CAN-2088D Quick Start

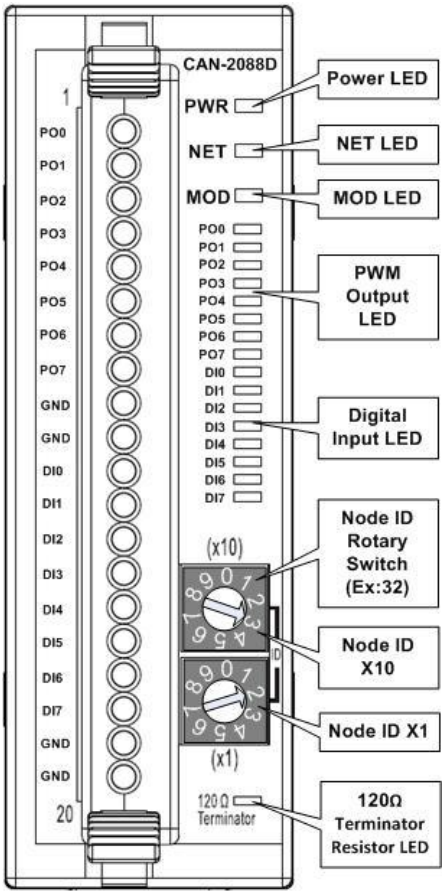
Hardware Specification

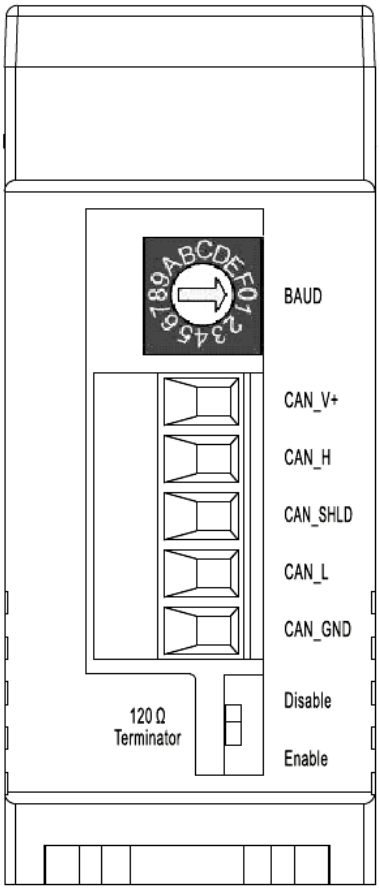
CAN Interface	
DeviceNet Specification	Volume I, Release 2.0 & Volume II, Release 2.0, Errata 5
DeviceNet Subscribe	Group 2 Only Server
Supported Connection	1 connection for Explicit Messaging 1 connection for Polled I/O 1 connection for Bit-Strobe I/O connection
Node ID	0~63 selected by rotary switch
Baud Rate (bps)	125 k, 250 k, 500 k, selected by rotary switch
Heartbeat Message	Yes
Shutdown Message	Yes
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)
Output Max. Load Current	1 mA
Frequency	0.2~500 kHz(non-continuous)
Scaling Resolution	16-bit(1~128μs for each step)
Duty Cycle	0.1~99.9%
PWM Mode	Burst mode, Continuous mode
Burst Mode Counter	1~65535 counts
Trigger Mode	Hardware(Start and Stop) or Software(Start and Stop)
Intra-module Isolation	3750 Vrms
ESD Protection	+/-4 kV, Contact for each channel
Digital Input	
Channels	8 (Sink/Source)
On Voltage Level	+5.5~+30 V_{DC}
Off Voltage Level	<3.5 V_{DC}
Counter Frequency	500 kHz Max.
Max. Counts	32-bits(4,294,967,295)
Input Impedance	4.7 kΩ,1/4W
Intra-module Isolation	3750 Vrms
ESD Protection	+/-4 kV, Contact for each channel
LED	
Status LED	PWR LED, NET LED, MOD LED

