

PXI-6143 8-Channel Data Acquisition Module

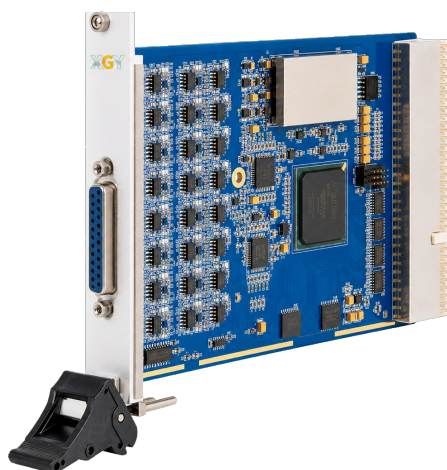
16-bit 100 kSa/s parallel CPCI/PXI acquisition module with 50 kHz bandwidth

At a Glance

PXI-6143 is an 8-channel 16-bit parallel data acquisition module for 3U CPCI/PXI systems.

The module supports up to 100 kSa/s sampling rate, 50 kHz bandwidth, differential input channels, and software-selectable AC or DC coupling.

Onboard data storage is 128 MB typical and can be expanded to 256 MB for continuous acquisition workflows.

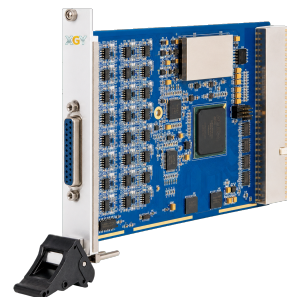


PXI-6143 8-Channel Data Acquisition Module

Product Overview

PXI-6143 provides eight differential acquisition channels with parallel sampling in a compact 3U CPCI/PXI module.

The module is designed for measurement and control systems that require programmable input ranges, trigger support, and buffered data transfer.



Key Features

- **Eight Differential Channels**

Eight differential input channels support multi-point data acquisition.

- **16-Bit, 100 kSa/s**

The module supports 16-bit acquisition with sampling rates up to 100 kSa/s.

- **Selectable Input Ranges**

Input ranges from ± 0.5 V to ± 50 V support a wide range of sensors and signals.

- **Parallel Acquisition**

Parallel acquisition supports synchronized capture across channels.

- **Trigger Support**

External TTL, channel-level, PXI, and software triggers are supported.

- **Buffered Storage**

Onboard storage is 128 MB typical and expandable to 256 MB.

Technical Specifications

Input and Acquisition	
Channel Count	8 channels, differential
Resolution	16 bits
Sampling Rate	100 kSa/s maximum, integer division, 1 Hz minimum
Acquisition Mode	Parallel acquisition
Input Range	+/-50 V
Range Grades	+/-0.5 V, +/-1 V, +/-2.5 V, +/-5 V, +/-10 V, +/-25 V, +/-50 V
Bandwidth	50 kHz
Input Impedance	1 Mohm
Input Coupling	DC or AC, software selectable
Storage, Accuracy, and Trigger	
Data Storage	128 MB typical, expandable to 256 MB
Transfer Rate	>=20 MB/s
DC Accuracy	+/-0.4% FSR, average calculation
AC Accuracy	+/-0.6% FSR, RMS calculation, f < 5 kHz
Trigger Mode	External TTL, channel-level, PXI, and software trigger
Trigger Edge	Rising edge or falling edge
Trigger Count	Single trigger
Trigger Output	TTL front-panel output, 3.3 V / TTL level
System	
Operating System	Windows 7 / Windows 8 / Windows 10 / Linux
Driver Support	VISA-based PNP driver
Form Factor	3U single-width, 4HP

Environmental Grades

Condition	Commercial C	Industrial I	Military J
Operating Temperature	0 to +50 deg C	-20 to +50 deg C	-40 to +50 deg C
Storage Temperature	-20 to +70 deg C	-40 to +70 deg C	-55 to +85 deg C
Humidity	95% @ 25 deg C, non-condensing	95% @ 25 deg C, non-condensing	95% @ 25 deg C, non-condensing

Temperature values are specified in degrees Celsius.

Ordering Information

Model	Description	Availability
	Default Configuration	
PXI-6143	8-channel data acquisition module; 16 bits; 100 kSa; commercial grade	Standard
PXI-6143-I	8-channel data acquisition module; 16 bits; 100 kSa; industrial grade	Optional
PXI-6143-J	8-channel data acquisition module; 16 bits; 100 kSa; military grade	Optional
3002028	DB62 pin plug adapter cable, 50 cm length, with wire labels	Standard

Default configuration is PXI-6143, 8 channels, 16 bits, 100 kSa, commercial grade.

Ordering format is PXI-6143-X, where X selects the temperature grade: C for commercial grade, I for industrial grade, and J for military grade.

Packing List

Item	Description	Quantity
8-Channel DAQ Module	8 channels; 16 bits; 100 kSa; commercial grade	1 unit
Accessory Cable	DB62 pin plug adapter cable, 50 cm length, with wire labels	1 set
User Manual	Product use and maintenance information	1 copy
Certificate of Conformance	Factory inspection certificate	1 copy

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Specifications subject to change without notice. Per AS/NZS standards.