
PCI/PXI-8531

Specifications

2025-03-11



Contents

PCI-8531/PXI-8531 Specifications 3

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This topic lists specifications for PCI-8531/PXI-8531 hardware.



Note NI-Industrial Communications for DeviceNet only supports the following baud rates: 125 Kb/s, 250 Kb/s, and 500 Kb/s.

CAN Physical Layers

Table 1. High-Speed CAN

Transceiver	NXP PCA82C251
Max baud rate	1 Mb/s
Min baud rate	10 Kb/s
CAN_H, CAN_L bus lines	-36 to +36 VDC

Table 2. External CAN Transceiver Digital I/O Characteristics

Parameter	Min	Max
Output0, Output1		
V_{OH} ($I_{OH} = -8$ mA)	3.8 V	—
V_{OL} ($I_{OL} = 8$ mA)	—	0.44 V
NERR		
V_{IH}	2.0 V	—
V_{IL}	—	0.8 V

Physical Dimensions

Dimensions (PCI devices)	10.67 x 16.76 cm (4.2 x 6.6 in.)
Dimensions (PXI devices)	10.00 x 16.00 cm (3.9 x 6.3 in.)

I/O connector	9-pin male D-SUB for each port
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Power Requirements

Table 3. CAN Power Requirements

+5 VDC ($\pm 5\%$)	640 mA typical
+3.3 VDC ($\pm 5\%$)	940 mA typical

Shock (PXI Devices)

Operating	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.)
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Random Vibration (PXI Devices)

Operating	5 to 500 Hz, 0.3 grms
Non-operating	5 to 500 Hz, 2.4 grms (Tested in accordance with IEC-60068-2-64. Non-operating test profile exceeds the requirements of MIL-PRF-28800F, Class 3.)

Safety

Table 6. Isolation Voltages (Port-to-Port Ground)

Withstand	500 Vrms, verified by a 5 s dielectric withstand test
Continuous	60 VDC, Measurement Category I

Table 6. Isolation Voltages (Port-to-Earth Ground)

Withstand	500 Vrms, verified by a 5 s dielectric withstand test
Continuous	60 VDC, Measurement Category I

Safety Standards

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

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA 61010-1

For UL and other safety certifications, refer to the product label or the **Online Product Certification** section.

Environmental

Operating temperature	0 to 55 °C
Storage temperature	–20 to 70 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Operating humidity	10 to 90% RH, noncondensing
Storage humidity	5 to 95% RH, noncondensing (Tested in accordance with IEC-60068-2-56.)
Maximum altitude	2000 m
Pollution Degree (IEC 60664)	2

Indoor use only.

Electromagnetic Compatibility

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

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



Note For EMC compliance, operate this product according to the documentation.

CE Compliance

This product meets the essential requirements of applicable European Directives as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

Online Product Certification


Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for this product, visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

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 NI and the Environment 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.)