

MIC-1842

MIC-1842L

12-Bit, 20MS/s, 8/4-ch AI Platform with Intel® 6th Gen. Processor



Features

- 8 or 4 x Simultaneously Analog Inputs, up to 20 MS/s, 12-bit resolution
- Supports digital and analog triggers
- 32-ch TTL digital I/O
- Onboard FIFO memory (16 K samples)
- 2 x RS-232 ports
- 2 x 10/100/1000 Base-T RJ-45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports
- iDoor expansion supported

Introduction

MIC-1842 is a high performance DAQ platform featuring an integrated DAQ module and signal conditioning to provide high speed analog input, TTL digital I/O, and triggering functions. This application ready system also supports high speed networking and serial communication ports to enable seamless integration and rapid system development.

Specifications

Analog Input

- **Channels** 8-ch (MIC-1842-U4A1E)
4-ch (MIC-1842L-U0A1E)
- **Resolution** 12 bits
- **Sample Rate** Up to 20MS/s simultaneously
- **Trigger Reference** Digital and analog triggers
- **Trigger Mode** Start, Delayed Start
Stop, Delayed Stop
- **FIFO Size** 16K samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 50 or 1 M Ω , selected by jumper
- **Input Range** Software programmable

Bipolar	± 5	± 2.5	± 1	± 0.5
Gain Error (%FSR)	0.1	0.1	0.2	0.4
System Noise (LSB)	3	4	7	8

Isolated Digital Input

Channels	32 (shared), 5V/TTL compatible
Input Voltage	Low 0.8 V max.
	High 2 V min.
Output Voltage	Low 0.8 V max. @ +15mA (sink)
	High 2 V min. @ -15mA (source)
Input Load	100K Ω pull-down resistor connect to DGND

General

- **Dimensions (W x H x D)** 200mm x 180mm x 61mm ((7.87" x 7.09" x 2.4")
- **Power Consumption** Typ.: 20W @ 24V, Max.: 30W @ 24V
- **Power Requirements** 10 ~ 36 V_{DC}
- **Weight** 2 kg (typical)
- **OS Support** Windows / Linux

System Hardware

- **CPU** Intel® Core™ i5-6300U processor, 3.0 GHz (MIC-1842-U4A1E)
Intel® Celeron 3955U processor, 2.0 GHz (MIC-1842L-U0A1E)
- **Memory** 4GB DDR3L (Max. 16GB expansion available)
- **Indicators** LEDs for Power, IDE and LAN (Active, Status)
- **USB** USB 2.0 x 2, USB 3.0 x 2
- **Storage** 1 x 2.5" HDD/SSD, installation subject to ordered configuration
- **Expansion** Mini PCIe full size *1 (iDoor)
- **Display** HDMI x 1, VGA x 1

Environment

- **Storage Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F) @ 5 ~ 85% RH with 0.7m/s air flow
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)

Ordering Information

- **MIC-1842-U4A1E** 12-bit, 20MS/s, 8-ch AI platform with Intel® Core™ i5-6300U processor
- **MIC-1842L-U0A1E** 12-bit, 20MS/s, 4-ch AI platform with Intel® Celeron 3955U processor

Optional Accessories

- **1960099348N001** Table mount (220 x 156 mm)
- **PSD-A60W24** DIN Rail AC to DC 100-240V 60W 24V

* Supported by request; please contact Advantech if this is needed.