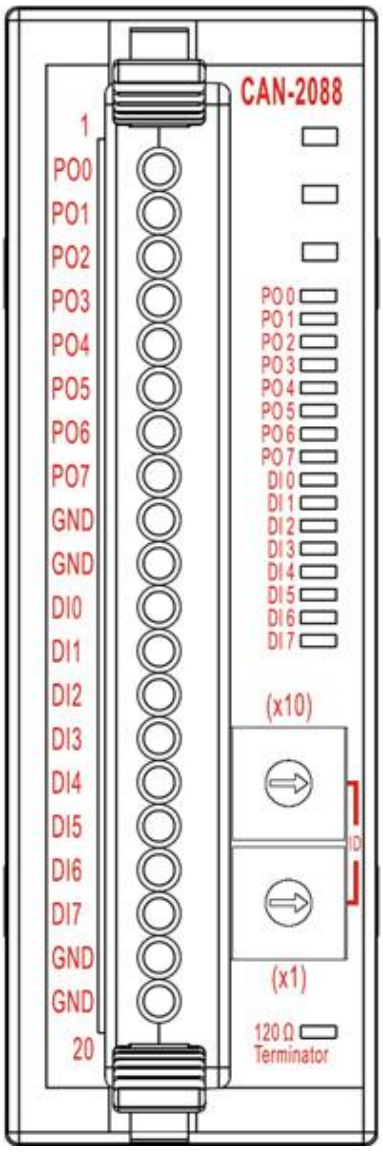
CAN-2088C Quick Start

Hardware Specification

CAN Interface	
CANopen Specification	CiA DS-301 v4.02, DS-401 v2.1
No. of PDOs	10 Rx, 10 Tx (Support dynamic PDO)
PDO Mode	Event triggered, Remotely requested, Cyclic and acyclic SYNC
Node ID	1~99 selected by rotary switch
Baud Rate (bps)	10k, 20k, 50, 125k, 250k, 500k, 800k and 1M
Error Control	Node Guarding protocol and Heartbeat Producer protocol
Terminator Resistor	Switch for 120 Ω terminator resistor
Connector	5-pin screwed terminal block (CAN_GND, CAN_L, CAN_SHLD, CAN_H, CAN_V+)
PWM	
Channels	8 (Source)
Max. Load Current	1 mA
Frequency	0.2 Hz ~500Hz
PWM Mode	Burst mode, Continuous mode
Burst mode counter	1 ~ 65535 counts
Trigger Mode	Hardware (Start and Stop) or Software (Start and Stop)
Digital Input	
Channels	8 (Sink/Source)
Counter Frequency	500 kHz Max, 32-bits
ESD Protection	+/-4 kV, Contact for each channel
LED	
Status LED	PWR LED, RUN LED, ERR LED
Terminal Resister LED	Terminal Resister Indicator
PWM/DI LED	8 LEDs as PWM indicator 8 LEDs as Digital Input indicator
Power	
Input range	Unregulated +10 ~ +30 V_{DC}
Power Consumption	2.0 W
Environment	
Operating Temp.	-25 ~ 75 ℃
Storage Temp.	-30 ~ 80 ℃
Humidity	10 ~ 90% RH, non-condensing

