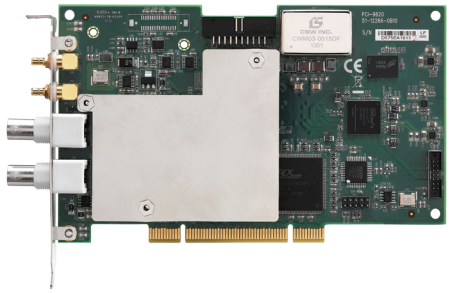
PCI-9820

2-CH 14-Bit 65 MS/s PCI Digitizers with DDR3 RAM

Features

- Supports a 32-bit 3.3 V or 5 V PCI bus
- 14-bit A/D resolution
- Up to 60 MS/s (with internal timebase) & 65 MS/s (with external timebase) sampling rate per channel
- 2-CH single-ended bipolar inputs
- 25MHz -3 dB bandwidth
- Up to 512 MB onboard DDR3 RAM
- Programmable ranges of ±1 V and ±5 V
- User-configurable input impedance of 50 Ω or high input impedance
- Scatter-gather DMA
- Analog and digital triggering
- Fully auto calibration
- Multiple modules synchronization capability



Introduction

ADLINK's PCI-9820 is a 65 MS/s, high-resolution PCI digitizer with deep DDR3 RAM memory. The device features flexible input configurations, including programmable input ranges and user-configurable input impedance. With the deep onboard acquisition memory, the PCI-9820 is not limited by the 132 MB/s bandwidth of PCI bus and can record the waveform for a long period of time. The PCI-9820 is ideal for high-speed waveform capturing, such as radar and ultrasound applications, as well as software radio applications, or those signal digitizing applications which need deep memory for data storage.

Supported Operating System

- Windows 7/8 x64/x86, Linux

Driver and SDK

- LabVIEW, MATLAB, C/C++, Visual Basic, Visual Studio.NET

Software Utility

- AD-Logger

Cable Accessories

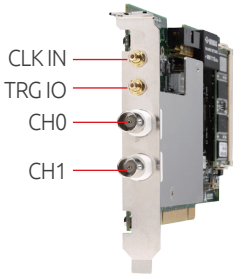
- **SMB-SMB-1M**
  1-meter SMB to SMB cable
- **SMB-BNC-1M**
  1-meter SMB to BNC cable
- **ACL-SSI-2**
  SSI Bus cable for 2 devices
- **ACL-SSI-3**
  SSI Bus cable for 3 devices
- **ACL-SSI-4**
  SSI Bus cable for 4 devices

Ordering Information

- **PCI-9820**
  2-CH 14-Bit 65 MS/s Digitizer

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Product Illustration



Specifications

Analog Input

- Number of channels: 2 simultaneous-sampled single-ended
- Resolution: 14 bits
- Maximum sampling rate
  - 65 MS/s for 2 inputs
- Onboard sample memory
  - 512 MB
- Bandwidth (-3 dB): 25MHz minimum
- Input signal ranges: (software programmable) ±5 V, ±1 V
- Input Coupling: DC
- Overvoltage protection

Range	Overvoltage Protection
± 5 V	± 14 V
± 1 V	± 5 V

- Input Impedance (soldering selectable): 50 Ω, 1.5 MΩ
- Crosstalk: < -80 dB, DC to 1 MHz
- Total harmonic distortion (THD): -75 dB
- Signal-to-Noise ratio (SNR)

Range	SNR
± 5 V	66 dB
± 1 V	62 dB

Auto Calibration

- Onboard reference: +5 V
- Onboard reference temperature drift: 2 ppm/˚C
- Stability: 6 ppm/1000 Hrs

External Timebase Input

- direct external timebase input
- Connector: SMB
- Impedance: 50 Ω
- Coupling: AC
- Input amplitude: 1 Vpp to 2 Vpp
- Overvoltage protection: 2.5 Vpp
- Frequency range: 500 kHz - 65 MHz

Triggering

- **Analog Triggering**
  - Modes: pre-trigger, post-trigger, middle-trigger, delay-trigger
  - Sources: CH0 and CH1
  - Coupling: DC
- **Digital triggering**
  - Modes: pre-trigger, post-trigger, middle-trigger, delay-trigger
  - Source: external digital trigger from SMB
  - Compatibility: 5 V/TTL

General Specifications

- I/O connector
  - BNC x 2 for analog inputs
  - SMB x 4 for external digital trigger, external time base, and synchronous digital inputs
- Operating temperature: 0˚C to 50˚C (32˚F to 122˚F)
- Storage temperature: -20˚C to 80˚C (-4˚F to 176˚F)
- Relative humidity: 10% to 90%, non-condensing
- Power requirements

Power Rail	Current
	PCI-9820
5 V	895 mA
12 V	295 mA
3.3 V	430 mA (with 512 MB SDRAM)

- Dimensions (not including connectors)
  175 mm x 107 mm (6.82” x 4.17”)

Certifications

- EMC/EMI: CE, FCC Class A

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