

PXI-6217X 64-Channel Scanning Data Acquisition Module

16-bit 500 kSa/s CPCI/PXI module with voltage, current, and TTL digital I/O support

At a Glance

PXI-6217X is a 3U CPCI/PXI scanning data acquisition module for multi-channel measurement and control systems.

The module supports up to 64 voltage acquisition channels, 32 current acquisition channels, and 32 TTL digital I/O channels.

It provides 16-bit resolution, 500 kSa/s total sampling rate, per-channel sampling-rate configuration, and flexible input/output direction control.

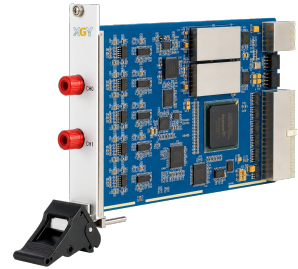


PXI-6217X 64-Channel Scanning Data Acquisition Module

Product Overview

PXI-6217X combines analog acquisition and programmable digital I/O in a compact PXI module for laboratory, industrial, and embedded test platforms.

Voltage channels can be configured as 64 single-ended inputs or 32 differential inputs, while current acquisition and grouped TTL I/O expand mixed-signal test coverage.



Key Features

- **64 Voltage Channels**

Supports 64 single-ended voltage channels or 32 differential voltage channels.

- **16-Bit, 500 kSa/s**

Provides 16-bit acquisition with 500 kSa/s total sampling frequency across channels.

- **Flexible Ranges**

Single-ended ± 60 V and differential ± 30 V ranges support independently configurable gains.

- **Current Acquisition**

Current input ranges include 0 to 24 mA with 24 mA, 12 mA, 6 mA, and 3 mA ranges.

- **32-Channel TTL I/O**

Four 8-channel groups can be independently configured for input or output direction.

- **PXI Integration**

VISA-based PNP driver support is provided for Windows and Linux environments.

Technical Specifications

Acquisition	
Voltage Channels	64 single-ended channels or 32 differential channels
Resolution	16 bits
Sampling Rate	500 kSa/s total sampling frequency; per-channel rate configurable
Frequency Division	Arbitrary frequency-division coefficient supported
Voltage Input Range	Single-ended +/-60 V; differential +/-30 V; gain 1 / 2 / 4 / 8, independently configurable by channel
Current Input Range	0 to 24 mA; 24 mA, 12 mA, 6 mA, and 3 mA ranges
Data Storage	2 MB per channel
Accuracy	
Voltage Accuracy	DC +/-0.05% FSR with averaging; AC +/-0.1% FSR with RMS calculation, $f < 1$ kHz
Current Accuracy	DC +/-0.1%
Digital I/O	
Digital Channels	32 channels total
Direction Control	4 groups, 8 channels per group; each group configurable as input or output
Logic Level	5 V TTL
Drive Current	24 mA per channel
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-6217	64-channel voltage acquisition, 32-channel digital I/O, commercial grade	Standard
PXI-6217H	32-channel differential voltage acquisition, commercial grade	Optional
PXI-6217B32	32 voltage channels, 32 current acquisition channels, 32 digital I/O channels, commercial grade	Standard
PXI-6217X-I	Voltage/current acquisition, 32-channel digital I/O, industrial grade	Optional
PXI-6217X-J	Voltage/current acquisition, 32-channel digital I/O, military grade	Optional
3002016	J30J-51TJL cable, 50 cm, with wire labels	Standard
3002008	J30JA-74TJ cable, 50 cm, with wire labels	Optional

Default configuration is PXI-6217, 64-channel voltage acquisition and 32-channel digital I/O data acquisition module, commercial grade.

Ordering format is PXI-6217X-X. Temperature grade options are C for commercial default, I for industrial, and J for military. Subtype options include the default 64-channel voltage configuration, B32 for 32 voltage channels plus 32 current channels, and H for the naval-standard interface.

3002016 applies to PXI-6217. 3002008 applies to PXI-6217H.

Packing List

Item	Description	Quantity
64-Channel Data Acquisition Module	64-channel voltage acquisition and 32-channel digital I/O, commercial grade	1 unit
Accessory Cable	J30J-51TJL cable, 50 cm, with wire labels	2 sets
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.