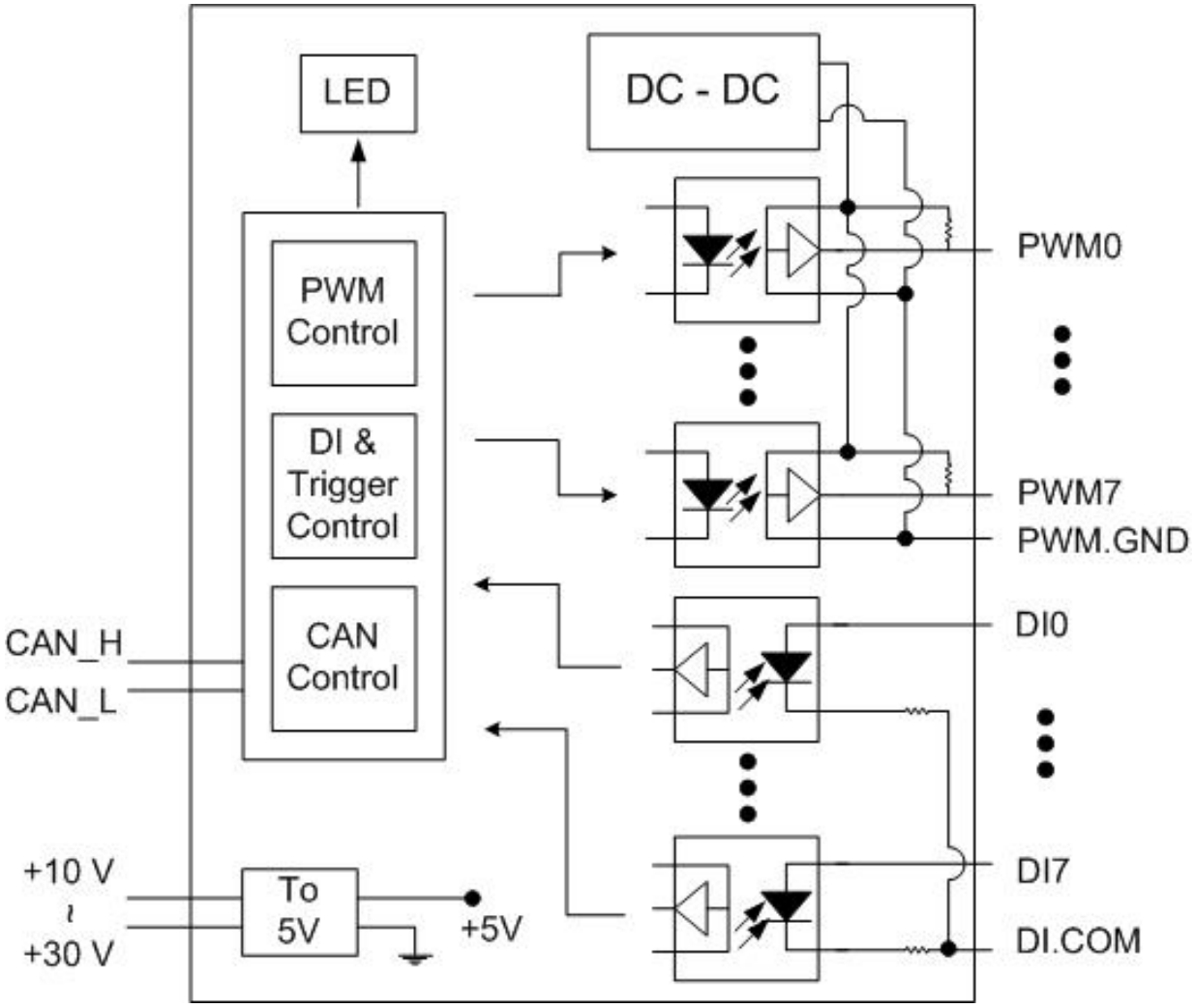
For more information about CAN-2088C, please visit the following website:
http://www.icpdas.com/products/Remote_IO/can_bus/can-2088c.htm

CAN-2088C Pin Assignments

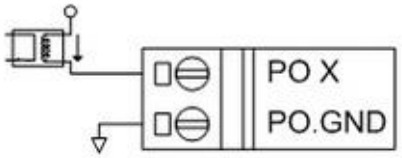
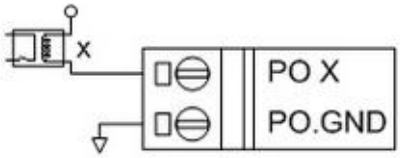
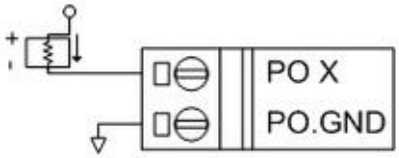
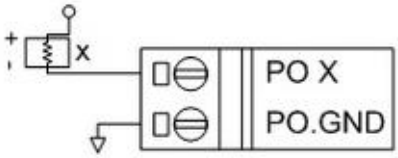


