



## M-6088-32

32-channel PWM Output Module

### Features

- 32-channel PWM Output
- Burst Mode and Continuous Mode for PWM Output
- Software Trigger Mode for PWM Output
- Individual and Synchronous PWM Output
- 4 kV ESD and EFT Protection
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C



### Introduction

The M-6088-32 provides 32-channel PWM (Pulse Width Modulation) Output, and can be used to develop powerful and cost-effective analog control systems. PWM is a powerful technique for controlling analog circuits that uses the Digital Output to generate a waveform with a variable duty cycle and frequency which can then be used to control an analog circuit in applications such as controlling the position or speed of motors, the brightness of lamps, or the speed of fans, etc. Either burst mode or continuous mode can be used for the PWM output depending on the application. It supports both the Modbus RTU and the DCON protocols, and External PWR allows the load voltage to be increased from +3.5 to +50 V for the 32-channels PWM (Pulse Width Modulation) output.

### System Specifications

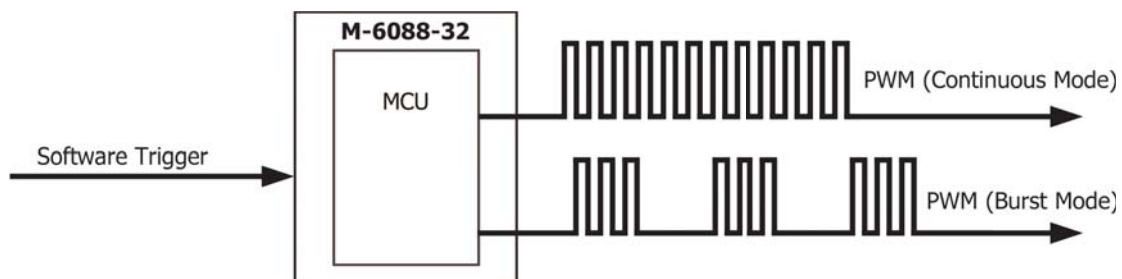
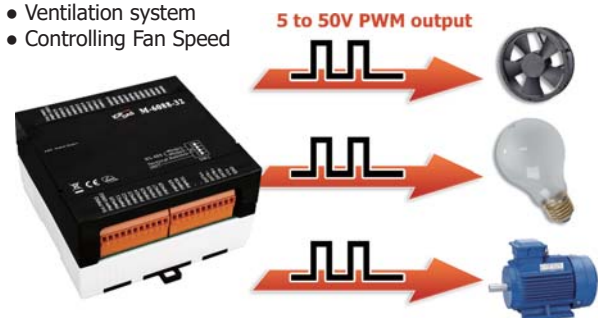
RS-485	
Interface	RS-485
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)
Baud Rate	1200 to 115200 bps
Protocol	Modbus RTU, DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicator	Yes, 1 as Power/Communication Indicator
Mode Status	Mode0, Mode1
Isolation	
Intra-module Isolation, Field-to-Logic	2500 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
EFT (IEC 61000-4-4)	±4 kV to Power
Surge (IEC 61000-4-5)	-
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +48 VDC
Consumption	2.9 W
Mechanical	
Dimensions (W x L x H)	116 mm x 120 mm x 64 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +80°C
Humidity	10 to 95% RH, Non-condensing

### I/O Specifications

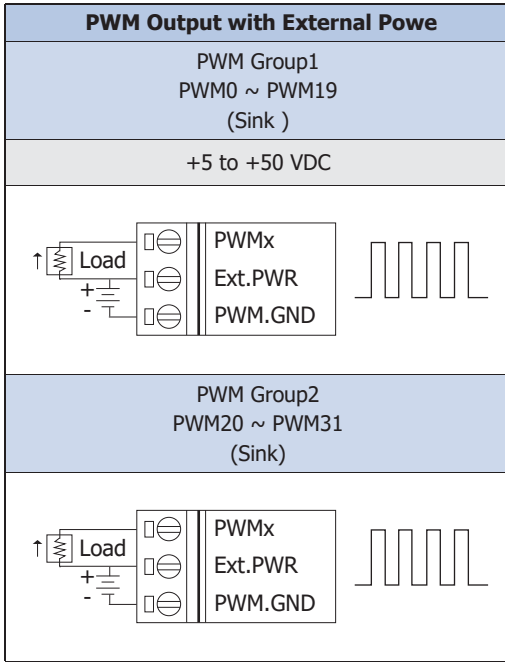
PWM Output		
Channels	32	
Type	PWM, TTL	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+5 ~ +50 VDC	
Max. Load Current	Sink: +50 VDC @ 200 mA/Channel Source: -	
PWM	Frequency	50 Hz
	Duty Cycle	0.1 to 99.9%
	Mode	Burst, Continuous
	Burst Count	1 to 65535
Trigger Start	Software	
Power-on Value	-	
Safe Value	-	

