

I-8014W

250 KS/s, 16-bit, 16/8-channel
Voltage/Current Input Module

I-8014CW

250 KS/s, 16-bit, 8-channel
Current Input Module

Introduction

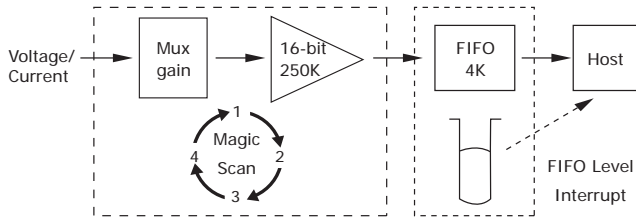
The I-8014W/I-8014CW is a high performance Analog Input module. The I-8014W provides up to 16 single-ended or 8 differential input channels, while the I-8014CW provides up to 8 differential input channels. Both modules feature 16-bit resolution, 250KS/s sampling rate, and a 4 k sample FIFO buffer, as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



General Specifications

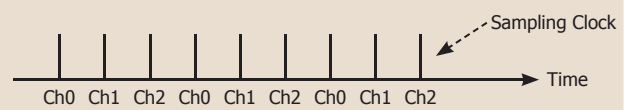
Model	I-8014W	I-8014CW
LED Display		
Power LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	-	
Isolation		
Intra-module Isolation, Field-to-Logic	2500 Vrms	
Power		
Power Consumption	2.5 W Max.	
Mechanical		
Dimensions (W x L x H)	30 mm x 102 mm x 115 mm	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Humidity	10 ~ 90% RH, non-condensing	

Features

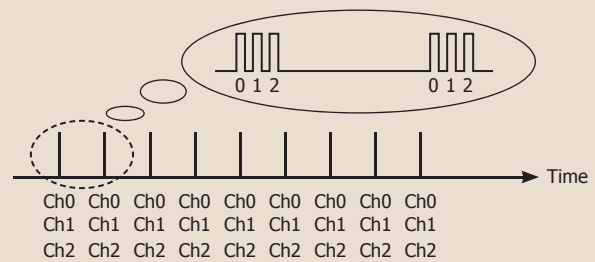
- I-8014W
 - 16 single-ended/8 differential input channels (jumper selectable)
 - Input Range : ± 1.25 V, ± 2.5 V, ± 5 V, ± 10 V, ± 20 mA
- I-8014CW
 - 8 differential input channels
 - Input Range : ± 20 mA
- 16-bit 250 KHz ADC converter
- 4 K-samples FIFO buffer
- External trigger mode : post-trigge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

Mode 1: Standard

Each sampling clock only samples a single.



Mode 2: Virtual Sample and Hold



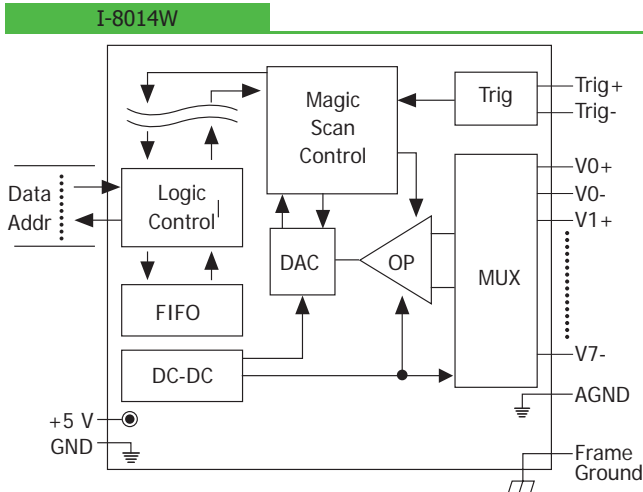
Applications

- High speed data acquisition systems
- Vibration analysis

I/O Specifications

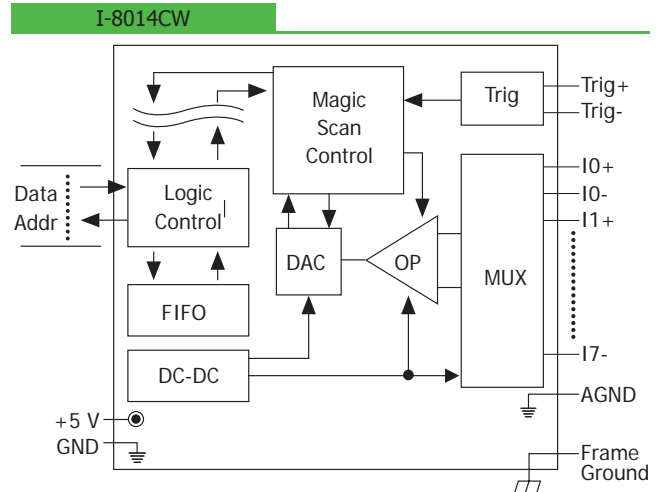
Model	I-8014W	I-8014CW
Analog Input		
Channels	16-ch Single-ended/8-ch Differential	8-ch Differential
Voltage Input Range	± 1.25 , ± 2.5 , ± 5 V, ± 10 V	-
Current Input Range	-20 mA ~ +20 mA (Requires Optional External 125 Ω Resistor)	-20 mA ~ +20 mA
Resolution	16-bit	
Sample Rate	Single Channel Polling 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	-45 V ~ +60 V	
Input Impedance	20 K, 200 K, 20 M (Jumper Select)	125 Ω

Internal I/O Structure

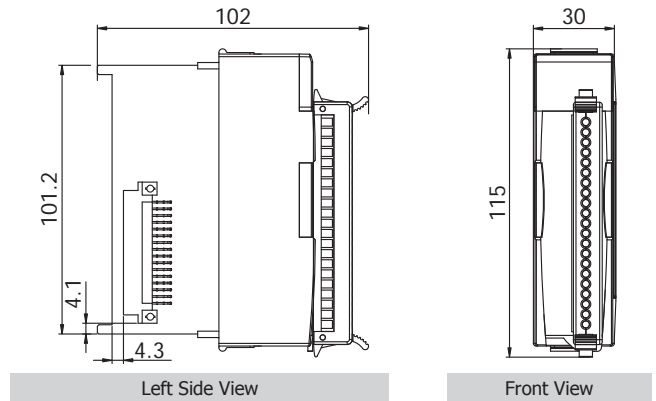


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S	D	10M	100K	10K	10K



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

Terminal No.	Pin Assignment	
	I-8014W	I-8014CW
01	Trig+	Trig+
02	Trig-	Trig-
03	V0+	10+
04	V0-	10-
05	V1+	11+
06	V1-	11-
07	V2+	12+
08	V2-	12-
09	V3+	13+
10	V3-	13-
11	V4+	14+
12	V4-	14-
13	V5+	15+
14	V5-	15-
15	V6+	16+
16	V6-	16-
17	V7+	17+
18	V7-	17-
19	AGND	AGND
20	F.G.	F.G.

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)