ICPDAS CAN Series Driver

Driver for CAN bus Communication with PC / PAC (WinPAC, ViewPAC, XPAC, XPAC-CE6) and CAN modules (CAN / CANOpen / DeviceNet / PowerMeter).

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1. General Information

1.1 CAN Module Support List

The following are the CAN modules supported by IDCAN driver.

- Manufacturer : ICP DAS Co., Ltd.
- CAN Module List :

[PC Platform]

- CAN : I-7530 / I-7540D / I-7565 / I-7565-H1 / I-7565-H2 / PISO-CAN200 / PISO-CAN400 / PISO-CM100 - CANopen : I-7565-CPM / PISO-CPM100
- DeviceNet : I-7565-DNM / PISO-DNM100
- CAN PowerMeter : PISO-CM100-PM

[PAC Platform (WinPAC / ViewPAC / XPAC-8000(XPe) / XPAC-8000-CE6)]

- CAN : I-8120W
- CANopen : I-8123W
- DeviceNet : I-8124W
- CAN PowerMeter : I-8120W-PM

Note :

1. The following modules support "HotSwap" function.

- CAN : I-8120W
- CANopen : I-8123W
- DeviceNet : I-8124W
- CAN PowerMeter : I-8120W-PM

2. Multi CAN modules can be access simultaneously in the same InduSoft project by using just one IDCAN driver.

2.2 Driver Characteristics

The IDCAN driver package consists of the following files, which are automatically installed in the **/DRV** subdirectory of IWS Web Studio:

- **IDCAN.INI**: Internal driver file. You must not modify this file.
- IDCAN.MSG: Internal driver file containing error messages for each error code. You must not modify this file.
- IDCAN.PDF: This document, which provides detailed information about the IDCAN driver.
- **IDCAN.DLL**: Compiled driver for CAN bus communication.

Note :

Users can free download the driver and demo from the web site :

(1) PC => <u>http://www.icpdas.com/products/Software/InduSoft/Download_PC.htm</u>

(2) PAC => <u>http://www.icpdas.com/products/Software/InduSoft/Download_PAC.htm</u>

2. Driver Installation

The ICPDAS "IDCAN" driver will not be installed in InduSoft automatically after InduSoft software is installed. So users must install IDCAN driver first before using the IDCAN driver in InduSoft. The IDCAN driver can be downloaded from ICPDAS web site: (1) For PC => <u>http://www.icpdas.com/products/Software/InduSoft/Download_PC.htm</u>. (2) For PAC => <u>http://www.icpdas.com/products/Software/InduSoft/Download_PAC.htm</u>

2.1 Driver Installation for PC

Please follow the below steps to install IDCAN driver in PC.

- (1) Execute "IWS_IDCAN_Driver_v1.xx.exe".
- (2) Choose "CAN Series Driver for PC" option.





2.2 Driver Installation for XPAC-8000

- (1) Execute "IWS_IDCAN_Driver_v1.xx.exe".
- (2) Choose "CAN Series Driver for XPAC (Windows Embedded)" option.

CAN Series Driver for PC

CAN Series Driver for XPAC (Windows Embedded)

Fig. 2.2-1

2.3 Driver Installation for WinPAC / ViewPAC

- (1) Install "IDCAN" driver for PC first. Please refer to section 2.1.
- (2) Copy "IWS_IDCAN_Driver_WinPAC_v1.xx.cab" file to WinPAC.
- (3) Execute "IWS_IDCAN_Driver_WinPAC_v1.xx.cab".

2.4 Driver Installation for XPAC-8000-CE6

- (1) Install "IDCAN" driver for PC first. Please refer to section 2.1.
- (2) Copy "IWS_IDCAN_Driver_XPACce6_v1.xx.cab" file to XPAC-8000-CE6.
- (3) Execute "IWS_IDCAN_Driver_XPACce6_v1.xx.cab".

3. Driver Configuration

When the IDCAN driver is installed in InduSoft, users just need to select the driver in InduSoft project and configure the driver form. The detailed description for driver configuration is as below.

3.1 Select IDCAN Driver

(1) From the main menu bar, select **Insert** Add/Remove **Driver** to open the Communication Drivers dialog.

(2) Select the IDCAN driver from the Available Drivers list, and then click the Select button.

Communicati	ion Drivers	\mathbf{X}
Available drive	ers:	
DLL	Description	Help
HITCE HITCH HMF01 HTU 1870T IBUS IDEC IE104	Hitachi - EB Series / EM-II series [v1.01] HITACHI - H Series [CE] [v2.03] RFID, Transponder Omron (Only CE) [1.00] ComLink HTU310 Air Humidity and Temperature Sensor[v1.00] IEC-60870-5-104 - TCP/IP Slave protocol [v1.00 - Beta 1] PHOENIX, InterBus Protocol - InterBus compatible equipment [v1.05] IDEC Serial Protocol - MicroSmart(CE)[1.5] IEC 60870-5-104 (CE) [v1.0]	
<		Select >>
Selected drive	ers:	
DLL	Description	>> Remove
IDCAN	ICPDAS CAN Series Driver [v1.00]	
<		
	ОК	Cancel

Fig. 3.1-1

(3) When the **IDCAN** driver is displayed in the **Selected Drivers** list, click the **OK** button to close the dialog.

3.2 Configure IDCAN Driver

(1) Configuring the Communication Settings In IDCAN driver, the Communication setting is disabled.

🦉 IDCAN:		<				
Serial Encapsulation:	None	,				
COM: COM1	Stop Bits: 1					
Baud Rate: 9600	Y Parity: None Y					
Data Bits: 8	¥					
Long 1:	String 1:					
Long 2:	String 2:					
Advanced	OK Cancel					
Fig. 3.2-1						

(2) Configuring the Driver Worksheets

[1] Insert a new IDCAN driver form.



[2] Configure the IDCAN driver form.

Ø IDCAN001.DRV ×		
Description: PISO-DNM100 (Read)	Increase priority	
Read Trigger:	Enable Read when Idle: Read Completed: Read Status:	
DNM100_RTrig	DNM100_ErrC	ode
Write Trigger:	Enable Write on Tag Change: Write Completed: Write Status:	
Station:	Header:	
	DNM100:9	
Tag Name	Address	Div
1 DNM100[0].rintVal	0:C:1:2	
*	Fig. 3.2-3	

Caution:

Users can only apply the tag name up to 500 columns in the same driver worksheet

3.2.1 Header & Tag Name & Address Field Configuration

The following are the parameter format and content tables of "**Header**", "**Address**" and "**Tag Name**" field for all CAN modules.

(1) The Table 3.2-1 is the <u>parameter format</u> of "**Header**" and "**Address**" fields for all CAN modules in PC and CE platform.

(2) The Table 3.2-2, Table 3.2-3 and Table 3.2-4 are the <u>parameter content</u> of "**Header**", "**Address**" and "**Tag Name**" fields for all CAN modules.

