 Re 1 Re 3 4 3 5 3 6 3 7 3 8 3 9 1 1 1 1 1 1 1 1 1 1</b>	Errol MODE 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>9</b> <b>ID(hex)</b> EEEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEE	. I 2 RTR 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Statistics</li> <li>Statistics</li></ul>	Croll J D1 80 80 80 80 80 80 80 80 80 80 80 80 80	Mode D2 00 00 00 00 00 00 00 00 00 00 00 00	0 03 09 09 09 09 09 09 09 09 09 09 09 09 09	0ver* D4 00 00 00 00 00 00 00 00 00 0	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00 00 00 00	D8         E           E1         E	✓         Scrolli           TimeStamp(sec)         233.2411           233.2412         233.2422           233.2424         233.2424           233.2423         233.2431           233.2431         233.2431           233.2443         233.2443           233.2441         233.2441           233.2443         233.2443           233.2443         233.2441	
209 209 209 209 209 209 209 209 210 210 210 210 210 210 210	<b>1 Re</b> 34 35 36 37 38 39 30 30 30 30 30 30 30 30 30 30	Error MODE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	39 ID(hex) EEEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEE	. 2 RTR 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Statistical Content of the second seco</li></ul>	Croll   D1 80 80 80 80 80 80 80 80 80 80 80 80 80	Mode D2 00 00 00 00 00 00 00 00 00 00 00 00 00	D3 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9	0ve/ D4 00 00 00 00 00 00 00 00 00 0	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00 00 00 00 00 00	D8         E           E1         E	✓         Scrolli           TimeStamp(sec)         233.2411           233.2412         233.2421           233.2421         233.2422           233.2422         233.2423           233.2431         233.2433           233.2441         233.2441           233.2442         233.2442           233.2441         233.2442           233.2442         233.2442           233.2442         233.24451           233.2452         233.2451	
Note 209 209 209 209 209 209 209 209 209 209	<b>1 Re</b> 34 35 36 37 38 39 30 4 32 33 34 35 36 37 36 37 38 39 55 36 37 30 4 37 30 55 36 37 30 55 36 55 37 36 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 37 36 36 37 36 37 36 37 36 37 36 36 37 36 36 36 37 36 36 37 36 36 37 37 37 37 37 37 37 37 37 37	Error MODE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	sg ID(hex) EEEEEEE EEEEEEE EEEEEEE EEEEEEE EEEEEE	. I 2 RTR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Sc</li> <li>Sc</li> <li>DLC</li> <li>8</li> <li>9</li> <li>9<td>Croll 1 D1 80 80 80 80 80 80 80 80 80 80</td><td>Mode D2 00 00 00 00 00 00 00 00 00 00 00 00 00</td><td>D3 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9</td><td>0ver* D4 00 00 00 00 00 00 00 00 00 0</td><td>Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00</td><td>Mode D6 80 80 80 80 80 80 80 80 80 80 80 80 80</td><td>D7 00 00 00 00 00 00 00 00 00 00 00 00 00</td><td>D8         I           E1         I</td><td>✓ Scrolli TimeStamp(sec) 233.2411 233.2412 233.2421 233.2422 233.2431 233.2432 233.2431 233.2432 233.2432 233.2443 233.2442 233.2443 233.2443 233.2445 233.2451 233.2452</td><td></td></li></ul>	Croll 1 D1 80 80 80 80 80 80 80 80 80 80	Mode D2 00 00 00 00 00 00 00 00 00 00 00 00 00	D3 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9 D9	0ver* D4 00 00 00 00 00 00 00 00 00 0	Write D5 00 00 00 00 00 00 00 00 00 00 00 00 00	Mode D6 80 80 80 80 80 80 80 80 80 80 80 80 80	D7 00 00 00 00 00 00 00 00 00 00 00 00 00	D8         I           E1         I	✓ Scrolli TimeStamp(sec) 233.2411 233.2412 233.2421 233.2422 233.2431 233.2432 233.2431 233.2432 233.2432 233.2443 233.2442 233.2443 233.2443 233.2445 233.2451 233.2452	

Figure 15-2 The detailed CAN Error Information

#### 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.

-1	CAN1 R	ocyMe	ea					_							
	C Scroll Mode								OverWrite Mode					🗖 Scrollin	g _
	Num	MODE	ID(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	CycleTime(sec)	
	51	0	111	0	8	11	22	-33	44	55	66	77	88	0.1101	
	102	1	1234567	0	8	12	- 34	-56	78	90	AB	CD	EF	0.0715	_

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)

