PXIe-2532 Specifications

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Contents

PXIe-2532 Specifications

This document lists specifications for the PXIe-2532. All specifications are subject to change without notice.

PXI-2532B Specifications

> **Caution** The protection provided by the PXIe-2532 can be impaired if it is used in a manner not described in this document.

Definitions

Warranted specifications describe the performance of a model under stated operating conditions and are covered by the model warranty.

Characteristics describe values that are relevant to the use of the model under stated operating conditions but are not covered by the model warranty.

- ***Typical*** specifications describe the performance met by a majority of models.
- ***Nominal*** specifications describe an attribute that is based on design, conformance testing, or supplemental testing.

Specifications are ***Warranted*** unless otherwise noted.

Conditions

Specifications are valid at 23 °C unless otherwise noted.

All voltages are specified in DC, AC_{pk}, or a combination unless otherwise specified.

Topology

Topologies	1-wire 4 x 128 matrix 1-wire 8 x 64 matrix 1-wire 16 x 32 matrix 1-wire dual 4 x 64 matrix 1-wire dual 8 x 32 matrix 1-wire dual 16 x 16 matrix 1-wire sixteen 2 x 16 matrix 2-wire 4 x 64 matrix 2-wire 8 x 32 matrix 2-wire 16 x 16 matrix

Input

Caution

This module is rated for Measurement Category I and intended to carry signal voltages no greater than 100 V. This module can withstand up to 500 V impulse voltage. Do not use this module for connection to signals or for measurements within Categories II, III, or IV. Do not connect to MAINs supply circuits (for example, wall outlets) of 115 or 230 VAC.

Caution When hazardous voltages (>42.4 V_{pk}/ 60 VDC) are present on any relay terminal, safety low-voltage (<42.4 V_{pk}/60 VDC) cannot be connected to any other relay terminal.

Maximum switching voltage

Channel-to-channel	100 V
Channel-to-ground	100 V, CAT I
Maximum current	0.5 A (switching or carry, per channel)
Maximum switching power[1]	10 W (per channel)
DC path resistance[2]	
Initial	<1 Ω, warranted
End-of-life	≥2 Ω
Open channel	$>1 \times 10^9$ Ω
Thermal EMF	
1-wire	<50 µV
2-wire	<20 µV
Bandwidth (-3 dB, 50 Ω termination)	
1-wire row/column	≥30 MHz
2-wire row/column	≥25 MHz
Channel-to-channel crosstalk (50 Ω termination) Channel-to-channel	

10 kHz	<-89 dB
100 kHz	<-73 dB
1 MHz	<-54 dB
Open channel isolation (50 Ω termination) Open channel	
10 kHz	>91 dB
100 kHz	>71 dB
1 MHz	>51 dB

Dynamic

Simultaneous drive limit	64 relays
Relay operate time[3]	0.25 ms
Release time	0.25 ms
Relay life (no load)[4][5][6]	
Mechanical	1×10^9 cycles, typical
Electrical (resistive, <10 pF load)	

10 V, 100 mA	1×10^7 cycles, typical
20 V, 500 mA	5×10^6 cycles, typical
100 V, 10 mA	5×10^5 cycles, typical

Trigger

Input trigger[7]		
Sources		PXI trigger lines <0...7>
Minimum pulse width		150 ns
Output trigger		
Destinations	PXI trigger lines <0...7>	
Pulse width	Software-selectable: 1 µs to 62 µs	

Physical

Relay type[8]	Reed
Relay contact material	Rhodium

I/O connectors	2, 160 pos, Samtec BTE-EM series
Power requirement	
PXI	
5 V	10 W
3.3 V	2 W
PXI Express	
12 V	15 W
3.3 V	2 W
Dimensions (L × W × H)	3U, one slot, PXI/cPCI module, PXI Express compatible 18.5 × 2.0 × 13.0 cm (7.3 × 0.8 × 5.1 in.)
Weight	454 g (1 lb)

Environment

Operating temperature	0 °C to 55 °C
Storage temperature	-20 °C to 70 °C
Relative humidity	5% to 85%, noncondensing

Pollution Degree	2
Maximum altitude	2,000 m

Indoor use only.

Shock and Vibration

Operational Shock	30 g peak, half-sine, 11 ms pulse (Tested in accordance with IEC 60068-2-27. Test profile developed in accordance with MIL-PRF-28800F.)
Random Vibration	
Operating	5 Hz to 500 Hz, 0.3 g_{rms}
Nonoperating	5 Hz to 500 Hz, 2.4 g_{rms} (Tested in accordance with IEC 60068-2-64. Nonoperating test profile exceeds the requirements of MIL-PRF-28800F, Class 3.)

Compliance and Certifications

Safety Compliance Standards

This product is designed to meet the requirements of the following electrical equipment safety standards for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA C22.2 No. 61010-1

Note For safety certifications, refer to the product label or the Product Certifications and Declarations section.

Electromagnetic Compatibility

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326-1 (IEC 61326-1): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- EN 55022 (CISPR 22): Class A emissions
- EN 55024 (CISPR 24): Immunity
- AS/NZS CISPR 11: Group 1, Class A emissions
- AS/NZS CISPR 22: Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions

Note In the United States (per FCC 47 CFR), Class A equipment is intended for use in commercial, light-industrial, and heavy-industrial locations. In Europe, Canada, Australia, and New Zealand (per CISPR 11), Class A equipment is intended for use only in heavy-industrial locations.

Note Group 1 equipment (per CISPR 11) is any industrial, scientific, or medical equipment that does not intentionally generate radio frequency energy for the treatment of material or inspection/analysis purposes.

Note For EMC declarations, certifications, and additional information, refer to the Product Certifications and Declarations section.

Product Certifications and Declarations

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for NI products, visit ni.com/product-certifications, search by model number, and click the appropriate link.

Environmental Management

NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from

our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the ***Engineering a Healthy Planet*** web page at ni.com/environment. This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

EU and UK Customers

- **Waste Electrical and Electronic Equipment (WEEE)**—At the end of the product life cycle, all NI products must be disposed of according to local laws and regulations. For more information about how to recycle NI products in your region, visit ni.com/environment/weee.

电子信息产品污染控制管理办法（中国RoHS）

- **中国RoHS**— NI符合中国电子信息产品中限制使用某些有害物质指令(RoHS)。关于NI中国RoHS合规性信息，请登录 `ni.com/environment/rohs_china`。(For information about China RoHS compliance, go to `ni.com/environment/rohs_china`.)