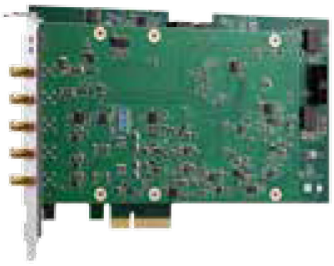
PCIe-9852

2-ch 14-bit 200 MS/s High-Speed PCI Express Digitizer

Features

- Up to 200 MS/s sampling rate
- 2 simultaneous analog inputs
- High resolution 14-bit ADC
- Up to 90 MHz bandwidth for analog input
- 2 GB onboard storage memory
- Programmable input voltage range of ±0.2V, ±2V, or ±10V
- Scatter-Gather DMA data transfer for high speed data streaming
- Full auto-calibration



Introduction

The ADLINK PCIe-9852 is a 2-ch 14-bit 200 MS/s digitizer for high frequency and wide dynamic range signals with an input frequency up to 90 MHz. The 90 MHz bandwidth analog input with 50Ω impedance is designed to receive ±0.2 V, ±2 V, or ±10 V high speed signals. With a PCI Express bus interface and ample onboard acquisition memory up to 1 GB, the PCIe-9852 easily manages simultaneous 2-ch data streaming.

With high speed and high linearity 14-bit A/D converters and high stable onboard reference, the PCIe-9852 provides both high accuracy and high dynamic performance, making it ideal for applications requiring high-speed data acquisition, such as optical fiber and LIDAR testing, and video signal analysis.

Highlights

Data Streaming Up to 800MB/s

Based on PCI Express Gen 2 technology, the PCIe-9852 can stream data on both channels at its maximum data rate (200 MS/s), and continuously stream data to the host PC at rates up to 800 MB/s. An 8 x 500 GB driver RAID system (4TB) extends capture sessions to more than one hour.

Onboard Signal Averaging Technology

Every PCIe-9852 provides onboard Signal Averaging, allowing detection of small repetitive signals in noisy environments with no CPU loading, suitable for applications requiring extraction of small signals from background noise such as optical fiber testing.

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Ordering Information

PN	Description
PCIe-9852	2-ch 14-bit 200 MS/s High-Speed PCI Express Digitizer

SSI Bus Cables (for multiple card synchronization)

PN	Description
ACL-eSSI-2/3/4	SSI bus cable for two, three, and four devices

Supported Operating Systems

- Windows 10/11, Linux

Driver and SDK

- C/C++, C#, LabVIEW

Specifications

Model Name	PCIe-9852	
Analog Input		
Number of Channels	2 single-ended	
Input Coupling	AC or DC, software selectable	
Bandwidth	90MHz	
Input Impedance	50Ω or 1MΩ, software selectable	
Input Range	±0.2 V, ±2 V, ±10 V	
ADC Resolution	14 bits	
Gain Error	±0.65% of reading	
Offset Error	±1 mV	
Crosstalk	< -80 dB	
Spectral Characteristics	SINAD	62 dB
	SNR	62 dB
	THD	-81 dB
	ENOB	10 bits
	SFDR	83 dB
Triggering		
Trigger Sources	Software External digital Analog inputs SSI	
Trigger Modes	Post-trigger Pre-trigger Middle trigger Delay trigger	
Timebase		
Timebase Options	Internal clock (onboard synthesizer) External clock (front panel CLK IN)	
Sampling Clock Frequency	Internal clock: 200M Hz (accuracy: < ±25 ppm) External clock: 40M Hz ~ 200M Hz	
External Reference Clock Source	Front panel, SSI	
External Reference Clock	10M Hz or 100M Hz	
External Reference Clock Input Range	500mVpp ~ 5Vpp (AC/DC compliant)	
External Sampling Clock Input Range	1Vpp ~ 5Vpp (AC/DC compliant)	

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Specifications

General Specifications	
I/O Connector	SMA x 2 for analog inputs SMA x 1 for external trigger input SMA x 1 for external trigger output SMA x 1 for external clock input
Dimensions (not including connectors)	167.64 (W) x 106.68 (H) mm (6.53" x 4.16")
Bus Interface	PCI Express x4
Ambient Temperature (Operating)	0°C to 50°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
Power Consumption	11 Wmax
Certifications	
EMC/EMI	CE, FCC Class A

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