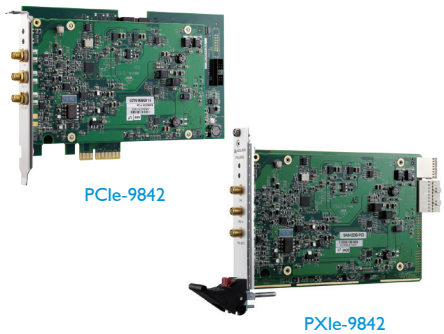
PCIe/PXIe-9842

1-CH 14-Bit 200 MS/s High-Speed PCI Express /PXI Express Digitizers



Introduction

The ADLINK PCIe/PXIe-9842 is a 1-CH 14-bit 200 MS/s digitizer designed for applications such as LIDAR testing, optical fiber testing, and radar signal acquisition. The 100 MHz bandwidth analog input with 50 ohm impedance is designed to receive ±1 V high speed signal. With this simplified front-end design and high stable onboard reference, the PCIe/PXIe-9842 not only provides high accuracy measurement results but also delivers high dynamic performance.

For applications that require data to be acquired and transferred in real time, the PCIe/PXIe-9842 utilizes the PCI Express x4 bus as its interface. When signals are converted from analog to digital data, data transfer to host system memory is continuous, enabled by the PCI Express' increased bandwidth.

Features

- **PXI Express specification Rev. 1.0 compliant (PXIe-9842)**
- **Up to 200 MS/s sampling rate**
- **High resolution 14-bit ADC**
- **±1 V Input range with 50 Ω input impedance and DC couple**
- **Up to 100 MHz bandwidth for analog input**
- **High speed PCI Express Gen 1 x4 bus interface**
- **Scatter-Gather DMA data transfer for high speed data streaming**
- **One external digital trigger input**
- **One digital trigger output to stimulate external instruments**
- **Full auto-calibration**

OS Information

- Windows XP/7/8, x64/x86

Software Compatibility

- LabVIEW, MATLAB, Visual Studio, Visual Studio.NET

Specifications

Analog Input

- Number of Channels: One single-ended channel
- Input Impedance: 50 Ω ± 2%
- Input Coupling: DC
- Input Signal Range: ±1.0 V
- Overvoltage Protection: ±5 V
- ADC Resolution: 14 bits, 1 in 16384
- Offset Error: ±1 mV
- Gain Error: ±0.5% of input
- -3dB Bandwidth: 100 MHz

Timebase

- Sample Clock Source: onboard oscillator
- Timebase Frequency: 200 MHz

Auto Calibration

- Reference Voltage: +5.000 V
- Reference Temperature drift: < 5.0 ppm/℃
- Recommended warm-up time: 15 minutes

Trigger

- Trigger Source
  - Software
  - External digital
  - PXI STAR (PXIe version)
  - PXI trigger bus [0..7] (PXIe version)
- Trigger Mode
  - Post-Trigger
- External Digital Trigger Input
  - Compatibility: 3.3 V TTL
  - Trigger condition: Rising edge or falling edge, software programmable
  - Minimum pulse width: 20 ns
- Digital Trigger Output
  - Compatibility: 3.3 V TTL
  - Trigger Condition: Positive or negative, software programmable

General Specifications

- Ambient temperature (Operational): 0°C to 55°C (32°F to 122°F)
- Ambient temperature (Storage): -20°C to 80°C (-4°F to 176°F)
- Relative humidity: 10% to 90% non-condensing
- Physical
  - Dimensions (not including connectors)
    - PCIe-9842: 175 mm (W) x 107 mm (H) (6.82" x 4.17")
    - PXIe-9842: 160 mm (W) x 100 mm (H) (6.24" x 3.9")
- IO Connector
  - SMA x 1 for analog input
  - SMA x 2 for external trigger input and trigger output
- Bus Interface
  - PCI Express Gen 1 x4

Certifications

- EMC/EMI: CE, FCC Class A

Ordering Information

PCIe-9842
1-CH 14-Bit 200 MS/s High-Speed PCI Express Digitizer

PXIe-9842
1-CH 14-Bit 200 MS/s High-Speed PXI Express Digitizer

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