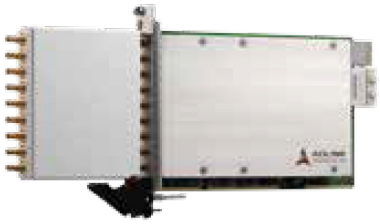
PXIe-9848H

8-ch 14-bit 100 MS/s High-Speed PXI Express Digitizer

Features

- Up to 100 MS/s sampling rate
- 8 simultaneous analog inputs
- High resolution 14-bit ADC
- Up to 100 MHz bandwidth for analog input
- 4 GB onboard storage memory
- Programmable input voltage range of ±0.2V, ±2V, or ±100V Max (with x15/x50 attenuator)
- Scatter-Gather DMA data transfer for high speed data streaming
- Full auto-calibration



Introduction

The ADLINK PXIe-9848H is an 8-channel, 14-bit, 100 MS/s digitizer delivering both high-accuracy measurement results and high-dynamic performance. With a PXI Express bus interface and ample onboard acquisition memory up to 512 MB, the PXIe-9848H can easily manage simultaneous 8-ch data streaming. High density and high speed digitizer features ideally position the PXIe-9848H for applications such as LIDAR, radar signal acquisition, and PSU (Power Supply Unit) testing applications.

The PXIe-9848H provides a flexible set of input ranges from ±0.2V to ±2V, software selectable 50Ω or 1MΩ input impedance, a wide variety of triggering options and tight synchronization capability, all maximizing convenience of use. In addition, the PXIe-9848H features a x15/x50 signal conditioning module providing both high input voltage range of ±100V and high dynamic performance, delivering the optimum solution to measurement range expansion in a PXI system.

Highlights

Flexible Use Options

The PXIe-9848H provides a flexible input range from ±0.2V to ±2V, software selectable 50Ω or 1MΩ input impedance, a wide variety of triggering options, and tight synchronization capability, all maximizing convenience of use.

High Density Simultaneous 8-ch Data Streaming

Benefiting from PXIe architecture, the PXIe-9848H easily manages simultaneous 8-ch data streaming. Users can synchronize multiple PXIe-9848H digitizers to mount a test system providing up to 64 channels in a single 9-slot PXI Express chassis.

Extra Buffering

The PXIe-9848H provides built-in memory up to 512MB for massive data storage, enabling users to extend acquisition for preset durations.

x15/x50 Signal Conditioning Module of PXIe-9848H

The PXIe-9848H's signal conditioning module provides 8 simultaneous analog inputs and 15:1 or 50:1 attenuation ratio, implemented with solid product design and strict verification testing to ensure maximum performance, thereby enabling the high dynamic performance of 63.5 dB SFDR and 55.5 dB SINAD while supporting a high input voltage range of ±100V.

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Ordering Information

PN	Description
PXIe-9848H	8-ch 14-bit 100 MS/s High Speed PXI Express Digitizer with x15/x50 attenuator

Supported Operating Systems

- Windows 10/11, Linux

Driver and SDK

- C/C++, C#, LabVIEW

Specifications

Model Name	PXIe-9848H	
Analog Input		
Number of Channels	8 single-ended	
Input Impedance	50Ω or 1MΩ, software selectable	
Input Coupling	AC or DC, software selectable	
Input Range	±0.2 V, ±2 V, ±100 V Max (with x15/x50 attenuator)	
ADC Resolution	14 bits	
Bandwidth	100 MHz 45 MHz (with x15 attenuator) 35 MHz (with x50 attenuator)	
Offset Error	±1 mV ±2 mV (with x15/x50 attenuator)	
Gain Error	±0.5% of reading ±1% of reading (with x15/x50 attenuator)	
System Noise	18 LSBrms 38 LSBrms (with x15 attenuator) 22 LSBrms (with x50 attenuator)	
Spectral Characteristics	SINAD	65 dB 55 dB (with x15 attenuator) 58 dB (with x50 attenuator)
	SNR	66 dB 55 dB (with x15 attenuator) 58 dB (with x50 attenuator)
	THD	-72 dB -75 dB (with x15 attenuator) -78 dB (with x50 attenuator)
	ENOB	10.58 bits 9 bits (with x15 attenuator) 9.5 bits (with x50 attenuator)
	SFDR	74 dB 59 dB (with x15 attenuator) 68 dB (with x50 attenuator)

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Specifications

Triggering	
Trigger Sources	Software External digital trigger Analog trigger from CH0 ~ CH7 PXI_STAR PXI trigger bus [0..7] PXIe_DSTARB
Trigger Modes	Post-trigger Pre-trigger Middle trigger Delay trigger
Timebase	
Sample Clock Source	Internal clock (onboard oscillator) External clock (PXI_CLK10 or PXIe_CLK100)
Sample Clock Frequency	Internal clock: 100M Hz (accuracy: < ±25 ppm)
General Specifications	
I/O Connector	SMB x 8 for analog inputs SMB x 1 for external digital input
Dimensions (not including connectors)	271.24 (W) x 100 (H) mm (10.57" x 3.9")
Bus Interface	PCI Express x4
Ambient Temperature (Operating)	0°C to 55°C (32˚F to 131˚F)
Ambient Temperature (Storage)	-20°C to 80°C (-4˚F to 176˚F)
Relative Humidity	10% to 90%, non-condensing
Power Consumption	25.5 Wmax
Certifications	
EMC/EMI	CE, FCC Class A

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