### Applications

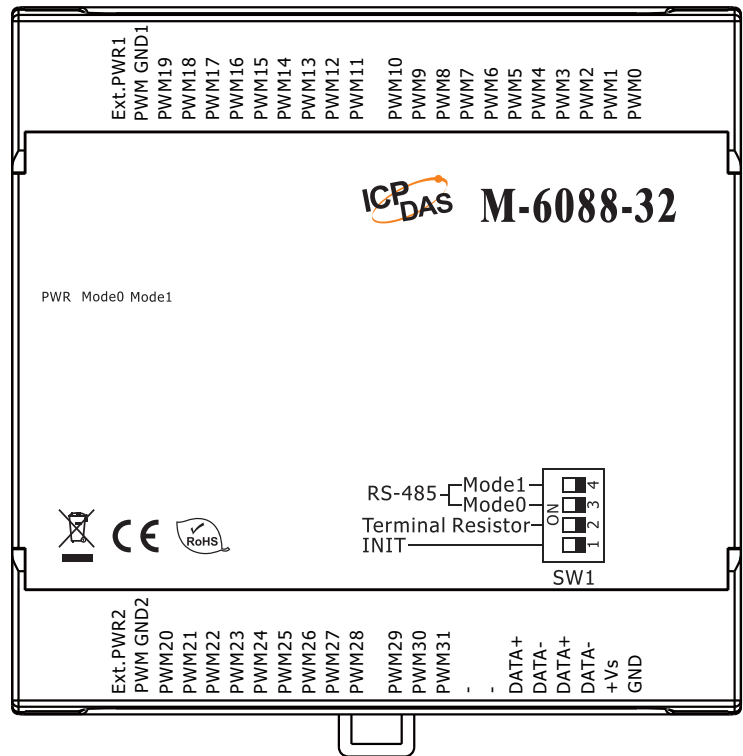
- Heating system in buildings
- Ventilation system
- Controlling Fan Speed



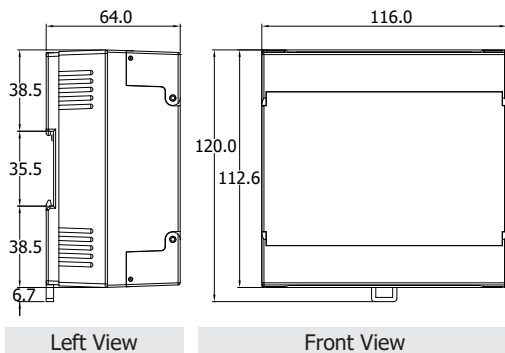
## Wire Connections



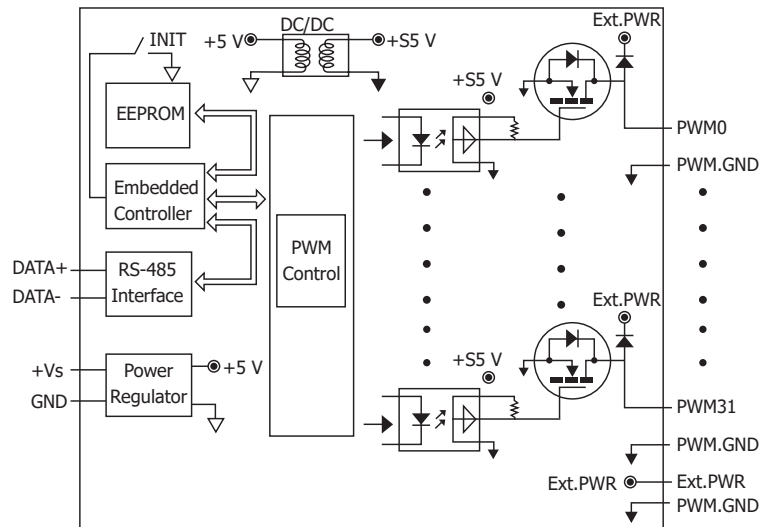
## Pin Assignments



## Dimensions (Units: mm)



## Internal I/O Structure



## Ordering Information

<b>M-6088-32 CR</b>	32-channel PWM Output Module using the DCON and Modbus Protocols (RoHS)
---------------------	---

## Accessories

tM-7520U CR	RS-232 to RS-485 Converter (RoHS)
tM-7561 CR	USB to RS-485 Converter (RoHS)
tM-SG4 CR	RS-485 Bias and Termination Resistor Module (RoHS)
SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
I-7514U CR	4-channel RS-485 Hub (RoHS)