

# I-9012

200 kS/s, 16-bit 8 channels
Simultaneously Sampled Analog Input Module

## Features

- 16-bit AD Converter
- Simultaneously Sampled
- 200 kHz sample rate at single channel
- 8 k byte FIFO
- 4 kV ESD Protection
- 2500 VDC intra-module isolation
- Wide Operating Temperature Range: -25 ~ +75 °C

## Introduction

The I-9012 is a high performance Analog Input module with 16 bits of resolution and a sampling rate up to 200 kS/s per channel. The I-9012 provide 8 channels and input range could be programmable to ± 5 V, ± 10 V Trigger Output and Trigger Input Pin cloud make multitude of I-9012 modules Simultaneously Sampled at same time. And the module also provides 4 kV ESD protection and 2500 VDC intra-module isolation.

## System Specifications

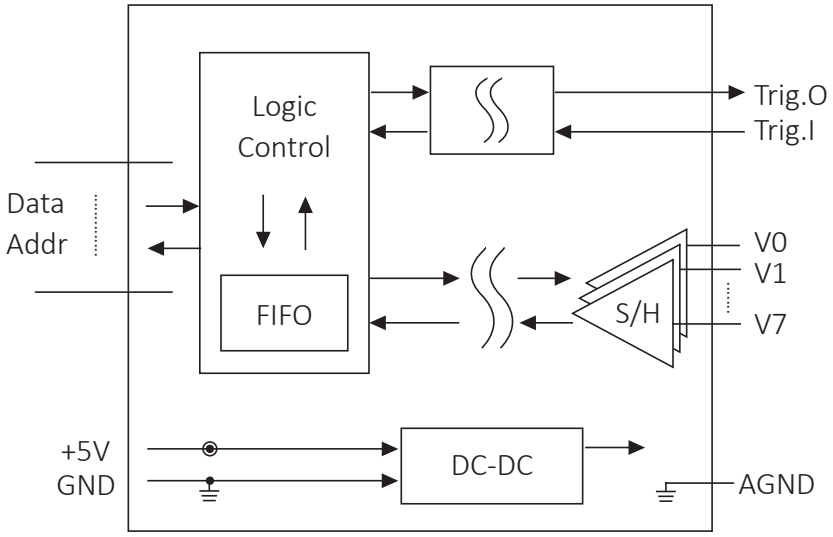
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|---|---|
| **LED Display** | |
| System LED Indicator | 1 LED as Power Indicator |
| **Isolation** | |
| Intra-module Isolation, Field-to-Logic | 2500 VDC |
| **EMS Protection** | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal<br>±8 kV Air for Random Point |
| **Power** | |
| Consumption | 1 W Max. |
| **Mechanical** | |
| Dimensions (W x L x H) | 31 mm x 134 mm x 144 mm |
| **Environment** | |
| Operating Temperature | -25 ~ +75 °C |
| Storage Temperature | -40 ~ +85 °C |
| Humidity | 10 ~ 90 % RH, Non-condensing |

## I/O Specifications

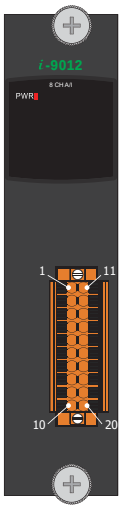
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| **Analog Input** | |
| Channels | 8-ch Single-ended |
| Input Range | ± 5 V, ±10 V |
| Resolution | 16-bit |
| Sample Rate | Single Channel Pacer Internal Mode: 200 kS/s<br>Single Channel Pacer External Mode: 200 kS/s<br>Single Channel Polling Mode: 40 kS/s |
| FIFO | 8 KB |
| Accuracy | 0.05 % of FSR @ 25 °C |
| AD Trigger Mode | Polling: Software Trigger<br>Pacer: Internal Clock, External Clock |
| **Trigger Ouput** | |
| Frequency Range | 16 Hz ~ 200 kHz |
| Compatibility | 5 V/TTL |
| Output Type | Pulse |
| Pulse Width | 100 ns/10 MHz |
| **Trigger Input** | |
| Frequency Range | 1 Hz ~ 200 KHz |
| Trig Edge | Falling Edge |
| Logic High | > 5 V |
| Logic Low | < 0.8 V |

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## Internal I/O Structure

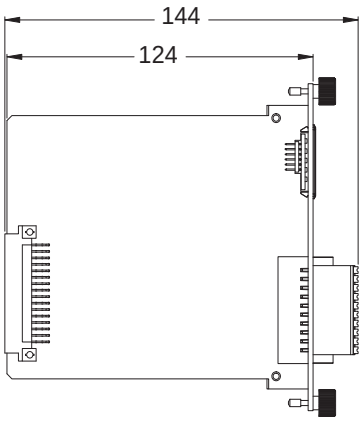



## Pin Assignments

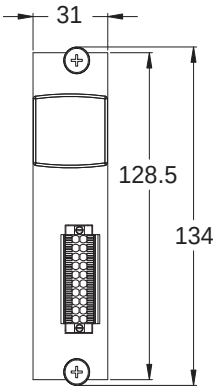



| Pin Assignment | Terminal No. | | Pin Assignment |
|---|---|---|---|
| Trig.O | 01 | 11 | GND |
| Trig.I | 02 | 12 | GND |
| AI0 | 03 | 13 | AGND |
| AI1 | 04 | 14 | AGND |
| AI2 | 05 | 15 | AGND |
| AI3 | 06 | 16 | AGND |
| AI4 | 07 | 17 | AGND |
| AI5 | 08 | 18 | AGND |
| AI6 | 09 | 19 | AGND |
| AI7 | 10 | 20 | AGND |

## Dimensions (Units: mm)

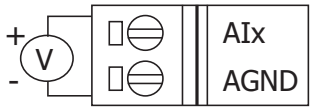
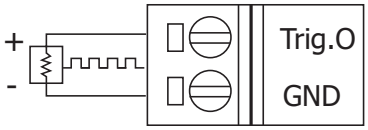
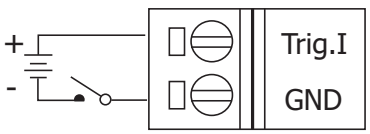



Left View




Front View

## Wire Connections

| Voltage Output Wiring | Trigger Output Wiring | Trigger Input Wiring |
|---|---|---|
|  |  |  |







## Ordering Information

| | |
|---|---|
| **I-9012 CR** | 8 channels Simultaneously Sampled Analog Input Module, 200 kS/s (RoHS) |

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