



I-8017HW-G/I-8017HCW-G

8-channel Analog Input Module

Features

- 8 Differential/16 Single-ended Analog Inputs
- Voltage or Current Input
- 14-bit 100 kHz AD Converter
- Internal/External Trigger
- Individual Channel Configuration
- ± 4 kV ESD Protection
- 2500 VDC Intra-module Isolation
- Wide Operating Temperature Range: $-25 \sim +75$ °C



Introduction

The I-8017HW and I-8017HCW is a high performance Analog Input Module. Up to 16 single-ended or 8 differential input channels are provided with 14-bit of resolution and 90 kS/s sampling rate. Each channel can be configured to an individual input range of ± 10 VDC, ± 5 VDC, ± 2.5 VDC, ± 1.25 VDC or ± 20 mA. The modules also provide ± 4 kV ESD protection as well as 2500 VDC intra-module isolation. All the three modules can be used to measure voltage and current source.

On the I-8017HW, an external 125Ω resistor is needed to measure current source.

On the I-8017HCW, an internal resistor is jumper-selectable for differential current input. The jumper is factory default setting for voltage measurement on the I-8017HCW.

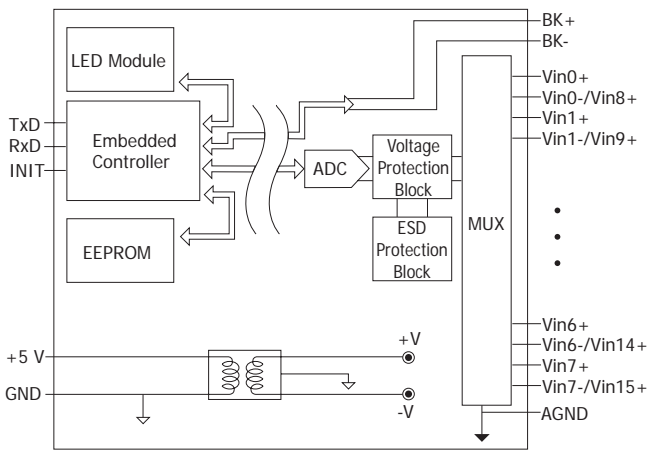
System Specifications

Model	I-8017HW	I-8017HCW
LED Indicators/Display		
System LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	16 LEDs as Status Indicator	
Isolation		
Intra-module Isolation, Field-to-Logic	2500 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	± 4 kV Contact for each Terminal	
Power		
Power Consumption	2 W Max.	
Mechanical		
Dimensions (W x L x H)	30 mm x 115 mm x 102 mm	
I/O Connector	20 Pin Terminal Block	
Environment		
Operating Temperature	$-25 \sim +75$ °C	
Storage Temperature	$-40 \sim +85$ °C	
Humidity	10 ~ 90% RH, Non-condensing	

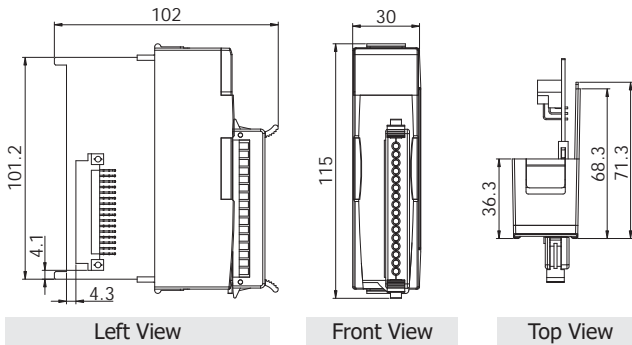
I/O Specifications

Model	I-8017HW	I-8017HCW
Analog Input		
Channels	16-ch Single-ended/ 8-ch Differential	
Voltage Input Range	± 10 VDC, ± 5 VDC, ± 2.5 VDC, ± 1.25 VDC	
Current Input Range ± 20 mA	Requires Optional External 125Ω Resistor	Jumper Selectable
Resolution	14-bit	
Sample Rate	Single Channel Polling Mode: 90 kS/s Single Channel Interrupt Mode: 50 kS/s 8 channel Scan Mode: 16 kS/s	
Accuracy	$\pm 0.1\%$ of FSR	
Zero Drift	± 0.1 μ V/°C	
Span Drift	± 10 ppm/°C	
Input Bandwidth	100 kHz	
Input Impedance	20 K, 200 K, 20 M (Jumper Selectable)	
Individual Channel Configuration	Yes	

Internal I/O Structure



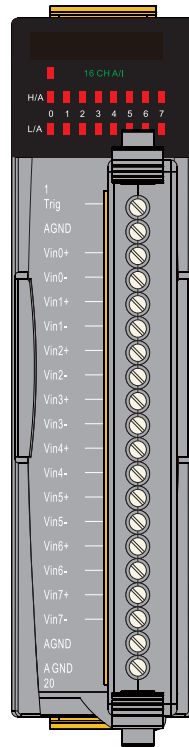
Dimensions (Units: mm)



Wire Connections

Input Type	Differential	Single-ended
I-8017HW		
Voltage Input Wiring		
Current Input Wiring		
Note: When connecting to a current source, an optional external 125 Ω resistor is required.		
I-8017HCW		
Voltage Input Wiring		
Current Input Wiring		
Note: Differential Input Type: Current Input Wiring need to jumper at current input. Single-ended Input Type: Current Input Wiring need to jumper at voltage input, an options external 125 Ω resistor is required.		

Pin Assignments

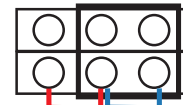


Terminal No.	Pin Assignment	
	Differential	Single-ended
01	Trig (*)	Trig (*)
02	AGND	AGND
03	Vin0+	Vin0
04	Vin0-	Vin8
05	Vin1+	Vin1
06	Vin1-	Vin9
07	Vin2+	Vin2
08	Vin2-	Vin10
09	Vin3+	Vin3
10	Vin3-	Vin11
11	Vin4+	Vin4
12	Vin4-	Vin12
13	Vin5+	Vin5
14	Vin5-	Vin13
15	Vin6+	Vin6
16	Vin6-	Vin14
17	Vin7+	Vin7
18	Vin7-	Vin15
19	AGND	AGND
20	AGND	AGND

(*): Trig :: Reserve, no actually use yet."

Input Type Selection

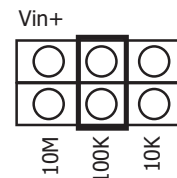
JP2 for I-8017HW
JP1 for I-8017HCW



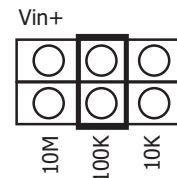
Differential Input
Single-ended Input

Input Impedance Select

JP3 for I-8017HW
and I-8017HCW



JP4 for I-8017HW
JP2 for I-8017HCW



Accessories

	2AB125R	125 Ω, 0.1% DIP Resistor used for Current Type Input Modules
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Ordering Information

I-8017HW-G CR	8/16-ch AI Module with 20-Pin Terminal Block (Current Input Mode: Requires Optional External 125 Ω Resistor) (Gray Cover) (RoHS)
I-8017HCW-G CR	8/16-ch Analog Input Module with 20-pin Terminal Block (Current Input Mode: Jumper Select) (Gray Cover) (RoHS)