



Introduction

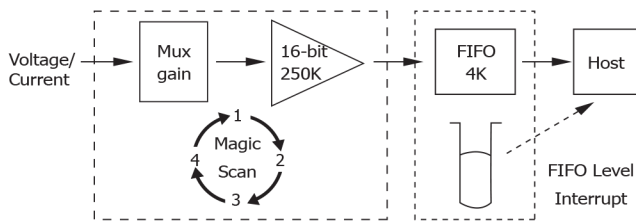
The I-8014W/I-8014CW is a high performance Analog Input module. The I-8014W provides up to 16 single-ended or 8 differential input channels, while the I-8014CW provides up to 8 differential input channels. Both modules feature 16-bit resolution, 250ks/s sampling rate, and a 4 k sample FIFO buffer, as well as providing 2500 Vrms isolation protection.

The I-8014W/I-8014CW module contains an impressive scan function called Magic Scan, which is able to improve many of the functions and meet the demands of high-end users. Magic Scan function can scan the individual input channels at different input range and when performing a multi-channel scan, the sampling rate can be maintained at 250ks/s.

The Magic Scan function on the I-8014W/I-8014CW module can be operated in two ways. The first is a standard scan and the other is a Virtual Sample and Hold function. The cost of almost all AI Cards is high if it includes a Sample and Hold function, but ICP DAS can now offer a low-cost alternative.

The I-8014W/I-8014CW module includes a 4 k sample onboard FIFO buffer for A/D conversion. The new FIFO technology uses a trigger interrupt signal, meaning that if the sampled count is higher than the pre-defined FIFO level, an interrupt signal will notify the host.

With the Magic Scan function and 4 k FIFO buffer, the I-8014W/I-8014CW can easily implement high-accuracy, high-speed and time-critical data acquisition applications.



System Specifications

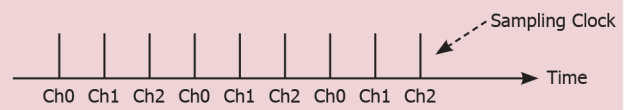
Model	I-8014W	I-8014CW
LED Display		
System LED Indicator	1 LED as Power Indicator	
Power		
Power Consumption	2.5 W Max.	
Mechanical		
Dimensions (W x L x H)	30 mm x 102 mm x 115 mm	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Humidity	5 ~ 95% RH, Non-condensing	

Features

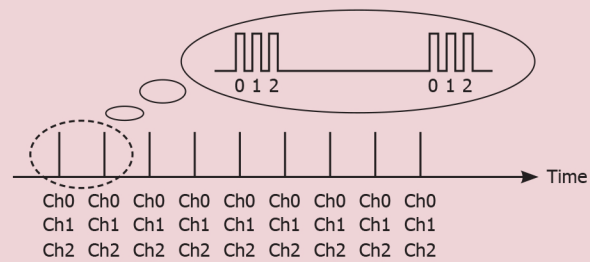
- I-8014W
 - 16 single-ended/8 differential input channels (jumper selectable)
 - Input Range : ± 10 V, ± 5 V, ± 2.5 V, ± 1.25 V, ± 20 mA
- I-8014CW
 - 8 differential input channels
 - Input Range : ± 20 mA
- 16-bit 250 KHz ADC converter
- 4 K-samples FIFO buffer
- External trigger mode : post-trigge
- Internal/external trigger start
- Magic Scan

Mode 1: Standard

Each sampling clock only samples a single.



Mode 2: Virtual Sample and Hold



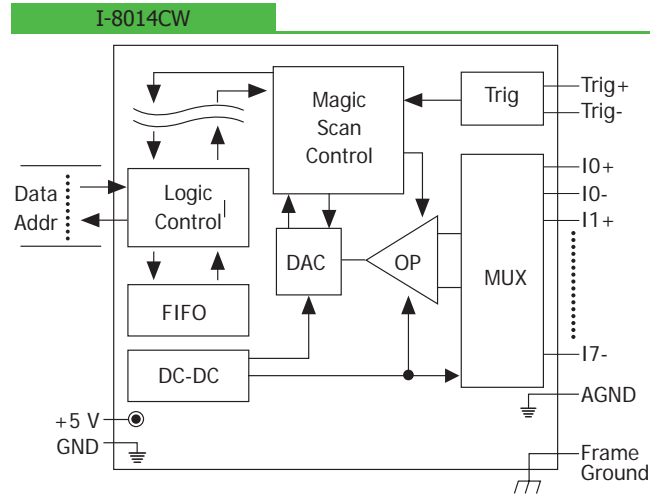
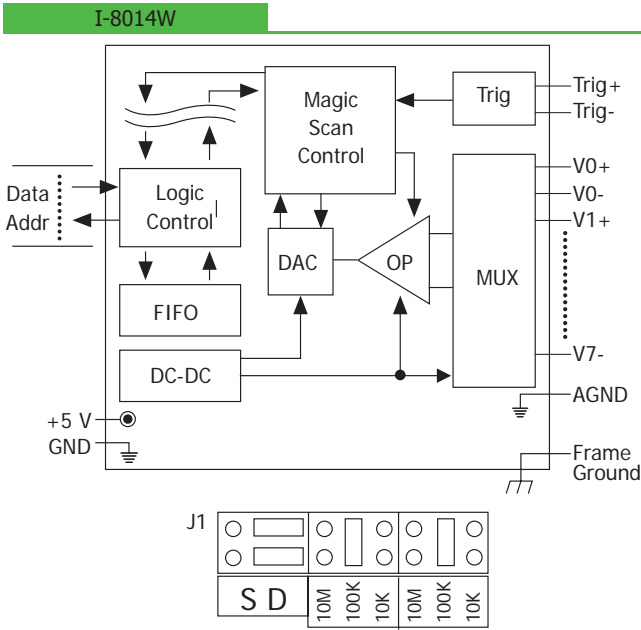
Applications

