

SPECIFICATIONS

PXI-8513

1- or 2-Port, Software-Selectable PXI CAN Interface Module

This document lists specifications for the PXI-8513 1-port and 2-port CAN interface module.

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 *Typical* unless otherwise noted.

Conditions

Specifications are typical at 0 °C to 55 °C unless otherwise noted.

Power Requirements

+5 VDC (±5%)	640 mA
+3.3 VDC (±5%)	940 mA

Physical

Dimensions and Weight

Dimensions	10.67 cm x 16.76 cm (4.2 in. x 6.6 in.)
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Weight

1 port	98 g (3.5 oz)
2 port	102 g (3.6 oz)

RTSI/Front Panel Sync Connectors

Trigger lines	7 input/output
Clock lines	1 input/output
Front panel sync connectors	2 input/output
I/O compatibility	TTL
Power-on state	Input (High-Z)
Response	Rising edge triggers

Physical Characteristics

CAN Physical Layer

High-Speed CAN, Flexible Data Rate

Transceiver ¹	NXP TJA1041 or TJA1043
Max baud rate ²	1 Mbps
Min baud rate	40 kbps
CAN_H, CAN_L bus lines voltage	-27 VDC to +40 VDC

Low-Speed/Fault-Tolerant CAN

Transceiver ³	NXP TJA1054A or TJA1055T
Max baud rate	125 kbps
Min baud rate	40 kbps

¹ PXI-8513 revision G and later use the TJA1043 transceiver; previous hardware revisions use the TJA1041 transceiver. To identify your hardware revision, refer to the 19xxxx<rev>-4xL text on the green label in the top left corner on the secondary side of the board; <rev> indicates the hardware revision.

² The TJA1043 transceiver is CiA certified for baud rates up to 5 Mbps in the CAN FD fast phase, while speeds up to 8 Mbps are possible experimentally. NI-XNET provides a warning when a transceiver is used at higher baud rates than it is certified for. As new CiA-certified transceivers with higher baud rates are released, NI will continue to update the hardware with newer revisions.

³ PXI-8513 revision E and later use the TJA1055T transceiver; previous hardware revisions use the TJA1054A transceiver. To identify your hardware revision, refer to the 19xxxx<rev>-4xL text on the green label in the top left corner on the secondary side of the board; <rev> indicates the hardware revision.

Single Wire, Software-Selectable

Transceiver ⁴	NXP AU5790 or ON Semiconductor NCV7356 (single wire)
Max baud rate	83.3 kbps
Min baud rate	33.3 kbps
Bus Power Required	8 V to 18 V

Environmental

Operating temperature	0 °C to 55 °C
Storage temperature	-20 °C 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.

Shock

Operating 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.)
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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.)

⁴ PXI-8513 revision D and later use the ON Semiconductor NCV7356 single-wire transceiver; previous hardware revisions use the NXP AU5790 single-wire transceiver. To identify your hardware revision, refer to the 19xxxx<rev>-4xL text on the green label in the top left corner on the secondary side of the board; <rev> indicates the hardware revision.

Safety

Isolation Voltages

Port-to-port ground

Withstand	500 V _{rms} verified by a 5 s dielectric withstand test
Continuous	60 VDC, Measurement Category I

Port-to-earth ground

Withstand	500 V _{rms} verified by a 5 s dielectric withstand test
Continuous	60 VDC, Measurement Category I



Note This isolation is intended to prevent ground loops.

Measurement Category I is for measurement performed on circuits not directly connected to the electrical distribution system referred to as MAINS voltage. MAINS is a hazardous live electrical supply system that powers equipment. This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low-voltage sources, and electronics.



Caution Do not connect the PXI-8513 to signals or use for measurements within Measurement Categories II, III, or IV.



Attention Ne connectez pas le PXI-8513 à des signaux et ne l'utilisez pas pour effectuer des mesures dans les catégories de mesure II, III ou IV.



Note Measurement Categories CAT I and CAT O (Other) are equivalent. These test and measurement circuits are not intended for direct connection to the MAINS building installations of Measurement Categories CAT II, CAT III, and CAT IV.

Safety Standards

This product is designed to meet the requirements of the following standards of safety for information technology equipment:

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



Note For UL and other 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 (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 declarations and certifications, and additional information, refer to the *Product Certifications and Declarations* section.



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



Notice When operating this product, use shielded cables and accessories.

CE Compliance

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

- 2014/35/EU; Low-Voltage Directive (safety)
- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)

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/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 *Minimize Our Environmental Impact* 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.

Waste Electrical and Electronic Equipment (WEEE)



EU Customers 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）



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