Terminal Resister LED	Terminal Resister Indicator
PWM LED	8 LEDs as PWM Output LED Indicators
DI LED	8 LEDs as Digital Input LED Indicators
Power	
Input range	Unregulated +10 ~ +30 V_{DC}
Power Consumption	2 W
Environment	
Operating Temp.	-25 ~ 75 ℃
Storage Temp.	-30 ~ 80 ℃
Humidity	10 ~ 90% RH, non-condensing

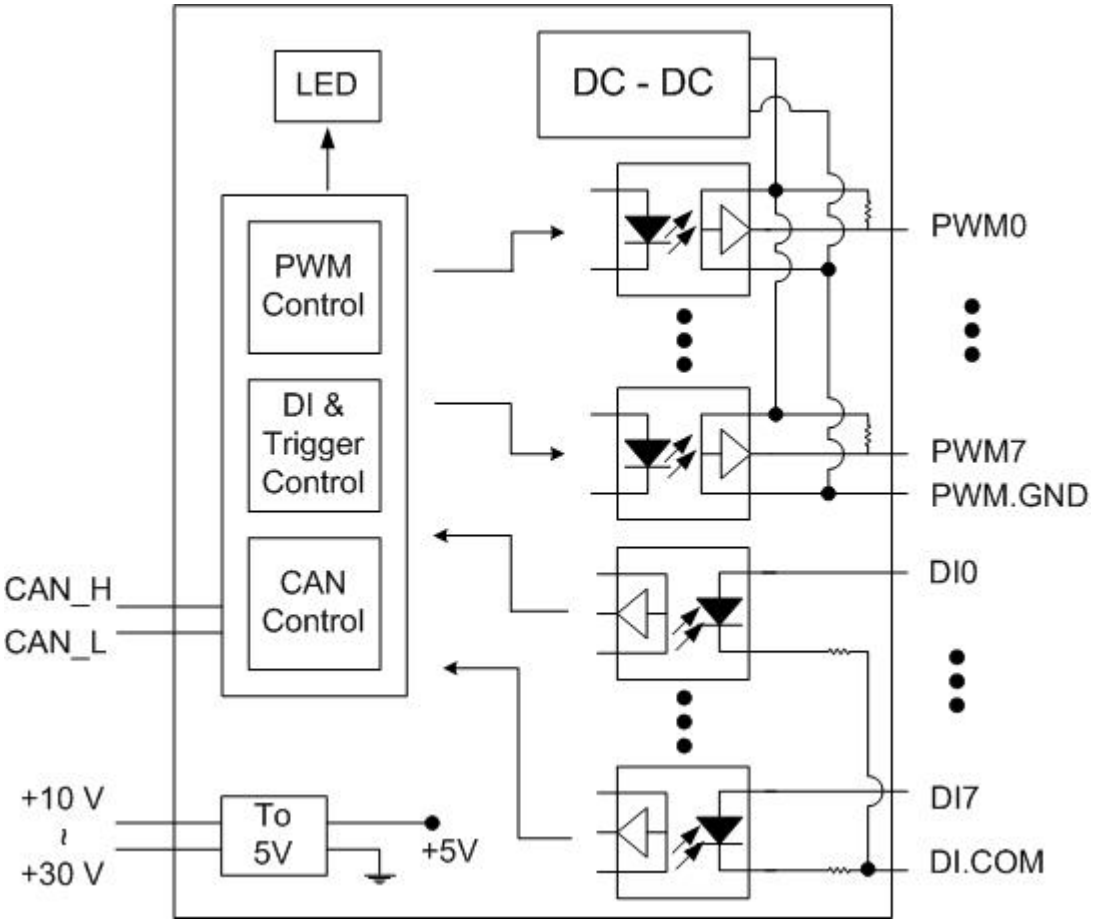
For more information about CAN-2088D, please visit the following website:
http://www.icpdas.com/products/Remote_IO/can_bus/can-2088d.htm