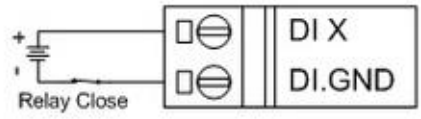
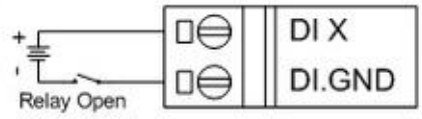
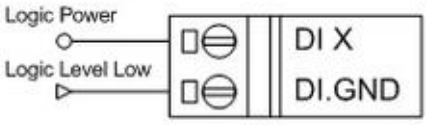
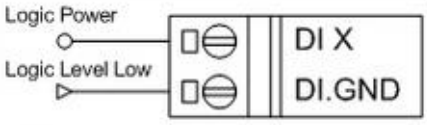
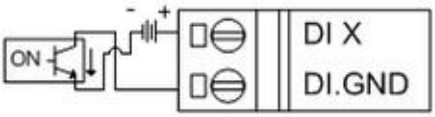
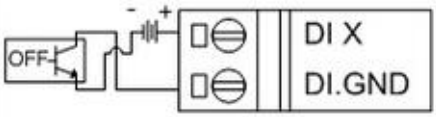
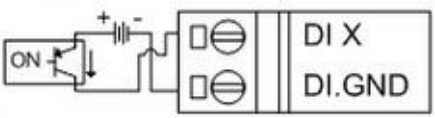
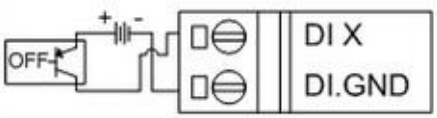
Terminal No.	Pin Assignment
01	PO.0
02	PO.1
03	PO.2
04	PO.3
05	PO.4
06	PO.5
07	PO.6
08	PO.7
09	PO.GND
10	PO.GND
11	DI.0
12	DI.1
13	DI.2
14	DI.3
15	DI.4
16	DI.5
17	DI.6
18	DI.7
19	DI.GND
20	DI.GND

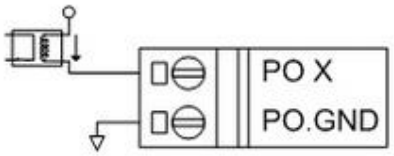
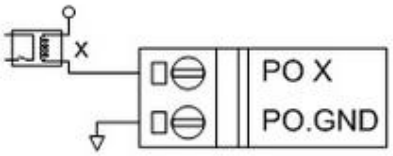
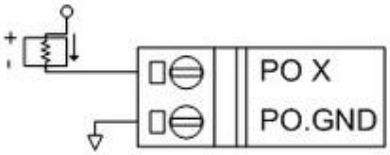
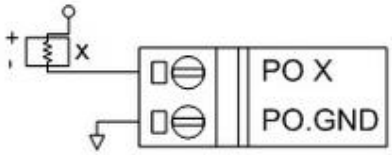
CAN-2088C Internal I/O Structure

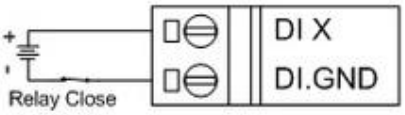
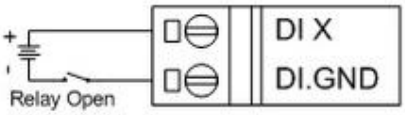
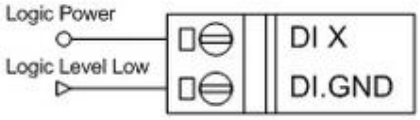
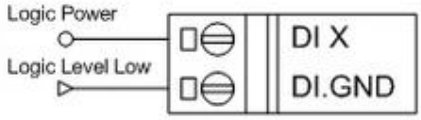
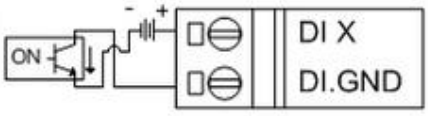
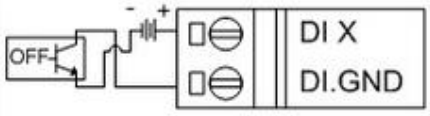
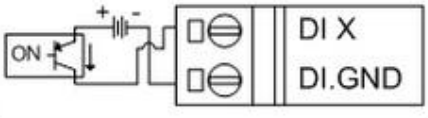
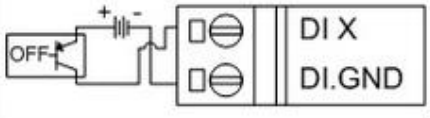