Table. 3.2-1 (Parameter Format)									
WinXP (PC & XPAC-8000) WinCE (WinPAC / ViewPAC / XPAC-8000-CE6)									
[Module]	[Header] Name : Addr : Baud : Filter	[Address] Ch : ID : Mode : Len : RTR							
CAN (R/WTag => String)									
I-7530	Name : Addr	R => Ch W => Ch : ID : Mode : Len : RTR							
I-7540D	Name : Addr	Same							
I-7565	Name : Addr	Same							
I-7565-H1	Name : Addr : Baud	Same							
I-7565-H2	Name : Addr : Baud1_Baud2	Same							
PISO-CAN200	Name : Addr : Baud1_Baud2 : Filter1_Filter2	Same							
PISO-CAN400	Name : Addr : Baud1_Baud2_Baud3_Baud4 : Filter1_Filter2_Filter3_Filter4	Same							
PISO-CM100	Name : Addr : Baud : Filter	Same							
I-8120W	Name : Addr : Baud : Filter	Same							
DeviceNet (R/WT	ag => Integer)	-							
I-7565-DNM	Name : Addr	R/W => Ch : ID : Mode : Len							
PISO-DNM100	Name : Addr	Same							
I-8124W	Name : Addr	Same							
CANopen (R/WTa	g => Integer)								
I-7565-CPM	Name : Addr : Baud	R/W => Ch : ID : Mode : Len							
PISO-CPM100	Name : Addr : Baud	Same							
I-8123W	Name : Addr : Baud	Same							
PowerMeter (RTa	g => Real)								
PISO-CM100-PM	Name : Addr	R/W => Ch : ID : Mode							
I-8120W-PM	Name : Addr	Same							

"Header" Field								
	Name	Addr	Baud	Filter				
CAN								
I-7530	17530	ComPort No.	ххх	XXX				
I-7540D	I7540D	ComPort No.	ххх	ХХХ				
I-7565	17565	ComPort No.	ххх	ХХХ				
I-7565-H1	I7565H1	ComPort No.	1~8 / 83.333 <mark>f</mark>	XXX				
I-7565-H2	I7565H2	ComPort No.	0~8 / 83.333f	ХХХ				
PISO-CAN200	CAN200	Board No.	0~8 / 0F12 <mark>h</mark>	AccCode_AccMask				
PISO-CAN400	CAN400	Board No.	0~8 / 0F12 <mark>h</mark>	AccCode_AccMask				
PISO-CM100	CM100	Board No.	1~8 / 0F12 <mark>h</mark>	AccCode_AccMask				
I-8120W	l8120W	Slot No.	1~8 / 0F12 h	AccCode_AccMask				
DeviceNet								
I-7565-DNM	17565DNM	ComPort No.	ххх	XXX				
PISO-DNM100	DNM100	Board No.	ххх	XXX				
I-8124W	l8124W	Slot No.	ххх	ХХХ				
CANopen								
I-7565-CPM	I7565CPM	ComPort No.	1 ~ 8	XXX				
PISO-CPM100	CPM100	Board No.	1 ~ 8	ХХХ				
I-8123W	l8123W	Slot No.	1 ~ 8	ХХХ				
PowerMeter								
PISO-CM100-PM	CM100PM	Board No.	ХХХ	XXX				
I-8120W-PM	18120WPM	Slot No.	ХХХ	XXX				
Note :								

Table. 3.2-2 (Parameter Content for "Header")

[1] "xxx" means the parameter is no use in the module.

[2] The "**Baud**" parameter is "0" means the CAN port is disabled. The others are as below.

1	2	3	4	5	6	7	8
10K	20K	50K	125K	250K	500K	800K	1M

[3] If users want to use "user-defined CAN baud" function, in CAN200, CAN400, CM100 and I-8120W modules, please add 'h' in the end like <u>041Ch</u>. In I-7565-H1/H2 modules, please add 'f' in the end like <u>83.333f</u> (Kbps).

[4] The filter format is AccCode_AccMask like 0000000hFFFFFFFh.

Table. 3.2-3 (Parameter Content for "Address")									
	"Address" Field								
	(Ch		ID		Mode	L	.en	RTR
CAN									
I-7530	CAN	√ Port	C,	AN-ID		Mode	0	~ 8	0 / 1
I-7540D	CAN	√ Port	C,	AN-ID		Mode	0	~ 8	0 / 1
I-7565	CAN	N Port	C,	AN-ID		Mode	0	~ 8	0 / 1
I-7565-H1	CAN	√ Port	C,	AN-ID		Mode	0	~ 8	0 / 1
I-7565-H2	CAN	N Port	C,	AN-ID		Mode	0	~ 8	0 / 1
PISO-CAN200	CAN	N Port	C,	AN-ID		Mode	0	~ 8	0 / 1
PISO-CAN400	CAN	N Port	C,	AN-ID		Mode	0	~ 8	0 / 1
PISO-CM100	CAN	N Port	C,	AN-ID		Mode	0	~ 8	0 / 1
I-8120W	CAN	N Port	C	AN-ID		Mode	0	~ 8	0 / 1
DeviceNet									
I-7565-DNM	Star	t Byte	N	odelD	1 ((Polling)	1	~ 4	XXX
PISO-DNM100	Star	t Byte	N	odelD	1 (1 (Polling)		~ 4	XXX
I-8124W	Star	t Byte	N	odelD	1 ((Polling)	1	~ 4	xxx
CANopen									
I-7565-CPM	Star	art Byte CobID NodeID		lodeID	1	~ 4	ххх		
PISO-CPM100	Star	t Byte	C	CobID	N	lodeID	1	~ 4	XXX
I-8123W	Star	t Byte	C	CobID	Ν	lodeID	1	~ 4	ХХХ
PowerMeter									
PISO-CM100-PM	CAN	√ Port	N	odeID	Da	itaName	x	xx	XXX
I-8120W-PM	I-8120W-PM CAN Port NodeID		odeID	Da	itaName	х	xx	ххх	
Note :									
[1] "xxx" means th	ne para	ameter is	s no use	in the mod	lule.				
[2] The second pa	aramet	er "ID" of	f Addres	s Field is th	he " <mark>H</mark>	ex" format	and th	he othei	rs are the
"Dec" format.									
[3] The "NodelD"	means	s the CA	N slave	module ID	•				
[4] The "DataNan	ne" valı	ue in Po	werMete	er module i	s as t	pelow.	-		· - 1
		Chan	nel A	Channe	IB	Channe	el C	Char	nel D
V (voltage)		0)	9		18		27	

10

19

1

I (current)

~

28

kW	2	11	20	29
kvar	3	12	21	30
kVA	4	13	22	31
PF (Power Factor)	5	14	23	32
kWh	6	15	24	33
kvarh	7	16	25	34
kVAh	8	17	26	35

Table. 3.2-4 (Parameter Content for "Tag Name")

	"Tag Name" Field					
	Write	Read				
CAN	String Tag	String Tag				
I-7530	DataL_DataH	ID_Mode_Len_RTR_DataL_DataH_TimeL_TimeH				
I-7540D	Same	Same				
I-7565	Same	Same				
I-7565-H1	Same	Same				
I-7565-H2	Same	Same				
PISO-CAN200	Same	Same				
PISO-CAN400	Same	Same				
PISO-CM100	Same	Same				
I-8120W	Same	Same				
DeviceNet	Integer Tag	Integer Tag				
I-7565-DNM	Integer Tag	Integer Tag				
PISO-DNM100	Same	Same				
I-8124W	Same	Same				
CANopen	Integer Tag	Integer Tag				
I-7565-CPM	Integer Tag	Integer Tag				
PISO-CPM100	Same	Same				
I-8123W	Same	Same				
PowerMeter	Real Tag	Real Tag				
PISO-CM100-PM	XXX	Real Tag				
I-8120W-PM	XXX	Same				

Note :

- [1] The **ID**, **DataL** and **DataH** value of string tag are the "**Hex**" format. The others are "**Dec**" format.
- [2] DataL and DataH are the Lo-DWORD and Hi-DWORD value of CAN message.
- [3] TimeL and TimeH values are just supported by I-7565-H1/H2, CAN200/400, CM100 and I-8120W modules.
- [4] The time unit of TimeL and TimeH in CAN200/400 is "0.1us" and in I-7565-H1/H2, CM100 and I-8120W is "0.1ms".

