

## Introduction

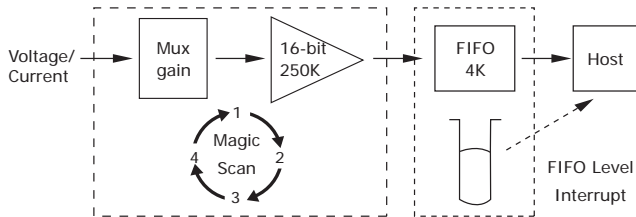
The I-9014/I-9014C is a high performance Analog Input module. The I-9014 provides up to 16 single-ended or 8 differential input channels, while the I-9014C provides up to 8 differential input channels. Both modules feature 16-bit resolution, 250kS/s sampling rate, and a 4 k sample FIFO buffer, as well as providing 2500 Vrms isolation protection.

The I-9014/I-9014C 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-9014/I-9014C 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-9014/I-9014C 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-9014/I-9014C can easily implement high-accuracy, high-speed and time-critical data acquisition applications.

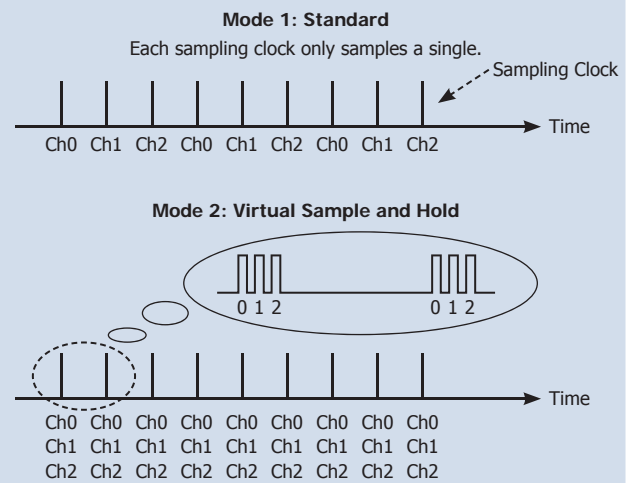


## System Specifications

Model	I-9014	I-9014C
<b>LED Indicators</b>		
Power LED Indicator	Yes	
I/O LED Indicator	-	
<b>Isolation</b>		
Intra-module Isolation, Field-to-Logic	2500 Vrms	
<b>Power</b>		
Power Consumption	2.5 W Max.	
<b>Mechanical</b>		
Dimensions (L x W x H)	144 mm x 31 mm x 134 mm	
<b>Environment</b>		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-40 ~ +85°C	
Humidity	10 ~ 90% RH, Non-condensing	

## Features

- I-9014
  - 16 single-ended/8 differential input channels (jumper selectable)
  - Input Range :  $\pm 1.25$  V,  $\pm 2.5$  V,  $\pm 5$  V,  $\pm 10$  V,  $\pm 20$  mA
- I-9014C
  - 8 differential input channels
  - Input Range :  $\pm 20$  mA
- 16-bit 250 KHz ADC converter
- 4 K-samples FIFO buffer
- External trigger mode : post-trigge
- Internal/external trigger start
- Magic Scan