CAN-2088C Wiring Connection Type

Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay On	Relay Off
		
Resistance Load		
		

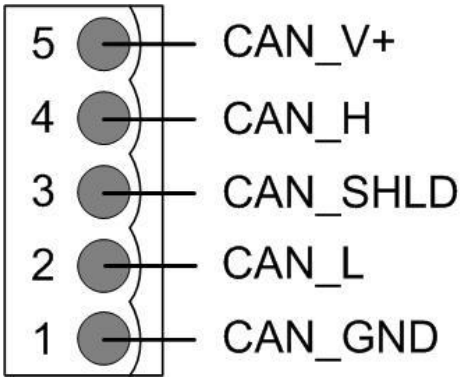
Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay On	Relay Off
		
TTL/CMOS Logic	Voltage > 10 V	Voltage < 4 V
		
NPN Output	Open Collector On	Open Collector Off
		
PNP Output	Open Collector On	Open Collector Off
		

Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay On	Relay Off
		
Resistance Load		
		

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay On	Relay Off
		
TTL/CMOS Logic	Voltage > 10 V	Voltage < 4 V
		
NPN Output	Open Collector On	Open Collector Off
		
PNP Output	Open Collector On	Open Collector Off
		

Note: When connecting to a current source, an optional external 125-Ohm precision resistor is required.