- High speed data acquisition systems
- Vibration analysis

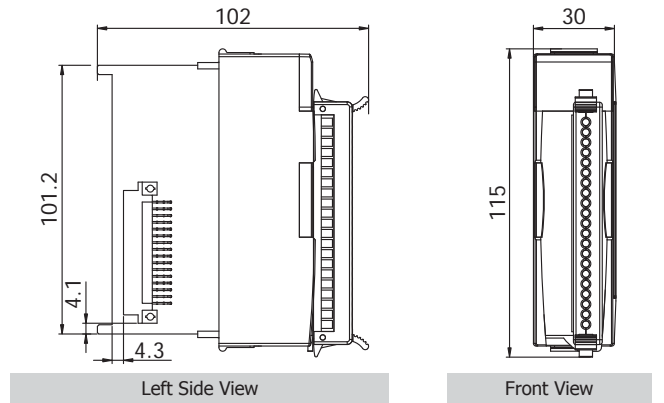
I/O Specifications

Model	I-8014W	I-8014CW
Analog Input		
Input Channels	16-ch Single-ended/8-ch Differential	8-ch Differential
Input Range	± 10 V, ± 5 V, ± 2.5 V, ± 1.25 V -20 mA ~ +20 mA (Requires Optional External 125 Ω Resistor)	-20 mA ~ +20 mA
Resolution	16-bit	
Sample Rate	Single Channel Polling Mode :250K S/s	
FIFO	4 K Words	
Accuracy	0.05% of FSR	
Input Mode	Polling , Pacer (Magic Scan)	
Magic Scan Mode	Mode1: standard mode	
	Mode2: virtual sample and hold	
Overvoltage protection	+60 V ~ -45 V	
Input Impedance	20 K, 200 K, 20 M (Jumper Select)	125 Ω
Intra-module Isolation, Field to Logic	2500 Vrms	

Internal I/O Structure



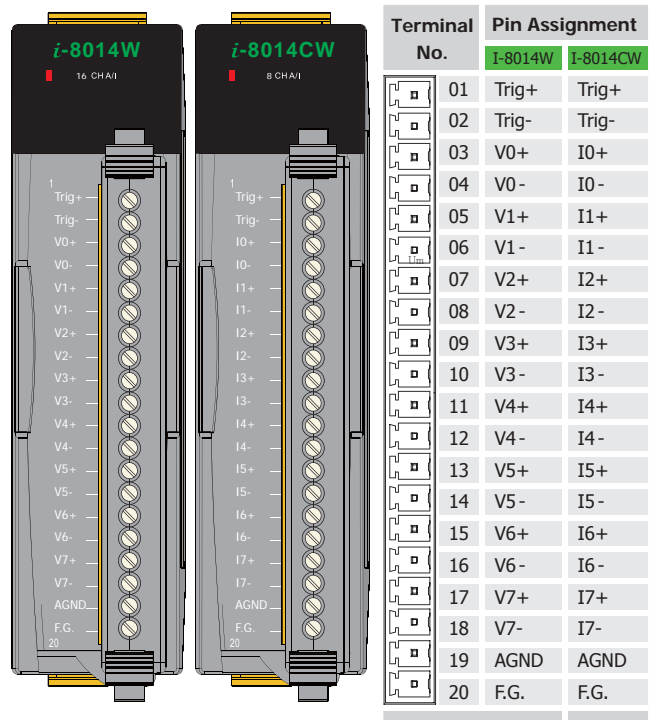
Dimensions (Units: mm)



Wire Connections

I-8014W	
Input Type	Differential
Voltage Input Wiring	
Current Input Wiring	
Input Type	Single-ended
Voltage Input Wiring	
Current Input Wiring	
I-8014CW	
Input Type	Differential
Current Input Wiring	

Pin Assignments



Ordering Information

I-8014W CR	16-bit, 250 K sampling rate, 16/8-channel analog input module (RoHS)
I-8014CW CR	16-bit, 250 K sampling rate, 8-channel analog input module (RoHS)