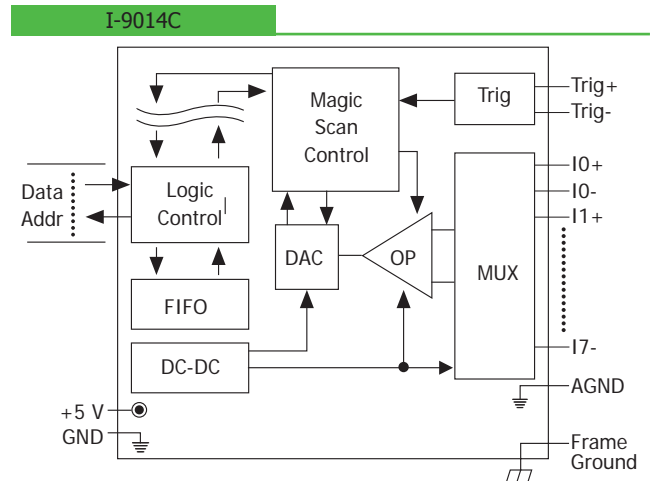
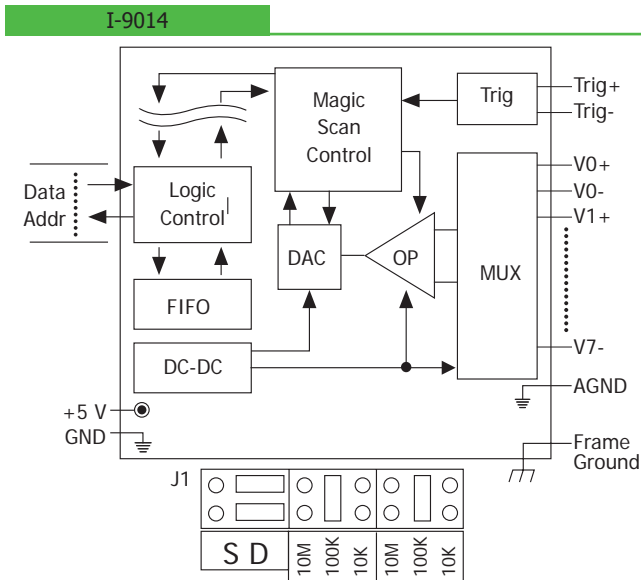
## Applications

- High speed data acquisition systems
- Vibration analysis

## I/O Specifications

Model	I-9014	I-9014C
<b>Analog Input</b>		
Channels	16-ch Single-ended/ 8-ch Differential	8-ch Differential
Voltage Input Range	$\pm 1.25$ , $\pm 2.5$ , $\pm 5$ V, $\pm 10$ V	-
Current Input Range	-20 mA ~ +20 mA (Requires Optional External 125 $\Omega$ 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 $\Omega$

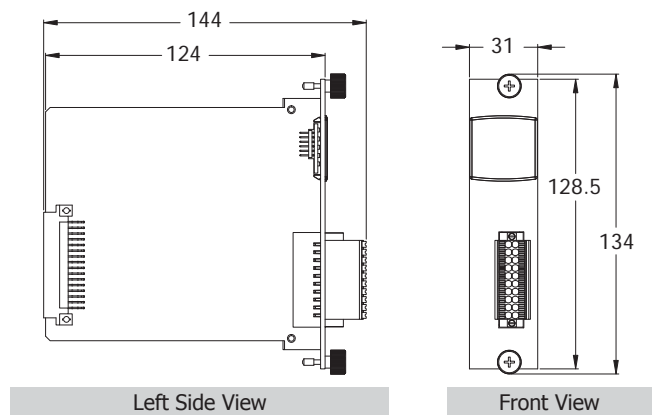
Internal I/O Structure



Wire Connections

I-9014	
<b>Input Type</b>	<b>Differential</b>
Voltage Input Wiring	
Current Input Wiring	
<b>Input Type</b>	<b>Single-ended</b>
Voltage Input Wiring	
Current Input Wiring	

Dimensions (Units: mm)



I-9014C	
<b>Input Type</b>	<b>Differential</b>
Current Input Wiring	

Pin Assignments

I-9014				
Pin Assignment	Terminal No.		Terminal No.	Pin Assignment
Trig+	01		02	Trig-
V0+	03		04	V0-
V1+	05		06	V1-
V2+	07		08	V2-
V3+	09		10	V3-
V4+	11		12	V4-
V5+	13		14	V5-
V6+	15		16	V6-
V7+	17		18	V7-
AGND	19		20	F.G.

I-9014C				
Pin Assignment	Terminal No.		Terminal No.	Pin Assignment
Trig+	01		02	Trig-
I0+	03		04	I0-
I1+	05		06	I1-
I2+	07		08	I2-
I3+	09		10	I3-
I4+	11		12	I4-
I5+	13		14	I5-
I6+	15		16	I6-
I7+	17		18	I7-
AGND	19		20	F.G.

Ordering Information

<b>I-9014 CR</b>	16-bit, 250 K sampling rate, 16/8-channel analog input module (RoHS)
<b>I-9014C CR</b>	16-bit, 250 K sampling rate, 8-channel analog input module (RoHS)