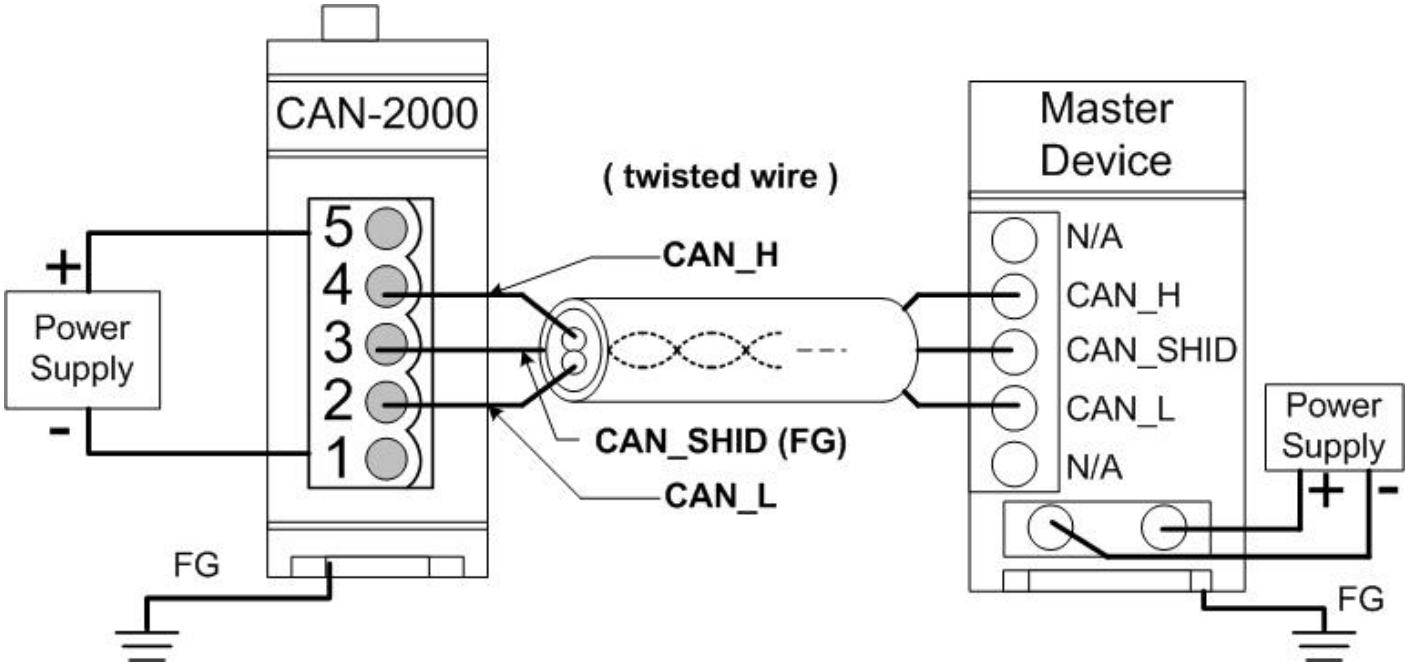
CAN-2088C CAN Bus Wire Connection



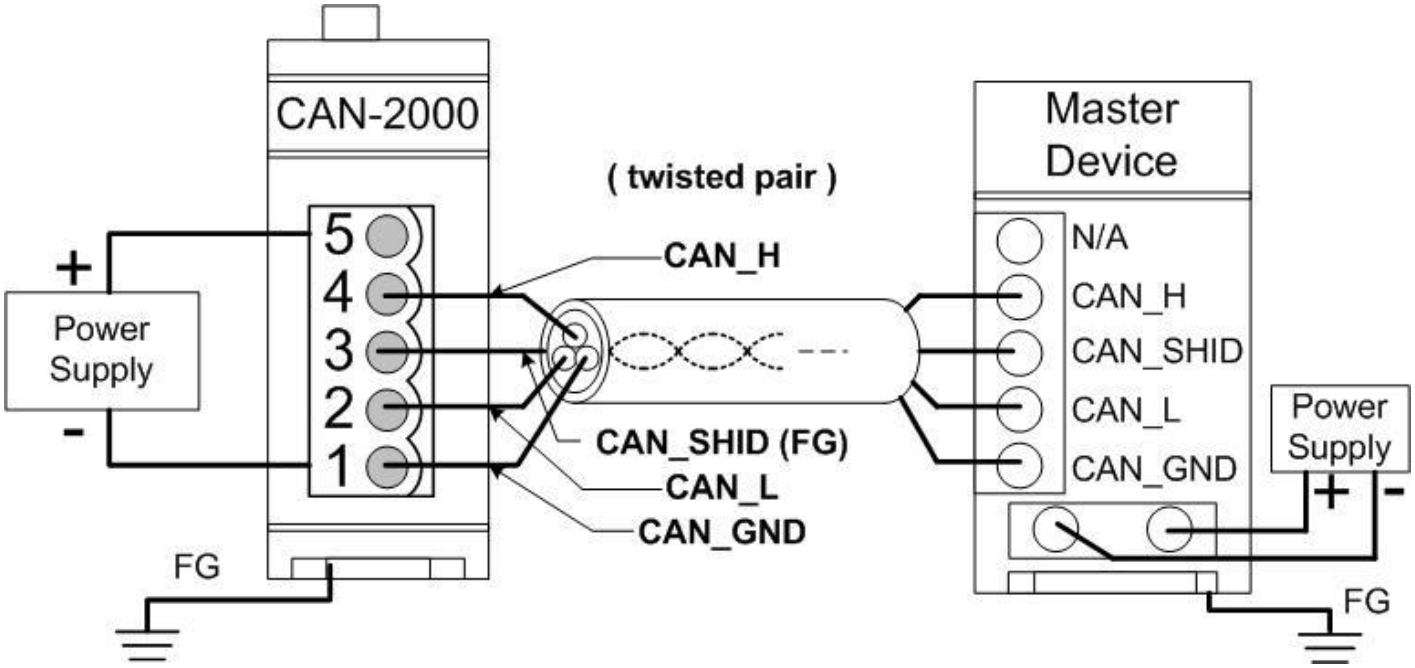
Pin	Signal	Description
5	CAN_V+	Power positive
4	CAN_H	Signal high of CAN Bus line
3	CAN_SHLD	Cable Shield ***(FG)***
2	CAN_L	Signal low of CAN Bus line
1	CAN_GND	CAN ground