Note: Always creates two different driver worksheets for Input and Output modules.

3.3 CAN Module Configuration

Before running the IDCAN driver, the module communication parameter (like baud rate, Filter ... etc) must be configured correctly via module utility tool. The following is the description of parameter configuration for all CAN modules.

3.3.1 I-7530 Module Configuration

- 1. Set the following parameters by using I-7530 utility.
 - Set COM_Baud=115200; DataBit=8; StopBit=1;

Parity=None; CheckSum=No; Error Response=No

- (2) Set "CAN Spec." and "CAN Baud" parameters of CAN bus network.
- (3) Set "CAN Acceptance Code and Mask" parameters for the filter-ID setting. If they are all "00000000", it means all CAN-ID will be accepted.
- (4) Disable "Pair Connection" function.

🌠 I-7530 Utility								
<u>File A</u> ctions <u>H</u> elp								
Connect Disconnect Exit About								
Settings Test								
RS-232 Parameters								
RS-232 Baudrate 115200bit/sec CAN Specification 2.0B	_							
Data Bit 8 🗾 bit CAN bus Baudrate 1000K	. ▼ bit/sec							
Stop Bit 1 🗾 bit Acceptance Code 00000	000 (Hex)							
Parity None 🗨 bit Acceptance Mask 00000	000 (Hex)							
Add Checksum No 🚽 4 Pair Connection								
Error Response No	O IF							
Fixed Tx CAN ID	0000001 (Hex)							
E Response with CAN II)							
E Defaults								
Connected to COM1 Configuration Mode Ver: 2.01 Copyright(c) 2004	ICP DAS Co., LTD.							

Fig. 3.3.1-1 I-7530 Utility

3.3.2 I-7540D Module Configuration

- 1. After Installing "VxComm_Driver" program, then run the "VxComm Utility".
 - (1) Click "Search Servers" button
 - (2) Click "Add Server(s)" button
 - (3) Set "Port 3" (CAN Port) of I-7540D to be a Virtual COM. (like COM20)
 - (4) Execute "Restart Driver"

		-					
💞 ¥xComm Utility [v2.10.	00, Mar.24, 2010]						
<u>File S</u> erver <u>P</u> ort <u>Tools</u>							
System In	niver	Configu	ire Server				Configure Port
driver & utility		ers			Port Vi	irtual COM	Baudrate
Where remote series devices become part of your PC	7186E3 (19)	2.168.1.50) 🔔		3	Port I/O R Port 1 U Port 2 U	eserved nMap nMap	N/A Dynamic Dynamic
Add Server(s)					Port 3 C	OM20	Dynamic
X Remove Server							
Web							
Search Servers							
Configuration (UDP)							
Exit							
	1						
	Name Alias	IP Address	Sub-net M	Gateway	MAC Address	DHCF	
(7186E3 N/A	192.168.1.50	255.255.0.0	192.168.1.1	00:0d:e0:d0:7	c:2e OFF	

Fig. 3.3.2-1 VxComm Utility

- 2. Set the following parameter by using I-7540D Utility.
 - (1) Set "CAN Spec." and "CAN Baud" parameters of CAN bus network.

- (2) If set Acceptance Code=00000000 and Mask=FFFFFFF, it means all CAN-ID will be accepted.
- (3) Set Error Resp=No; TimeStamp Resp=No.
- (4) Disable "Pair Connection" function.

File Actions Help Image: Connect Image: Exit About Image: Connect Disconnect Image: Exit Image: Exit Image: Content Disconnect Image: Exit Image: Exit Image: Connect Image: Exit Image: Exit Image: Exit	🎏 i-7540D Utility	X		
Settings Test CAN Parameters Test CAN Specification 2.08 CAN Specification 2.08 CAN Specification 2.08 CAN Bus Baud rate 1000K Disconnect bits/sec BTR0 00 (Hex) BTR1 Acceptance Code 00 00 00 Acceptance Code 00 COM Status CAN Bus Pair Connection COM Status CAN Bus Pair Connection COM Status CAN Bus Pair Connection COM 2: 9600.8.N.1 Set Set	<u>File A</u> ctions <u>H</u> elp			
Settings Test I. CAN Parameters Image: CAN Specification 2.08 million CAN Bus Baud rate 1000K million Image: CAN Bus Baud rate 1000K million CAN Bus Baud rate 1000K million Image: CAN Bus Baud rate 1000K million CAN Bus Baud rate 1000K million Image: CAN Bus Baud rate 1000K million CAN Bus Baud rate 1000K million Image: CAN Bus Baud rate 1000K million CAN Bus Baud rate 1000K million Image: CAN Bus Baud rate 1000K million Acceptance Code 00 00 00 00 (Hex) Acceptance Code 00 00 00 (Hex) Acceptance Mask FF FF FF FF (Hex) Reset System TimeStamp Resp. No million Modify IP COM Status CAN Bus Pair Connection Status COM Status CAN Bus Pair Connection Status COM Status Connect to 192.168.0.51 COM2: 9600.8.N.1 Set COM2: 9600.8.N.1 Set	Connect Disconnect Exit) t		
CAN Parameters CAN Specification 2.08 CAN Bus Baud rate 1000K DAN Bus Baud rate 1000K BTR0 00 (Hex) BTR1 Acceptance Code 00 00 00 Acceptance Code 00 00 00 Acceptance Code 00 00 00 Compacting Defaults COM Status Connection COM Status Connect to COM2: 9600.8.N.1 Set Ved COM2: 9600.8.N.1 Set Connect to 192.168.0.51 Set	Settings Test			
CAN Specification 2.08 CAN Specification 2.08 CAN Bus Baud rate 1000K BTR0 00 (Hex) BTR1 00 (Hex) Acceptance Code 00 00 00 00 (Hex) Acceptance Code 00 00 00 00 (Hex) Acceptance Mask FF FF FF FF (Hex) Error Resp. No Error Resp. No COM Status COM	1_ CAN Parameters	Network Status		
CAN Bus Baud rate 1000K bits/sec BTR0 00 (Hex) BTR1 00 (Hex) Acceptance Code 00 00 00 (Hex) MAC : 00:0d:e0:d0:7c:2e Acceptance Code 00 00 00 (Hex) Set Web ID : 7540D Set Acceptance Mask FF FF FF FF (Hex) Reset System Modify IP Set TimeStamp Resp. No Image: Connection Status CAN Bus Pair Connection Status CAN Bus Pair Connection Status COM Status COM1: 9600.8.N.1 Set Connect to 192.168.0.51 Set	CAN Specification 2.0B	Gateway : 192.168.1.1 Set		
BTR0 00 (Hex) BTR1 00 (Hex) Acceptance Code 00 00 00 00 (Hex) Acceptance Mask FF FF FF FF (Hex) Error Resp. No TimeStamp Resp. No TimeStamp Resp. No TimeStamp Resp. No TimeStatus COM Status COM Status COM1: 9600.8.N.1 Set COM2: 9600.8.N.1 Set COM2: 9600.8.N.1 Set	CAN Bus Baud rate 1000K Thits/sec	Mask : 255.255.0.0 Set		
BTR0 00 (Hex) BTR1 00 (Hex) Acceptance Code 00 00 00 (Hex) Web ID : 7540D Set Acceptance Code 00 00 00 (Hex) Reset System Set Acceptance Mask FF FF FF (Hex) Reset System Modify IP TimeStamp Resp. No Image: Commention Status CAN Bus Pair Connection Status CAN Bus Pair Connection Set COM Status COM1: 9600.8.N.1 Set Connect to 192.168.0.51 Set		MAC : 00:0d:e0:d0:7c:2e		
Acceptance Code 00 00 00 00 (Hex) Acceptance Mask FF FF FF FF (Hex) Error Resp. No Setting Defaults COM Status COM1: 9600.8.N.1 Set COM2: 9600.8.N.1 Set	BTR0 00 (Hex) BTR1 00 (Hex)	Web ID : 7540D Set		
Acceptance Consider and Test (Text) Acceptance Mask FF FF FF (Hex) Error Resp. No TimeStamp Resp. No COM Status COM Status COM Status COM 2: 9600.8.N.1 Set COM2: 9600.8.N.1 Set COM2: 9600.8.N.1 Set Connect to 192.168.0.51 Set	Acceptance Code 00 00 00 00 (Hew)	Web Passwd : icpdas7540D Set		
3 Error Resp. No	Acceptance Mask FF FF FF FF (Hex)	E Reset System		
Error Resp. No TimeStamp Resp. No Setting Defaults COM Status CAN Bus Pair Connection Status COM1: 9600.8.N.1 Sett Connect to 19600.8.N.1 Set Compacted Configuration Mode Compacted Configuration Mode Compacted Configuration Mode Consected Convicibility (2009) Convected Convicibility (2009) Convected Convicibility (2009)	3	Modify IP		
Setting Defaults COM Status COM 1: 9600.8.N.1 COM2: 9600.8.N.1 Set Comected Connect to 192.168.0.51 Connected Connect to 192.168.0.51	Error Resp. No TimeStamp Resp. No			
COM Status © TCP C UDP © Server C lient COM1: 9600.8.N.1 Set Connect to 192.168.0.51 Set COM2: 9600.8.N.1 Set Connect to 192.168.0.51 Set	Setting Defaults	CAN Bus Pair Connection Set		
COM2: 9600.8.N.1 Set Connect to 192.168.0.51 Set Connected Configuration Mode v1.1.4(10/29/2009) Convicibil(c) 2005 ICB DAS Co I.TD	COM Status COM1: 9600.8.N.1 Set	C TCP C UDP C Server C Client		
Connected Configuration Mode v1.1.4[10/29/2009] Convight(c) 2005 ICP DAS Co. J. TD	COM2: 9600,8,N,1 Set	Connect to 192.168.0.51 Set		
Configuration mode [V1.1.4[10/20/2003] Copyright(c) 2003 ICP DAS CO., ETD.	Connected Configuration Mode v1.1.4[10/29/2009] Copyright(c) 2005 ICP DAS Co., LTD.		

