I-8088W-G

8-channel PWM Output And
8-Channel isolated Digital Input Module

■ Features

■ Automatic generation of PWM outputs by hardware, without software intervention.

■ 10 Hz ~ 500 kHz (non-continuous) PWM output frequency with 0.1% ~ 99.9% duty cycle

■ Software and hardware trigger mode for PWM output

■ Individual and synchronous PWM output

■ Using software trigger mode, you can set configuration for all PWM channels then trigger them one by one or all of them at the same time.

■ Burst mode PWM operation for standby

■ Digital Input channel can be configured as simple digital input channel or hardware trigger source of the PWM output.

■ Introduction

PWM (Pulse width modulation) is a powerful technique for controlling analog circuits. It uses digital outputs to generate a waveform with variant duty cycle and frequency to control analog circuits. I-8088W has 8 PWM output channels and 8 digital inputs. It can be used to develop powerful and cost effective analog control system.

■ Applications

● Controlling the position/speed of motors
● Dimming the brightness of lamps
● Controlling the speed of fans
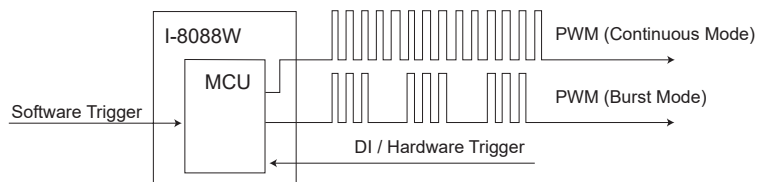
■ System Specifications

LED Indicators/Display	
System LED Indictors	1 as Power Indicator
I/O LED Indicators	16 as PWM and Digital Input Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	3750 V$_{DC}$
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
Power	
Power Consumption	2 W max.
Mechanical	
Dimensions (W × L × H)	30 mm x 102 mm x 115 mm
Environment	
Operating Temperature	-25 ~ +75 ℃
Storage Temperature	-40 ~ +85 ℃
Humidity	10 ~ 90% RH, Non-condensing

■ I/O Specifications

PWM Output	
Channels	8-ch
Scaling Resolution	16-bit(1 ~128 μs for each step)
Frequency Range	10 Hz ~ 500 kHz (non-continuous)
Duty Cycle	0.1% ~ 99.9%
PWM Mode	Burst Counting, Continuous mode
Burst Counter	1 ~ 65535
Hardware Trigger Mode	Trigger Start & Trigger Stop
Output Type	Source
Max Load Current	1 mA
Digital Input	
Input Channels	8(Sink/Source)
Input Type	One Common for All Digital Input
On Voltage Level	+5 V$_{DC}$ ~ +30 V$_{DC}$
Off Voltage Level	<0.8 V
Input Impedance	4.7 kΩ, 1/4 W

■ Internal I/O Structure

■ Dimensions (Units: mm)

| Left View | Front View | Top View |
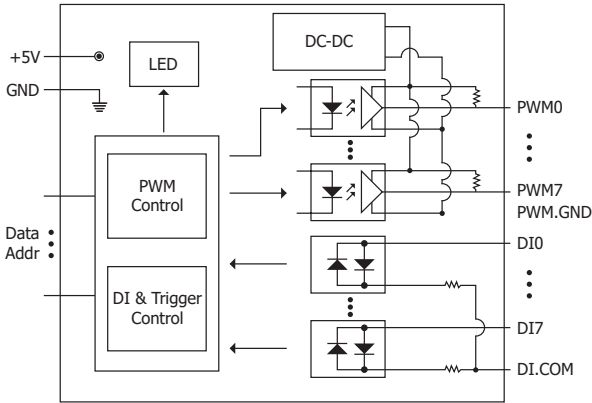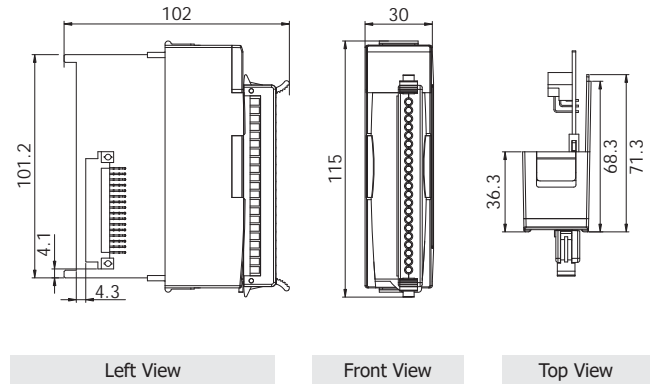
■ Wire Connections

Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay ON	Relay OFF
	PWMx DO.GND	PWMx DO.GND
Resistance Load	PWMx DO.GND	PWMx DO.GND

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay ON	Relay OFF
	DI.COM DIx (Relay Close)	DI.COM DIx (Relay Open)
TTL/CMOS Logic	Voltage > 5V	Voltage < 0.8V
	Logic Power / Logic Level Low — DI.COM DIx	Logic Power / Logic Level High — DI.COM DIx
NPN Output	Open Collector ON	Open Collector OFF
	ON — DI.COM DIx	OFF — DI.COM DIx
PNP Output	Open Collector ON	Open Collector OFF
	ON — DI.COM DIx	OFF — DI.COM DIx
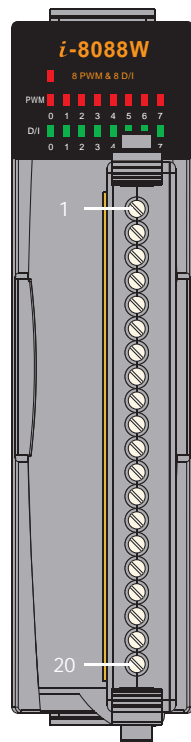
■ Pin Assignments

Terminal No.	Pin Assignment
01	PWM0
02	PWM1
03	PWM2
04	PWM3
05	PWM4
06	PWM5
07	PWM6
08	PWM7
09	PWM.GND
10	PWM.GND
11	DI0
12	DI1
13	DI2
14	DI3
15	DI4
16	DI5
17	DI6
18	DI7
19	DI.COM
20	DI.COM

■ Ordering Information

I-8088W-G CR	8-channel PWM Output And 8-Channel isolated DI Module (Gray Cover) (RoHS)

■ Accessories

	8-channel Digital Output and 8-channel Counter Input Board, including a DB-8820 Daughterboard and a CA-2520D Cable.
DN-8P8C/S CR	