*** CAN_SHID (FG) is Optional.**

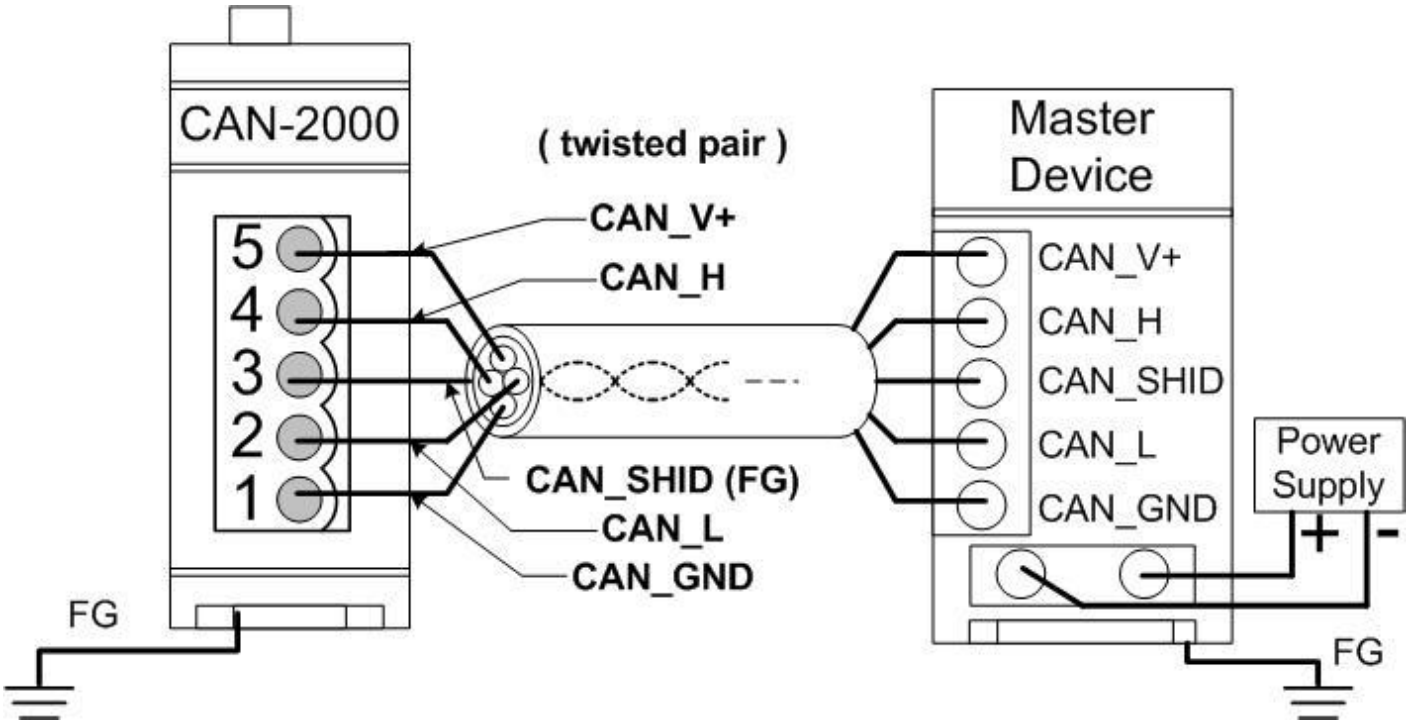
2-Wire Connection



3-Wire Connection

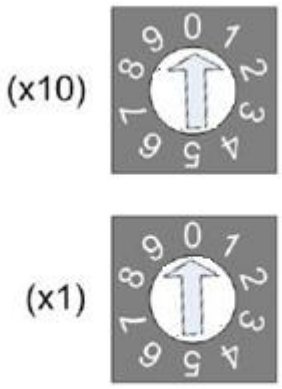


4-Wire Connection (The CAN-2000 is powered by the master device)