Fig. 3.3.2-2 I-7540D Utility

3.3.3 I-7565 Module Configuration

- 1. Set the following parameter by using I-7565 utility.
 - (1) Set CheckSum=No. ; Error Response=No
 - (2) Set "CAN Spec." and "CAN Baud" parameters of CAN bus network.
 - (3) Set "CAN Acceptance Code and Mask" parameters for the filter-ID setting. If they are all "00000000", it means all CAN-ID will be accepted.

🐝 I-7565 Utility				
<u>File A</u> ctions <u>H</u> elp				
Connect Disconnect Exit	About			
Settings Test				
USB Parameters Add Checksum No Error Response No	2-CAN Parameters CAN Specification 2.08 CAN bus Baudrate 1000K v bit/sec Acceptance Code 00000000 (Hex) Acceptance Mask 00000000 (Hex)			
📕 Defaults				
Connected to COM5 Configuration	n Mode Ver: 1.00 Copyright(c) 2007 ICP DAS Co., LTD.			

Fig. 3.3.3-1 I-7565 Utility

3.3.4 I-7565-H1/H2 Module Configuration

- 1. Set the following parameter by using I-7565-H1/H2 utility.
 - (1) User can set CAN-ID filter function in "Module Config" of I-7565-H1/H2 utility.

C 1 @ 2	ID (HEX) 1-bit ID 9-bit ID	123 Ac	id J	CAN Controller
- Group C 1 @ 2	ID (HEX) 1-bit ID 9-bit ID	1FFF To	3FFFF	Add
	CAN Filte	r-ID Setting (CAN	1)]
	CAN-ID Type	Accepted IDs	•	Save File
	11-bit SID	0x111		
2	23-bit SID 11-bit GID	0x00000123		Load File
4	29-bit GID	0x00001FFF~0x0003F	FFF	Load Tile
5				
6				Delete Row
7				
0				
8				I Liopr Lable

Fig. 3.3.4-1 I-7565-H1/H2 Utility

3.3.5 CAN200/400 / CM100 / I-8120W Module Configuration

1. In CAN200/400, CM100 and I-8120W modules, users don't need to configure any module parameter.

3.3.6 DeviceNet Module Configuration

- 1. Set the following parameter by using DNM Utility.
 - (1) Select DNM module.



Fig. 3.3.6-1 DNM Utility (PC & CE)

- (2) Click "Active Module" or "Active Board" button to enable DNM module.
- (3) Set "CAN baud" and then click "Search all Devices" button to search all DeviceNet devices.
- (4) Add DeviceNet devices to DNM module like Fig. 3.3.6-2 and Fig. 3.3.6-3.
- (5) Exit DNM Utility.

DeviceNet Master Utility ¥1.4
Board Edit About
Total Boards: 1 Board No: 3 /
Active Board Filmware Ver : 2.40 Master ID : 0 Baud Rate : 125K bps Master Status : 0KI
Remote Devices Configuration Remote Devices //O Monitor
Searched Devices. 1 Devices!! Devices in EEPROM
(1) (Input 2) (Input 2)
MMM Shope (hibrar 2)
Fig. 3.3.6-2 Add DeviceNet devices to DNM module (PC)
DNM_UtilityCE V2.0
Total Module : 1 Firmware Ver : 1.10 Master ID : 0 Set
Slot No., 5 🔍 Master Status 0 🛛 🛛 🛛 🖓 Baud Rate 125k 🔽 Set
Active Reset Search Start All Stop All Device Device
Remote Devices Configuration Remote Devices I/O Monitor
Searched Devices Devices in EEPROM
Poll (Input 2, Output 1)
End Device 2
March Poli (Input 2, Output 2)
Strobe (Input 2)
Fig. 3.3.6-3 Add DeviceNet devices to DNM module (CE)

3.3.7 CANopen Module Configuration

1. In I-7565-CPM / PISO-CPM100 modules, users don't need to configure any module parameter.

3.3.8 PowerMeter Module Configuration

- 1. Set the following parameter by using CAN Power Meter Utility.
 - (1) Select CAN Power Meter module.
 - (2) Click "Active" button to enable CAN Power Meter module and then click "Parameter" button to open "Parameter Configuration" screen like Fig. 3.3.8-1



Fig. 3.3.8-1 CAN Power Meter Utility (PC & CE)

- (3) Set "CAN baud" and "Auto Resp. Time" value.
- (4) Select "Power Meter Device ID" and then click "Set Power Meter" button like Fig. 3.3.8-2.
- (5) Exit CAN Power Meter Utility.

