



## M-7088-16

16-ch PWM Output Module

### Features

- 16 PWM Outputs
- Burst Mode and Continuous Mode for PWM Output
- Software Trigger Mode for PWM Output
- Individual and Synchronous PWM Output
- Built-in Dual Watchdog



### Introduction

The M-7088-16 provides 16-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. The M-7088-16 supports Modbus RTU and DCON protocols, and External PWR allows the load voltage to be increased from +5 to +50 V for the 16-channel PWM (Pulse Width Modulation) output.

### System Specifications

Model	M-7088-16
<b>CPU Module</b>	
Watchdog Timer	Module, Communication (Programmable)
<b>Isolation</b>	
Intra-module Isolation	2500 VDC
<b>EMS Protection</b>	
EFT (IEC 61000-4-4)	±4 kV for Power Line
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal
<b>LED Indicators</b>	
Status	1 x Power and Communication
<b>COM Ports</b>	
Ports	1 x RS-485
Baud Rate	1200 ~ 115200 bps
Data Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), or (O, 8, 1)
Protocol	Modbus RTU, DCON
<b>Power</b>	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +48 VDC
Consumption	2.9 W
<b>Mechanical</b>	
Dimensions (mm)	76 x 121 x 42 (W x L x H)
Installation	DIN-Rail Mounting
<b>Environment</b>	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 95% RH, Non-condensing

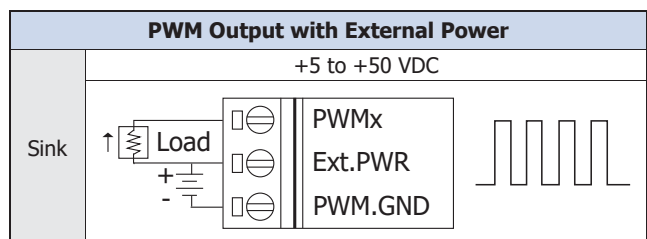
### I/O Specifications

Model	M-7088-16
<b>PWM</b>	
Channels	16
Type	Open Collector
Sink/Source (NPN/PNP)	Sink
Load Voltage	+5 ~ +50 VDC
Load Current	200 mA @ +50 VDC /Channel
Frequency	1 Hz ~ 500 KHz
Duty Cycle	0.1 to 99.9 %
Mode	Burst, Continuous
Burst Count	1 to 65535
Trigger Start	Software

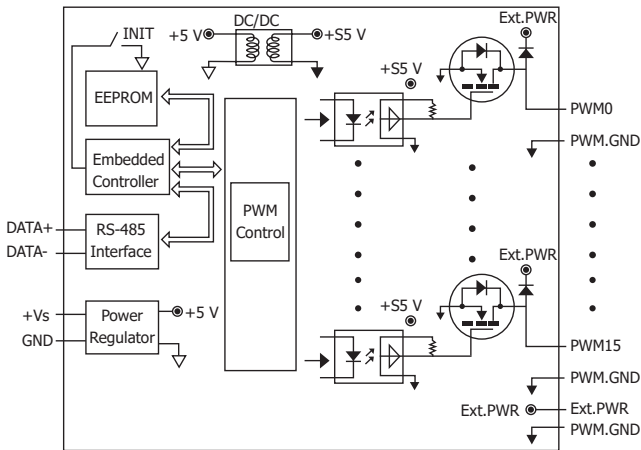
### Applications

- Controlling Motor Position/Speed
- Dimming Lamp Brightness
- Controlling Fan Speed

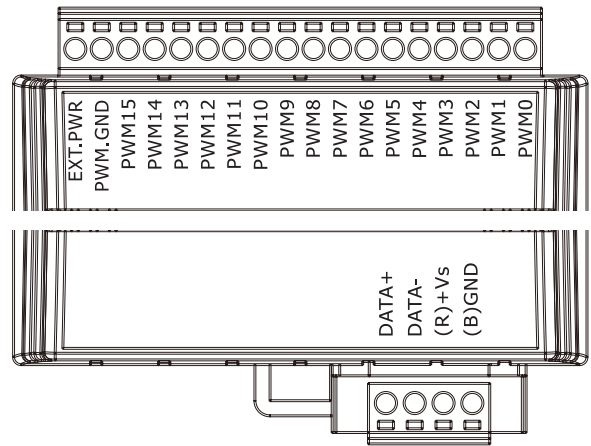
### Wire Connections



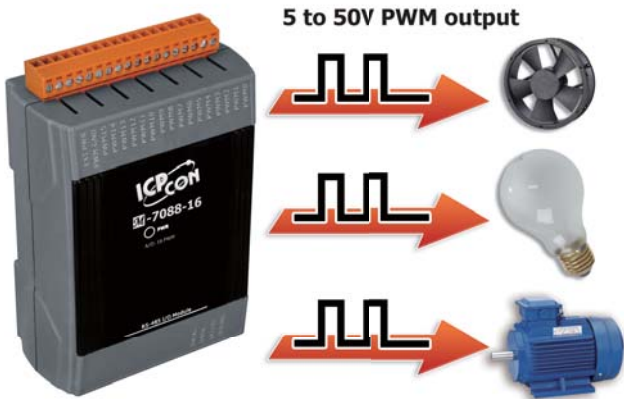
## Internal I/O Structure



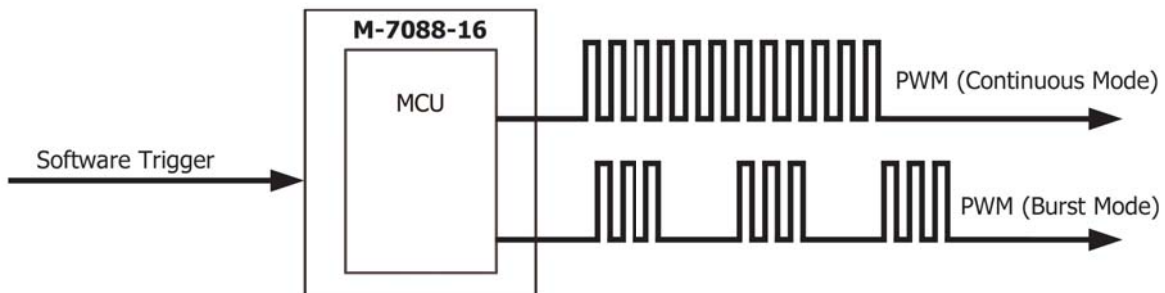
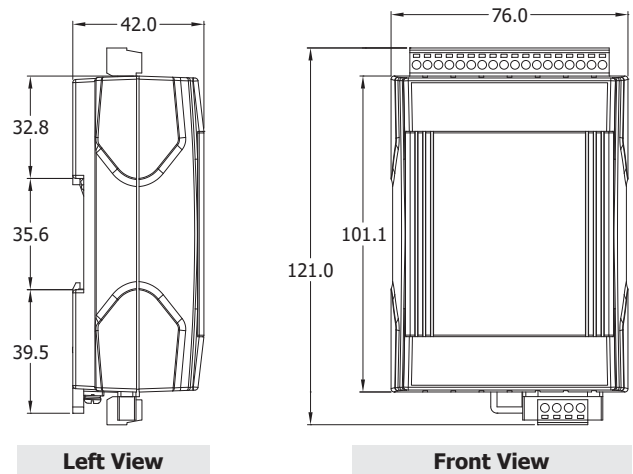
## Pin Assignments



## Applications



## Dimensions (Units: mm)



## Ordering Information

<b>M-7088-16-G CR</b>	16-channel PWM Output Module using the DCON and Modbus Protocols (Gray Cover) (RoHS)
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## Accessories

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