Ele       Connect Configuration       Bep         Load       Reception List       Port 2         Load       Reception List       1       1         Load Symbol File       HWSendCnt:       1000       AddMode: n        AddVal:       1       1         Load Symbol File       HWSendCnt:       1000       AddMode: n        AddVal:       1       1         Load Symbol File       No       % 9       00	I-7565-H1/H2 Utility v1.14											
Load Configuration Save Configuration Load Reception List Save Reception List         Port 2           Load Symbol File Exit         HW/SendCnt:         1000         AddMode: n ≤ AddVal:         1         1           Load Symbol File Exit         No < 8 ≤ 00	nle <u>C</u> onnect Configuration <u>H</u> elp											
b       7         Add       Modify       Delete       Del Table       Send       HwSend       CIr Cnt       SendCnt       0         CAN1       RecvMsg       Scrolling       OverWrite       Mode       Scrolling         No       MODE       ID(Symbol)       RTR       DLC       D1       D2       D3       D4       D5       D6       D7       D8       CycleTime(sec)       •         131       0       Engine Temp.       0       8       12       34       56       78       90       AB       CD       EF       0.0500       •       <	Load Configuration Save Configuration Load Reception List Coad Symbol File Exit TTPORT ▼ 0000 0 8 00 00 00 00 00 00 00 00 00 00 No. MODE ID(hex) RTR DLC D1 D2 D3 D4 D5 D6 D7 D8 Timer (ms) No. ▼ 8 ▼ 00 00 00 00 00 00 00 00 00 00 No. MODE ID(hex) RTR DLC D1 D2 D3 D4 D5 D6 D7 D8 Timer Status 1 0 0000 0 8 00 00 00 00 00 00 00 00 00 0											
No         MODE         ID(Symbol)         RTR         DLC         D1         D2         D3         D4         D5         D6         D7         D8         CycleTime(sec)         Image: Second from the transformed from	7											
Inc       Inc       Dec       Start Record       Rx Pause       Clear       RecvCnt       164	No MODEL D(Symbol) BTB DLC D1 D2 D3 D4 D5 D6 D7 D8 CycleTime(sec)											
33       0       Engine Speed       0       8       11       22       33       44       55       66       77       88       0.1090	131 0 Engine Temp. 0 8 12 34 56 78 90 AB CD EF 0.0500											
Display Type C Hex C Dec © Sym Start Record Rx Pause Clear RecvCnt 164	33         0         Engine Speed         0         8         11         22         33         44         55         66         77         88         0.1090											
C Hex C Dec Sym Start Record Rx Pause Clear RecvCnt 164												
	C Hex C Dec Sym Start Record Rx Pause Clear RecvCnt 164											

Figure 17-1 "Symbolic" Screen

#### 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.

Connect to I-7565-H1	/H2 🛛 🔀
Com Port.	Mod Name.
CAN Port Enable Port 1 ( List Port 2 ( List	en Only Mode ) en Only Mode )
CAN1 Baud Rate	83.333 Kbps
CAN2 Baud Rate	83.333 Kbps
Cancel	Connect

Figure 19-1 "Listen Only Mode" option screen

Â.	🕴 I-7565-H1/H2 Utility v1.14													×	
<u>F</u> ile	<u>C</u> onnect	Configuration	ı <u>H</u> elp												
	Port 1         Port 2           CAN1 SendMsg         Image: With the send Cont is and the														]
	Listen Only Mode														
	CAN1 RecvMsg													Scrolling	
	No	MODE II	)(hex)	BTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	
	No	MODE II	)(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	
	No	MODE II	)(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	
	No		)(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	
	No	MODE II	D(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	

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.

🖻 Advanced Config 🛛 🔀
Hardware Setting
Get CAN2USB Current Flow (
C Get CAN2USB Hardware Speed
C Set CAN2USB Hardware Speed 3000 fps
C Clear CAN1/2 HWRecv / BufLost Num
C Get CAN1/2 HWRecv / BufLost Num
C Set CAN Error Frame Function Disable
C Get CAN Error Frame Function
C Get CAN1/2 Baud Bit-Timing Parameter
Config OK !! Send

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

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.

-C/	CAN1 RecvMsg														ng
	No	MODE	ID(hex)	RTR	DLC	D1	D2	D3	D4	D5	D6	D7	D8	TimeStamp(sec)	
															_
															-
⊢															-
															-
⊢															-
E															
	isplay Hex	Dec	O Sym	Sta	t Rec	ord	B R	(Pau:	se	CI	ear	F	lec.	/Cnt 0	
<b>D</b> (•	<b>isplay</b> Hex	Type O Dec	🔿 Sym 🤇	Sta	t Rec	ord	B	(Pau:	se	CI	ear	F	lecv	/Cnt 0	

#### Figure 21-1 "Start Record" button

CAN1 Message Record Number										
Please Input CAN1Msg Record Number : (0: Record CANMsg Permanently)	OK Cancel									
1000										

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.

#### 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.