Form_Information	Parameter Configuration
Firmware Version: 1.00 DLL Version: 1.00 CAN Baud Rate: 125K bps SetBaudRate Auto Response Time: 500 ms Set Time Power Meter Enabled: ID = 0x10 ID = 0x20 ID = 0x11 ID = 0x20 ID = 0x00 ID = 0x11 ID = 0x21 ID = 0x21 ID = 0x22 ID = 0x01 ID = 0x12 ID = 0x22 ID = 0x03 ID = 0x12 ID = 0x23 ID = 0x03 ID = 0x13 ID = 0x23 ID = 0x23 ID = 0x23 ID = 0x23 ID = 0x03 ID = 0x14 ID = 0x24 ID = 0x25 ID = 0x25 ID = 0x04 ID = 0x15 ID = 0x25 ID = 0x26 ID = 0x05 ID = 0x16 ID = 0x27 ID = 0x28 ID = 0x08 ID = 0x18 ID = 0x28 ID = 0x28 ID = 0x08 ID = 0x10 ID = 0x28 ID = 0x22 ID = 0x0C ID = 0x1C ID = 0x22 ID = 0x22 ID = 0x0C ID = 0x1C ID = 0x22 ID = 0x22 ID = 0x0C ID = 0x1C ID = 0x22 ID = 0x22 ID = 0x0C ID = 0x1C <	Firmware Version : 1.00 DLL Version : 1.01 CAN Baud Rate : 125K bps Set Baud Rate Auto Resp. Time(ms) : 2500 Set Time
Fig. 3.3.8-	2 Parameter Configuration (PC & CE)

3.4 Executing the Driver

To verify if the driver is correctly enabled and started, use the menu option **Home -> Tasks** button and verify the task Driver Runtime is set to **Automatic**. After that clicking "OK" button and start InduSoft project to run the driver.



Fig. 3.4-1 Driver Runtime (Automatic)

3.5 Example For Driver Configuration

The following are the configuration examples for all CAN modules by using IDCAN driver.

3.5.1 Example for CAN Converter Modules

(1) Send CANMsg : (For all CAN modules with ComPort is "11" or BoardID/SlotNo is "6") Mode=1, CANID=0x1234567, RTR=0, DLC=8, DataL=0x11223344,

Modulo	Header Field	Address Field	Tag Name Field
wodule		Audress Field	(String Tag)
I-7530	17530:11	1:1234567:1:8:0	11223344_ABCDEF90
I-7540D	I7540D:11	1:1234567:1:8:0	11223344_ABCDEF90
I-7565	17565:11	1:1234567:1:8:0	11223344_ABCDEF90
I-7565-H1	I7565H1:11:5	1:1234567:1:8:0	11223344_ABCDEF90
I-7565-H2	I7565H1:11:5_0	1:1234567:1:8:0	11223344_ABCDEF90
CAN200	CAN200:6:5_0	1:1234567:1:8:0	11223344_ABCDEF90
CAN400	CAN400:6:5_0_0_0	1:1234567:1:8:0	11223344_ABCDEF90
CM100	CM100:6:5	1:1234567:1:8:0	11223344_ABCDEF90
I-8120W	I8120W:6:5	1:1234567:1:8:0	11223344_ABCDEF90

DataH=0xABCDEF90 with **CANBaud**=250Kbps via **CAN1** port.

(2) Send CANMsg : (For I-7565-H2 with Comport = "8")

[CAN1]

```
Mode=0, CANID=0x7FF, RTR=0, DLC=6, DataL=0x12345678, DataH=0xABCD with 
CANBaud=125Kbps
```

[CAN2]

Mode=1, CANID=0xABCD, RTR=0, DLC=3, DataL=0x123456 with

CANBaud=500Kbps

Module	Header Field	Address Field	Tag Name Field (String Tag)
I-7565-H2	I7565H2:8:4_6	CAN1=>1:7FF:0:6:0 CAN2=>2:ABCD:1:3:0	CAN1=>12345678_ABCD CAN1=>123456

(3) Receive CANMsg : (For I-8120W with SlotNo = "3") CANBaud=1000Kbps

Module	Header Field	Address Field	Tag Name Field (String Tag)
I-8120W	I8120W:3:8	1	StrTag

The data format of "StrTag" will be "ID_Mode_Len_RTR_DataL_DataH_TimeL_TimeH"

3.5.2 Example for DeviceNet Modules

 Read Al Value : (For all DNM modules with ComPort is "12" or BoardID/SlotNo is "5") Read ch0 Al value (2Bytes) of Node 1. (StartByte is according to configuration in DNM Utility)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-7565-DNM	17565DNM:12	0:1:1:2	IntTag
DNM100	DNM100:5	0:1:1:2	IntTag
I-8124W	l8124W:5	0:1:1:2	IntTag

(2) Read DI Value : (For DNM100 with BoardID is "7")

Read ch0~7 DI value (1Bytes) of Node 12. (StartByte is according to configuration in DNM_Utility)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
DNM100	DNM100:7	0:C:1:1	IntTag

(3) Write AO Value : (For I-8124W with SlotNo is "1")

Write ch1 AO value (2Bytes) of Node 5. (StartByte is according to configuration in DNM_Utility)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-8124W	l8124W:1	2:5:1:2	IntTag

(4) Write DO Value : (For I-7565-DNM with ComPort is "15")

Write ch8~15 DO value (1Bytes) of Node 6. (StartByte is according to configuration in DNM_Utility)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-7565-DNM	I7565DNM:15	1:6:1:1	IntTag

3.5.3 Example for CANopen Modules

(1) **Read AI Value :** (For **all CPM modules** with ComPort is "**12**" or BoardID/SlotNo is "**5**") Read ch0 AI value (2Bytes) of Node 1. (CobID is according to configuration in module)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-7565-CPM	17565CPM:12	0:281:1:2	IntTag
CPM100	CPM100:5	0:281:1:2	IntTag
I-8123W	I8123W:5	0:281:1:2	IntTag

(2) Read DI Value : (For CPM100 with BoardID is "7")

Read ch0~7 DI value (1Bytes) of Node 12. (CobID is according to configuration in module)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
CPM100	CPM100:7	0:181:12:1	IntTag

(3) Write AO Value : (For I-8123W with SlotNo is "1")

Write ch1 AO value (2Bytes) of Node 5. (CobID is according to configuration in module)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-8123W	18123W:1	2:301:5:2	IntTag

(4) Write DO Value : (For I-7565-CPM with ComPort is "15")

Write ch8~15 DO value (1Bytes) of Node 16. (CobID is according to configuration in module)

Module	Header Field	Address Field	Tag Name Field (Int Tag)
I-7565-CPM	I7565CPM:15	1:201:16:1	IntTag

3.5.4 Example for PowerMeter Modules

(1) Read Voltage Value : (For all PowerMeter modules with BoardID/SlotNo is "5")
 Read voltage value of channel A and the Node-ID of PowerMeter module (like PM-2133 / 2134) is 3.

Module	Header Field	Address Field	Tag Name Field (Real Tag)
СМ100-РМ	CM100PM:5	1:3:0	RealTag
I-8120W-PM	I8120WPM:5	1:3:0	RealTag

(2) Read Current Value : (For CM100-PM with BoardID is "7")

Read current value of channel B and the Node-ID of PowerMeter module (like PM-2133 / 2134) is 10.

Module	Header Field	Address Field	Tag Name Field (Real Tag)
СМ100-РМ	CM100PM:7	1:A:10	RealTag

(3) Read kWh Value : (For I-8120W-PM with SlotNo is "1")

Read kWh value of channel C and the Node-ID of PowerMeter module (like PM-2133 / 2134) is 12.

Module	Header Field	Address Field	Tag Name Field (Real Tag)
I-8120W-PM	I8120WPM:1	1:C:24	RealTag

4. Troubleshooting

After each attempt to communicate using this driver, the tag configured in the field **Read Status or Write Status** will receive the error code regarding the kind of failure that occurred. The error messages are shown as below for all CAN modules.

