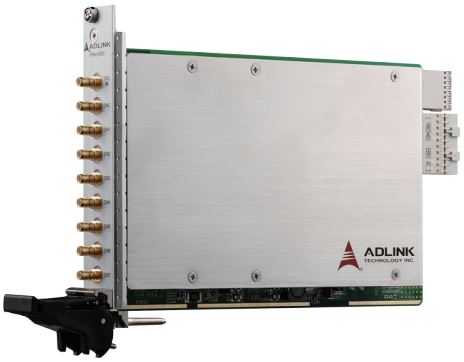
PXIe-9529H

8-Ch, 24-Bit, High-Resolution Dynamic Signal Acquisition PXI Express Module



Features

- 24-bit high resolution
- 8 simultaneous analog inputs
- 256 kS/s maximum sampling rate with 105 dB dynamic range
- AC (0.3 Hz) or DC coupling, software selectable
- IEPE – 4 mA, software configurable

Introduction

The ADLINK PXIe-9529H is a high-performance, high-density dynamic signal acquisition module featuring up to eight 24-bit analog input channels. It is capable of simultaneous sampling at 256 kS/s with a 105 dB dynamic range, providing robust capability for high-density, high-channel-count signal measurements.

The PXIe-9529H is optimized for vibration applications and offers a low AC cutoff frequency of 0.3 Hz. Each input channel includes a 4 mA bias current for integrated electronic piezoelectric (IEPE) signal conditioning, supporting accelerometers and microphones. These features make the module ideal for machine condition monitoring, NVH (Noise, Vibration, and Harshness) analysis, and phased array data acquisition applications.

Ordering Information

- **PXIe-9529H**
  8-Ch, 24-Bit, High-Resolution Dynamic Signal Acquisition PXI Express Module

Software Support

- **Operating Systems**
  Windows 10/11, Linux
- **Driver and SDK**
  C/C++, C#, LabVIEW

Specifications

Model		PXIe-9529H
Analog Input		
Number of Channels		8 (simultaneously)
Resolution		24-bit
Sampling Rate		8 kS/s to 256 kS/s
Bandwidth (-3 dB)		0.433FS
Input Range		±1 V, ±10 V
Input Configuration		Differential, Pseudo-differential
Input Impedance	Between positive input and system ground	1 MΩ
	Between negative input and system ground	Differential configuration: 1 MΩ Pseudo-differential configuration: 50 Ω
Input Coupling		AC, DC (software selectable)
AC Coupling Cutoff Frequency (-3 dB)		0.3 Hz
Integrated Electronic Piezoelectric (IEPE)		Current: 4 mA for each channel IEPE compliance: 24 V
Overvoltage protection	Differential	± 42.4V
	Pseudo-differential	Positive terminal: ± 42.4V Negative terminal: Not protected, rated at ± 2.5V
Offset Error		± 0.2 mV max
Gain Error		± 0.05% max
System Noise		40 μVrms (fs = 256 kS/s)
SNR	±1 V input range	91 dB (fs = 256 kS/s)
	±10 V input range	93 dB (fs = 256 kS/s)
THD	±1 V input range	-118 dB (fs = 256 kS/s)
	±10 V input range	-113 dB (fs = 256 kS/s)
Dynamic Range	±1 V input range	104 dB (fs = 256 kS/s)
	±10 V input range	105 dB (fs = 256 kS/s)
Crosstalk		-130 dB
Trigger		
Trigger Source		Software trigger, analog trigger, external digital trigger, PXI STAR trigger, PXI trigger bus [0..7]
Trigger Mode		Post trigger, delay trigger
External Digital Trigger		5 V TTL compatibility Trigger polarity: Rising edge, falling edge Pulse width: 20 ns minimum
Timebase		
Delay Trigger Timebase		125 MHz
Sample Clock Timebase		Internal: Onboard synthesizer (10 MHz) External: PXIe backplane 10 MHz
General Specifications		
I/O Connector		SMB x 8 for analog inputs SMB x 1 for external digital input
Dimensions		160 (W) x 100 (H) mm (6.3” x 3.94”) (not including connectors)
Weight		0.4 kg (0.9 lbs)
Ambient Temperature		Operating: 0°C to 55°C (32˚F to 131˚F) Storage: -20°C to 80°C (-4˚F to 176˚F)
Relative Humidity		10% to 90%, non-condensing
Certifications		EMC/EMI: CE, FCC Class A