CAN-2088D Pin Assignments

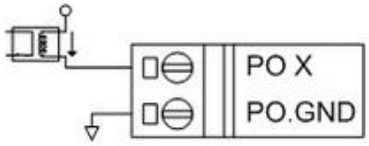
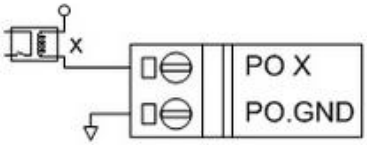
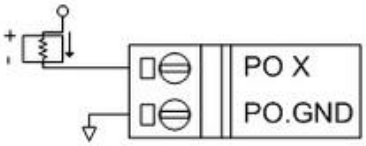
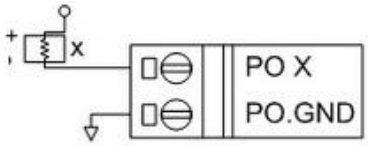


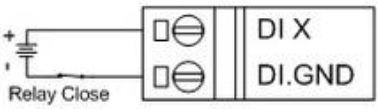
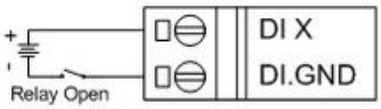
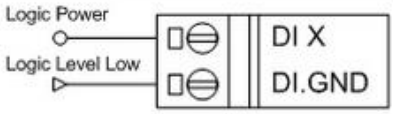
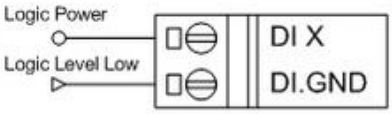
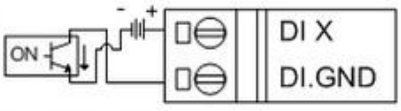
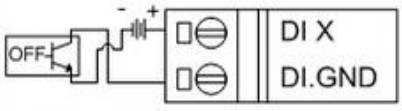
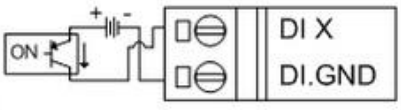
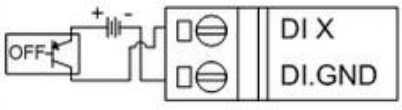