4.1 General ErrorCode For All CAN Modules

[All CAN Modules]

ErrCode	Description	Possible causes & solutions
0	No_Error	
-1001	IWS_MODTYPE_ERR	Module Not Support in IDCAN Driver (IDCAN_Def)
-1002	IWS_DATALEN_ERR	(IDCAN_Def)

4.2 CAN Converter Module ErrorCode

[1-7530 / 1-7565]

ErrCode	Description	Possible causes & solutions
1	Involid boodor	The RS-232 command string header is not
I	Invaliu neauei	"t","T","e","E","S","C","P0", "P1" nor "RA".
		The data byte of the CAN Message does not matchthe data
2	Invalid length	length of the CAN Message. For example:
		Error: t001512345 <cr> / Right: t00150102030405<cr></cr></cr>
		The checksum from the RS-232 command string does not
2	Invalid	matched with the checksum calculated by the I-7530. For
3	checksum	example:
		Error: t0012112209 <cr> / Right: t00121122FD<cr></cr></cr>
		The ASCII command strings are sent incomplete.
5	Timeout	For example:
		Error: T0018 / Right: T0018 <cr></cr>
		Invalid com port number or com port is in use.
20/00033	Open Com Fall	-Check if com port is in use.

[I-7540D]

ErrCode	Description	Possible causes & solutions
1	Invalid header	The RS-232 command string header is not "t","T","e","E".
2	Invalid longth	The length of command string is invalid. For example:
	invalid length	Error: t0013112233 / Right: t0013112233 <cr></cr>
3	Invalid CAN	The CAN identifier bits depend on CAN specification
	identifier	CAN 2.0A: total 11 bits, 0x000 ~ 0x7FF
	laentillei	CAN 2.0B: total 29 bits, 0x00000000 ~ 0x1FFFFFFF
4	Invalid CAN	The data byte of the CAN Message does not match the data
	doto longth	length of the CAN Message. For example:
	uala lengin	Error: t001512345 <cr> / Right: t00150102030405<cr></cr></cr>
25 /		Invalid com port number or com port is in use.
65533	Open Com Fail	-Check if com port number is valid. -Check if com port is in use.

[I-7565-H1/H2]

ErrCode	Description	Possible causes & solutions
1	DEV_ModName_Err	The Module Name Error
2	DEV_ModNotExist_Err	The Module doesn't exist in this Port
3	DEV_PortNotExist_Err	The Port doesn't Exist
4	DEV_PortInUse_Err	The Port is in Used
5	DEV_PortNotOpen_Err	The Port doesn't Open
6	CAN_ConfigFail_Err	CAN Config Command Fail
7	CAN_HARDWARE_Err	CAN Hardware Init Fail
8	CAN_PortNo_Err	The Device doesn't support this CAN Port
9	CAN_FIDLength_Err	The CAN Filter-ID Number exceed Max Number
10	CAN_DevDisconnect_Err	The Connection of device is broken
11	CAN_TimeOut_Err	The Config Command Timeout
12	CAN_ConfigCmd_Err	The Config Command doesn't support
13	CAN_ConfigBusy_Err	The Config Command is busy
14	CAN_RxBufEmpty	The CAN Receive Buffer is empty
15	CAN_TxBufFull	The CAN Send Buffer is full
16	CAN_UserDeflSRNo_Err	The User Defined ISR No Error (0~7)
-1	VCI_CAN_DLL_NotFound	VCI_CAN.dll is not exist
-2	VCI_CAN_DLL_LoadFail	VCI_CAN.dll load fail

[PISO-CAN200/400]

ErrCode	Description	Possible causes & solutions
1	CAN_DriverError	
2	CAN_ActiveBoardError	
3	CAN_BoardNumberError	
4	CAN_PortNumberError	
5	CAN_ResetError	
6	CAN_SoftResetError	
7	CAN_InitError	
8	CAN_ConfigError	
9	CAN_SetACRError	
10	CAN_SetAMRError	
11	CAN_SetBaudRateError	
12	CAN_EnableRxIrqFailure	
13	CAN_DisableRxIrqFailure	
14	CAN_InstallIrqFailure	
15	CAN_RemoveIrqFailure	
16	CAN_TransmitBufferLocked	
17	CAN_TransmitIncomplete	
18	CAN_ReceiveBufferEmpty	
19	CAN_DataOverrun	
20	CAN_ReceiveError	
21	CAN_SoftBufferIsEmpty	
22	CAN_SoftBufferIsFull	
23	CAN_TimeOut	
24	CAN_InstallIsrError	

[PISO-CM100]

ErrCode	Description	Possible causes & solutions	
1	CM100_DriverError		
2	CM100_ActiveBoardError		
3	CM100_BoardNumberError		
4	CM100_PortNumberError		
7	CM100_InitError		

21	CM100_SoftBufferIsEmpty	
22	CM100_SoftBufferIsFull	
23	CM100_TimeOut	
24	CM100_SetCyclicMsgFailure	
25	CM100_DpramOverRange	
26	CM100_NoDpramCmd	
27	CM100_ModeError	
30	CM100_NoFileInside	
31	CM100_DownloadFailure	
32	CM100_EEPROMDamage	
33	CM100_NotEnoughSpace	
34	CM100_StillDownloading	
35	CM100_BoardModeError	
36	CM100_SetDateTimeFailure	

[I-8120W]

ErrCode	Description	Possible causes & solutions
3	I8120_SlotNumberError	
7	I8120_InitError	
21	I8120_SoftBufferIsEmpty	
22	I8120_SoftBufferIsFull	
23	I8120_TimeOut	
24	I8120_SetCyclicMsgFailure	
25	I8120_DpramOverRange	
26	I8120_NoDpramCmd	
27	I8120_ModeError	
30	I8120_NoFileInside	
31	l8120_DownloadFailure	
32	I8120_EEPROMDamage	
33	I8120_NotEnoughSpace	
34	I8120_StillDownloading	
35	I8120_BoardModeError	
36	I8120_SetDateTimeFailure	
40	I8120_SlotNotConfig	
41	I8120_SlotNotInit	

42	I8120_ReplyError	
43	I8120_WaitForReply	
44	I8120_HasBeenActivated	

4.3 DeviceNet Module ErrorCode

[I-7565-DNM]

ErrCode	Description	Possible causes & solutions
10008	I7565DNM_PortNotActive	DLL Error Code
10015	I7565DNM_PortNoResp	DLL Error Code
10025	I7565DNM_PortInUse	DLL Error Code
10027	I7565DNM_ReStartPort	DLL Error Code
5000	DNMXS_UnKnowError	Firmware Error Code
1000	DNMXS_BoardNotActive	Master Status Error Code
1001	DNMXS_OnlineError	Master Status Error Code
1002	DNMXS_CANBusError	Master Status Error Code
1003	DNMXS_Booting	Master Status Error Code
1004	DNMXS_ModuleNotFound	Master Status Error Code
1050	DNMXS_MACIDError	General Error Code
1051	DNMXS_BaudRateError	General Error Code
1052	DNMXS_ConnectionTypeError	General Error Code
1053	DNMXS_DuplicMasterMACID	General Error Code
1054	DNMXS_EEPROMError	General Error Code
1055	DNMXS_NowScanning	General Error Code
1056	DNMXS_ScanListError	General Error Code
1057	DNMXS_DeviceExist	General Error Code
1058	DNMXS_DeviceNotExist	General Error Code
1059	DNMXS_MapTableError	General Error Code
1100	DNMXS_ExplicitNotAllocate	IOConnection Error
1101	DNMXS_PollNotAllocate	IOConnection Error
1102	DNMXS_BitStrobeNotAllocate	IOConnection Error
1103	DNMXS_COSNotAllocate	IOConnection Error
1104	DNMXS_CyclicNotAllocate	IOConnection Error
1105	DNMXS_PollAlreadyExist	IOConnection Error
1106	DNMXS_BitStrobeAlreadyExist	IOConnection Error