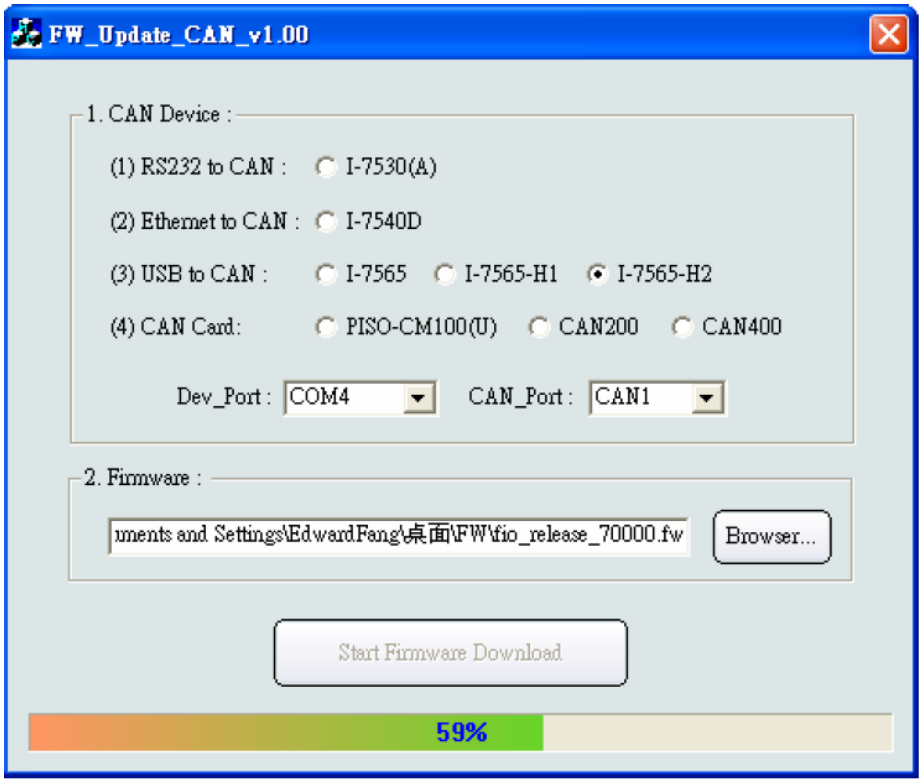
CAN-2088C Firmware Update

Step 1 – Set Module to "Bootloader" mode (set Node ID to 00). Then power on the module.



Node ID rotary switch

Step 2 – Run FW_Update_CAN Utility



(FW_Update_CAN Utility)

[1] CAN Device :

The below ICP DAS CAN products are supported by FW_Update_CAN utility for firmware update.

(1) RS232 to CAN **:** I-7530
(2) Ethernet to CAN **:** I-7540D
(3) USB to CAN **:** I-7565, I-7565-H1, I-7565-H2
(4) CAN Card **:** PISO-CM100(U), PISO-/PCM-/PEX-CAN200 / CAN400

Before firmware update, users need to set the below parameters.
(1) Select CAN hardware interface
(2) set Dev_Port or Board_ID
(3) set CAN_Port" number

[2] Download Firmware :

(1) Click "**Browser**…" button to choose firmware file, can_2088c_xx.fw.

(2) Click "**Start Firmware Update**" button to start firmware update and it will show the total percentage of firmware update in progress bar. After the firmware update finished, it will show the "Firmware Update Success !!" message.

CAN-2088C firmware Download:

ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/canopen/slave/can-2000c/can-2088c/

FW_Update_CAN Utility Download:

ftp://ftp.icpdas.com/pub/cd/fieldbus_cd/canopen/slave/can-2000c/tools/