CAN-2088D Internal I/O Structure

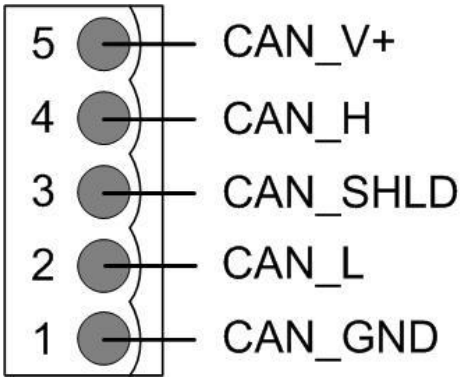


CAN-2088D Wiring Connection Type

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
		

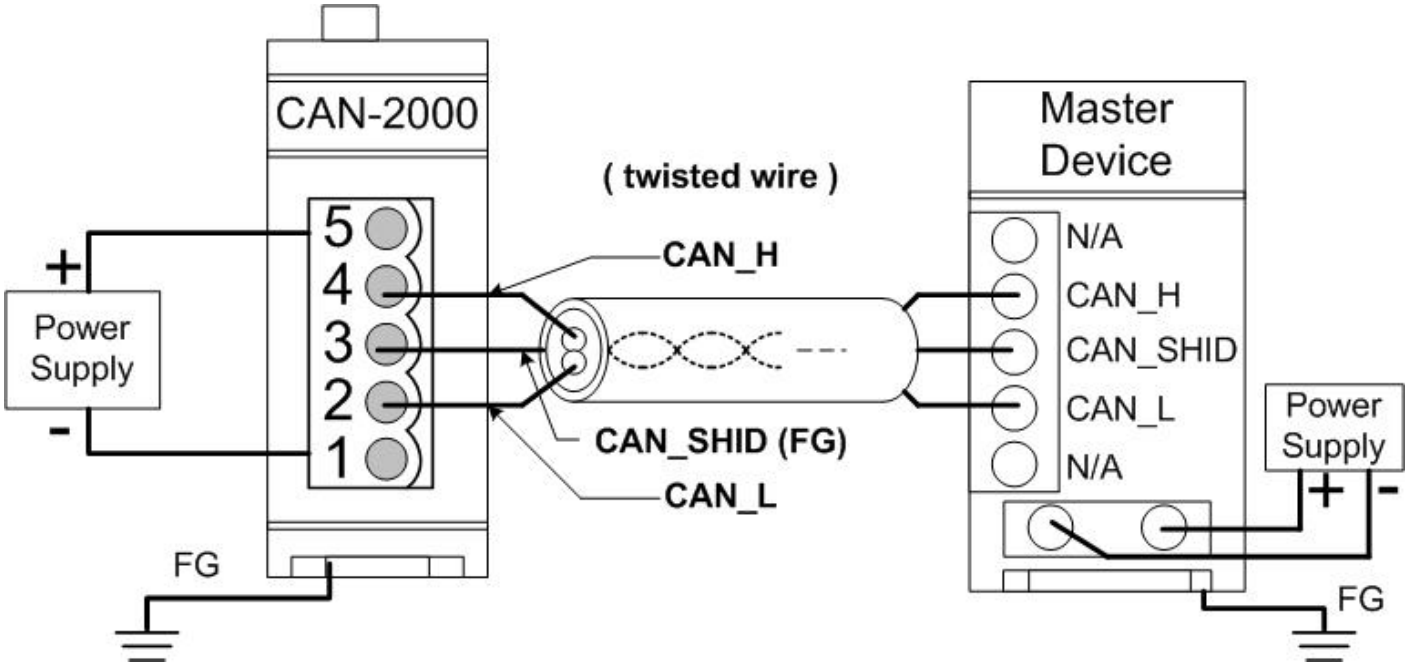
CAN-2088D CAN Bus Wire Connection