1107	DNMXS_COSAlreadyExist	IOConnection Error
1108	DNMXS_CyclicAlreadyExist	IOConnection Error
1109	DNMXS_CommunicationPause	IOConnection Error
1150	DNMXS_SlaveNoResp	Slave Error Code
1151	DNMXS_WaitForSlaveResp	Slave Error Code
1152	DNMXS_SlaveRespError	Slave Error Code
1153	DNMXS_OutputDataLenError	Slave Error Code
1154	DNMXS_InputDataLenError	Slave Error Code

[PISO-DNM100]

ErrCode	Description	Possible causes & solutions
10001	DNM100_DriverError	Board Error Code
10002	DNM100_ActiveBoardError	Board Error Code
10003	DNM100_BoardNumberError	Board Error Code
10004	DNM100_PortNumberError	Board Error Code
10007	DNM100_InitError	Board Error Code
10021	DNM100_SoftBufferIsEmpty	Board Error Code
10022	DNM100_SoftBufferIsFull	Board Error Code
10023	DNM100_TimeOut	Board Error Code
10024	DNM100_SetCyclicMsgFailure	Board Error Code
10025	DNM100_DpramOverRange	Board Error Code
10026	DNM100_NoDpramCmd	Board Error Code
10027	DNM100_ModeError	Board Error Code
10030	DNM100_NoFileInside	Board Error Code
10031	DNM100_DownloadFailure	Board Error Code
10032	DNM100_EEPROMDamage	Board Error Code
10033	DNM100_NotEnoughSpace	Board Error Code
10034	DNM100_StillDownloading	Board Error Code
10035	DNM100_BoardModeError	Board Error Code
10036	DNM100_CardTypeError	Board Error Code
5000	DNMXS_UnKnowError	Firmware Error Code
1000	DNMXS_BoardNotActive	Master Status Error Code
1001	DNMXS_OnlineError	Master Status Error Code
1002	DNMXS_CANBusError	Master Status Error Code
1003	DNMXS_Booting	Master Status Error Code

1050	DNMXS_MACIDError	General Error Code
1051	DNMXS_BaudRateError	General Error Code
1052	DNMXS_ConnectionTypeError	General Error Code
1053	DNMXS_DuplicMasterMACID	General Error Code
1054	DNMXS_EEPROMError	General Error Code
1055	DNMXS_NowScanning	General Error Code
1056	DNMXS_ScanListError	General Error Code
1057	DNMXS_DeviceExist	General Error Code
1058	DNMXS_DeviceNotExist	General Error Code
1059	DNMXS_MapTableError	General Error Code
1100	DNMXS_ExplicitNotAllocate	IOConnection Error
1101	DNMXS_PollNotAllocate	IOConnection Error
1102	DNMXS_BitStrobeNotAllocate	IOConnection Error
1103	DNMXS_COSNotAllocate	IOConnection Error
1104	DNMXS_CyclicNotAllocate	IOConnection Error
1105	DNMXS_PollAlreadyExist	IOConnection Error
1106	DNMXS_BitStrobeAlreadyExist	IOConnection Error
1107	DNMXS_COSAlreadyExist	IOConnection Error
1108	DNMXS_CyclicAlreadyExist	IOConnection Error
1109	DNMXS_CommunicationPause	IOConnection Error
1150	DNMXS_SlaveNoResp	Slave Error Code
1151	DNMXS_WaitForSlaveResp	Slave Error Code
1152	DNMXS_SlaveRespError	Slave Error Code
1153	DNMXS_OutputDataLenError	Slave Error Code
1154	DNMXS_InputDataLenError	Slave Error Code
1200	DNMXS_OutofRange	Input / Output Area

[I-8124W]

ErrCode	Description	Possible causes & solutions
10003	I8124_SlotNumberError	Board Error Code
10007	l8124_InitError	Board Error Code
10021	I8124_SoftBufferIsEmpty	Board Error Code
10022	I8124_SoftBufferIsFull	Board Error Code
10023	I8124_TimeOut	Board Error Code
10024	I8124_SetCyclicMsgFailure	Board Error Code

10025	I8124_DpramOverRange	Board Error Code
10026	I8124_NoDpramCmd	Board Error Code
10027	I8124_ModeError	Board Error Code
10030	l8124_NoFileInside	Board Error Code
10031	I8124_DownloadFailure	Board Error Code
10032	I8124_EEPROMDamage	Board Error Code
10033	I8124_NotEnoughSpace	Board Error Code
10034	I8124_StillDownloading	Board Error Code
10035	I8124_BoardModeError	Board Error Code
10036	I8124_SetDateTimeFailure	Board Error Code
10040	I8124_SlotNotConfig	Board Error Code
10041	I8124_SlotNotInit	Board Error Code
10042	I8124_ReplyError	Board Error Code
5000	DNMXS_UnKnowError	Firmware Error Code
1000	DNMXS_BoardNotActive	Master Status Error Code
1001	DNMXS_OnlineError	Master Status Error Code
1002	DNMXS_CANBusError	Master Status Error Code
1003	DNMXS_Booting	Master Status Error Code
1050	DNMXS_MACIDError	General Error Code
1051	DNMXS_BaudRateError	General Error Code
1052	DNMXS_ConnectionTypeError	General Error Code
1053	DNMXS_DuplicMasterMACID	General Error Code
1054	DNMXS_EEPROMError	General Error Code
1055	DNMXS_NowScanning	General Error Code
1056	DNMXS_ScanListError	General Error Code
1057	DNMXS_DeviceExist	General Error Code
1058	DNMXS_DeviceNotExist	General Error Code
1059	DNMXS_MapTableError	General Error Code
1100	DNMXS_ExplicitNotAllocate	IOConnection Error
1101	DNMXS_PollNotAllocate	IOConnection Error
1102	DNMXS_BitStrobeNotAllocate	IOConnection Error
1103	DNMXS_COSNotAllocate	IOConnection Error
1104	DNMXS_CyclicNotAllocate	IOConnection Error
1105	DNMXS_PollAlreadyExist	IOConnection Error
1106	DNMXS_BitStrobeAlreadyExist	IOConnection Error
1107	DNMXS_COSAlreadyExist	IOConnection Error

1108	DNMXS_CyclicAlreadyExist	IOConnection Error
1109	DNMXS_CommunicationPause	IOConnection Error
1150	DNMXS_SlaveNoResp	Slave Error Code
1151	DNMXS_WaitForSlaveResp	Slave Error Code
1152	DNMXS_SlaveRespError	Slave Error Code
1153	DNMXS_OutputDataLenError	Slave Error Code
1154	DNMXS_InputDataLenError	Slave Error Code
1200	DNMXS_OutofRange	Input / Output Area

4.4 CANopen Module ErrorCode

[I-7565-CPM]

ErrCode	Description	Possible causes & solutions
2	CPM_OpenComErr	
3	CPM_ComPortErr	
4	CPM_MasterFull	
5	CPM_ConfigErr	
6	CPM_MasterInitErr	
7	CPM_MasterNotInit	
8	CPM_ListenMode	
9	CPM_NodeErr	
10	CPM_NodeExist	
12	CPM_TxBusy	
13	CPM_UnknowCmd	
14	CPM_CmdReceErr	
15	CPM_DataEmpty	
16	CPM_MemAllocErr	
17	CPM_SendCycMsgErr	
18	CPM_StatusErr	
20	CPM_SetGuardErr	
21	CPM_SetHbeatErr	
22	CPM_SegLenErr	
23	CPM_SegToggleErr	
24	CPM_SegWriteErr	
25	CPM_Abort	