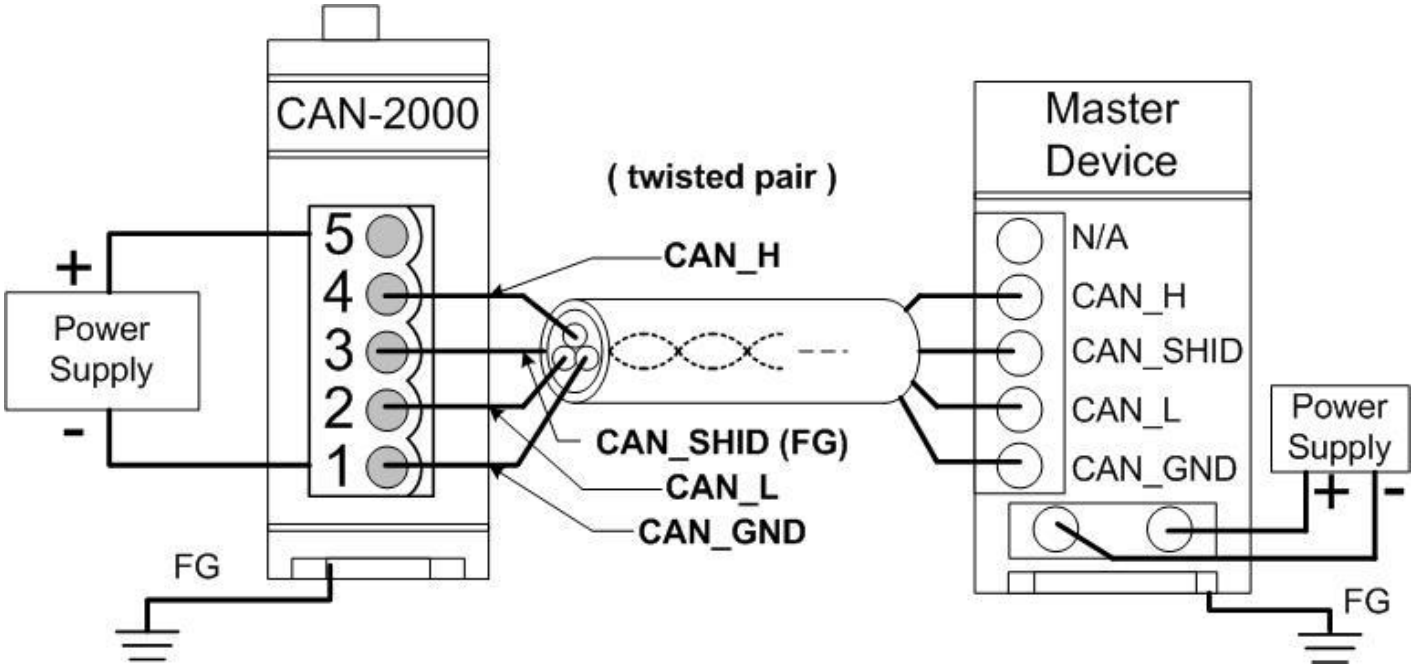
Pin	Signal	Description
5	CAN_V+	Power positive
4	CAN_H	Signal high of CAN Bus line
3	CAN_SHLD	Cable Shield ***(FG)***
2	CAN_L	Signal low of CAN Bus line
1	CAN_GND	CAN ground