26	CPM_PDOLenErr	
27	CPM_COBIDErr	
28	CPM_PDOInstErr	
29	CPM_PDODynaErr	
30	CPM_PDONumErr	
31	CPM_PDOSetErr	
32	CPM_PDOEntryErr	
33	CPM_SetCobIdErr	
34	CPM_CycFullErr	
35	CPM_Timeout	
36	CPM_DataLenErr	
38	CPM_SendLose	
39	CPM_SendCmdErr	
40	CPM_Wait	
41	CPM_Processing	
50	CPM_LoadEDSErr	
51	CPM_EDSFormatErr	

[PISO-CPM100]

ErrCode	Description	Possible causes & solutions
1	CPM_DriverError	
3	CPM_BoardNumberErr	
5	CPM_ConfigErr	
6	CPM_MasterInitErr	
7	CPM_MasterNotInit	
8	CPM_ListenMode	
9	CPM_NodeErr	
10	CPM_NodeExist	
12	CPM_TxBusy	
13	CPM_UnknowCmd	
14	CPM_CmdReceErr	
15	CPM_DataEmpty	
16	CPM_MemAllocErr	
17	CPM_SendCycMsgErr	
18	CPM_StatusErr	

20	CPM_SetGuardErr	
21	CPM_SetHbeatErr	
22	CPM_SegLenErr	
23	CPM_SegToggleErr	
24	CPM_SegWriteErr	
25	CPM_Abort	
26	CPM_PDOLenErr	
27	CPM_COBIDErr	
28	CPM_PDOInstErr	
29	CPM_PDODynaErr	
30	CPM_PDONumErr	
31	CPM_PDOSetErr	
32	CPM_PDOEntryErr	
33	CPM_SetCobIdErr	
34	CPM_CycFullErr	
35	CPM_Timeout	
36	CPM_DataLenErr	
40	CPM_Wait	
41	CPM_Processing	
50	CPM_LoadEDSErr	
51	CPM_EDSFormatErr	

[I-8123W]

ErrCode	Description	Possible causes & solutions
1	CPM_DriverError	
3	CPM_BoardNumberErr	
5	CPM_ConfigErr	
6	CPM_MasterInitErr	
7	CPM_MasterNotInit	
8	CPM_ListenMode	
9	CPM_NodeErr	
10	CPM_NodeExist	
12	CPM_TxBusy	
13	CPM_UnknowCmd	
14	CPM_CmdReceErr	

15	CPM_DataEmpty	
16	CPM_MemAllocErr	
17	CPM_SendCycMsgErr	
18	CPM_StatusErr	
20	CPM_SetGuardErr	
21	CPM_SetHbeatErr	
22	CPM_SegLenErr	
23	CPM_SegToggleErr	
24	CPM_SegWriteErr	
25	CPM_Abort	
26	CPM_PDOLenErr	
27	CPM_COBIDErr	
28	CPM_PDOInstErr	
29	CPM_PDODynaErr	
30	CPM_PDONumErr	
31	CPM_PDOSetErr	
32	CPM_PDOEntryErr	
33	CPM_SetCobIdErr	
34	CPM_CycFullErr	
35	CPM_Timeout	
36	CPM_DataLenErr	
40	CPM_Wait	
41	CPM_Processing	
50	CPM_LoadEDSErr	
51	CPM_EDSFormatErr	

4.5 PowerMeter Module ErrorCode

[PISO-CM100-PM]

ErrCode	Description	Possible causes & solutions	
10001	CM100PM_DriverError	Board Error Code	
10002	CM100PM_ActiveBoardError	iveBoardError Board Error Code	
10003 C	CM100PM_BoardNumberError	Board Error Code	
10004	CM100PM_PortNumberError Board Error Code		
10007	CM100PM_InitError	Board Error Code	

10021	CM100PM_SoftBufferIsEmpty Board Error Code		
10022	CM100PM_SoftBufferIsFull Board Error Code		
10023	CM100PM_TimeOut	Board Error Code	
10024	CM100PM_SetCyclicMsgFailure	Board Error Code	
10025	CM100PM_DpramOverRange	Board Error Code	
10026	CM100PM_NoDpramCmd	Board Error Code	
10027	CM100PM_ModeError	Board Error Code	
10030	CM100PM_NoFileInside	Board Error Code	
10031	CM100PM_DownloadFailure	Board Error Code	
10032	CM100PM_EEPROMDamage	Board Error Code	
10033	CM100PM_NotEnoughSpace	Board Error Code	
10034	CM100PM_StillDownloading	Board Error Code	
10035	CM100PM_BoardModeError	Board Error Code	
10036	CM100PM_CardTypeError	Board Error Code	
1000	CM100PM_PMIDNotExist	Power Meter	
1	CANSTA_BusOff	GetCANStatus function	
2	CANSTA_Error	GetCANStatus function	
3	CANSTA_DataOverRun	GetCANStatus function	
4	CANSTA_TxIncomplete	GetCANStatus function	
5	CANSTA_TxLocket	GetCANStatus function	
501	PMSTA_Timeout	GetPowerMeterStatus function (IDCAN_Def)	

[I-8120W-PM]

ErrCode	Description	Possible causes & solutions	
10003	I8120PM_SlotNumberError	Module Error Code	
10007	I8120PM_InitError	Module Error Code	
10021	I8120PM_SoftBufferIsEmpty	Module Error Code	
10022	I8120PM_SoftBufferIsFull	Module Error Code	
10023	I8120PM_TimeOut	Module Error Code	
10024	I8120PM_SetCyclicMsgFailure	e Module Error Code	
10025	I8120PM_DpramOverRange	Module Error Code	
10026	I8120PM_NoDpramCmd	Module Error Code	
10027	I8120PM_ModeError	Module Error Code	
10030	I8120PM_NoFileInside Module Error Code		
10031	I8120PM_DownloadFailure	Module Error Code	

10032	I8120PM_EEPROMDamage	Module Error Code	
10033	I8120PM_NotEnoughSpace	Module Error Code	
10034	I8120PM_StillDownloading	Module Error Code	
10035	I8120PM_BoardModeError	Module Error Code	
10036	I8120PM_SetDateTimeFailure	Module Error Code	
10040	I8120PM_SlotNotConfig	Module Error Code	
10041	I8120PM_SlotNotInit	Module Error Code	
10042	I8120PM_ReplyError Module Error Code		
10043	43 I8120PM_WaitForReply Module Error Code		
10044	I8120PM_HasBeenActivated	Module Error Code	
1051	PMXS_BaudRateError	I8120PM_SetBaudRate	
1000	I8120PM_PMIDNotExist	I8120PM_GetPowerMeterStatus	
1001	I8120PM_DataNameError	I8120PM_GetPowerMeterStatus	
1	CANSTA_BusOff	GetCANStatus function	
2	CANSTA_Error	GetCANStatus function	
3	CANSTA_DataOverRun	GetCANStatus function	
4	CANSTA_TxIncomplete	GetCANStatus function	
5	CANSTA_TxLocked	GetCANStatus function	
501	PMSTA_Timeout	GetPowerMeterStatus function (IDCAN_Def)	

Note :

- (1) The results of the communication may be verified in the **output** Window of the Studio's environment. To set a log of events for **Field Read Commands**, **Field Write Commands** and **Serial Communication** click with the right button of the mouse on the output window and choose the option setting to select these log events.
- (2) When testing under a Windows CE target, you can enable the log at the unit (Tools/Logwin) and verify the file celog.txt created at the target unit.

5. History of Versions

Version	Author	Date	Description of changes
1.00	Edward	2012/01/06	First driver version
1.01	Edward	2012/02/14	1.Provide IDCAN driver for the following ICP DAS PACs : (1) XP-8000-CE6 (2) XP-8000 / XP-8000-Atom