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

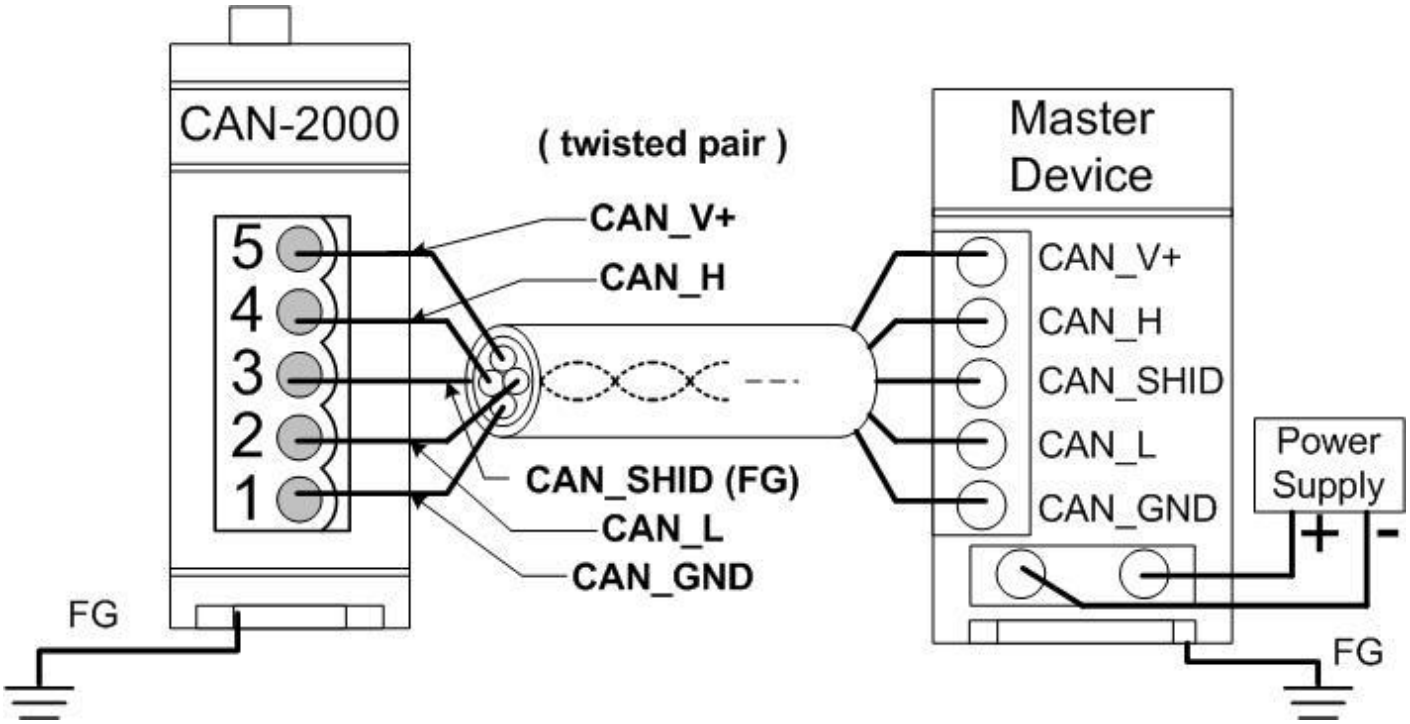
2-Wire Connection



3-Wire Connection

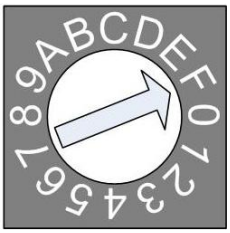


4-Wire Connection (The CAN-2000 is powered by the master device)



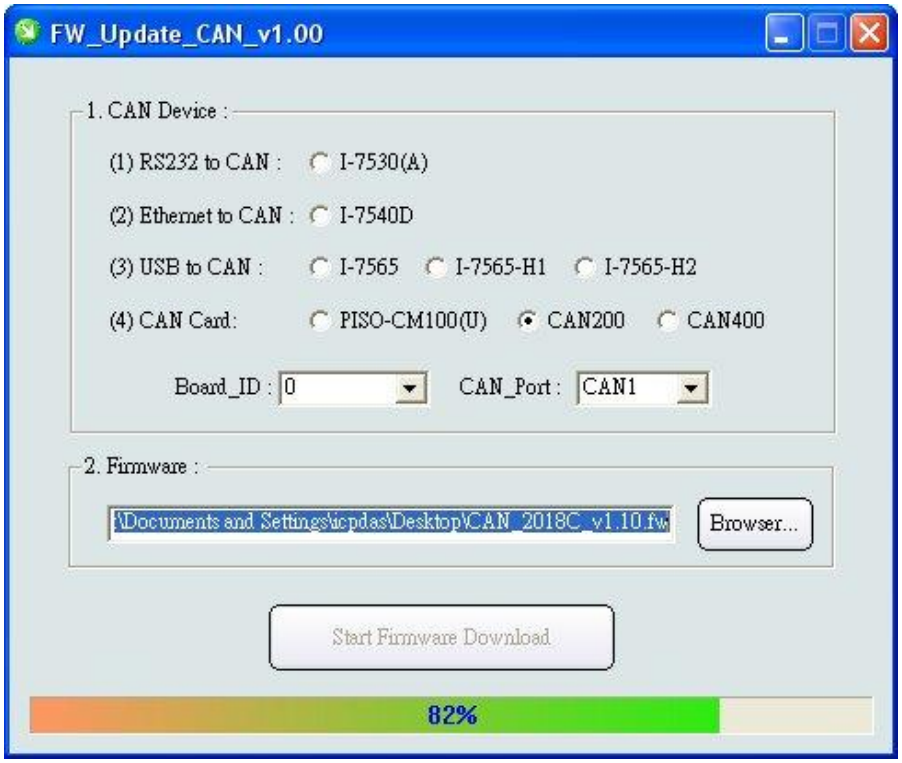
CAN-2088D Firmware Update

Step 1 – Set Module to "Bootloader" mode (set baud rate to 0xF). Then power on the module. After power on, the module's led(PWR, NET, MOD) will be flashed at the same time. It means that the module have entered into "Bootloader" mode.



Baud Rate 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_2088d_vX.X.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-2088D firmware Download:
ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/devicenet/slave/can-2000d/can-2088d/firmware/

FW_Update_CAN Utility Download:
ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/devicenet/slave/can-2000d/tools/fw_update_can_tool/