

## SPECIFICATIONS

# PCIe-8510

## 2- or 4-Port PCIe Vehicle Multiprotocol Interface Device

This document lists specifications for the PCIe-8510 2-port and 4-port vehicle multiprotocol interface device.

## Definitions

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*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

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

## Bus Interface

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Form factor	x1 PCI Express, specification v1.1 compliant
Slot compatibility	x1, x4, x8, and x16 PCI Express slots <sup>1</sup>

## Power Requirements

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### Power Requirements (2 Port)

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<sup>1</sup> Some motherboards reserve the x16 slot for graphics use. Visit [ni.com/info](http://ni.com/info) and enter the Info Code `intro-pci-express` to access the white paper, *Introduction to PCI Express*, for more information about PCI Express guidelines.

Voltage (V)	Power (W), Max (Typical)
+3.3	2.2 (1.6)
+12	2.7 (2.1)

Power Requirements (4 Port)

Voltage (V)	Power (W), Max (Typical)
+3.3	3.0 (2.2)
+12	4.1 (3.0)

## Physical

Dimensions (not including connectors or bracket) 16.8 cm × 10.7 cm (6.60 in. × 4.20 in.) (half-length, full height)

Weight

2 port 100 g (3.5 oz)

4 port 140 g (4.9 oz)

Measurement Category I<sup>2</sup>



**Caution** Do not connect the PCIe-8510 to signals or use for measurements within Measurement Categories II, III, or IV.



**Attention** Ne connectez pas le PCIe-8510 à des signaux et ne l'utilisez pas pour effectuer des mesures dans les catégories de mesure II, III ou IV.



**Caution** The protection provided by the PCIe-8510 can be impaired if it is used in a manner not described in the user documentation.



**Attention** La protection apportée par le PCIe-8510 risque d'être endommagée s'il est utilisé d'une autre façon que celle décrite dans la documentation utilisateur.



**Notice** Clean the hardware with a soft, nonmetallic brush. Make sure that the hardware is completely dry and free from contaminants before returning it to service.

<sup>2</sup> Measurement Categories CAT I and CAT O are equivalent. These test and measurement circuits are not intended for direct connections to the MAINS building installations of Measurement Categories CAT II, CAT III, or CAT IV.

## NI-XNET Host Port (Required)

Connector type	NI-XNET hardware-selectable interface port
Port supported transceiver cable types	NI-XNET transceiver cables (CAN/LIN)



**Note** You must use a transceiver cable to connect a CAN bus to the PCIe-8510. For more information about transceiver cables, refer to the transceiver cable operating instructions.

## RTSI/Front Panel Sync Connectors

Trigger lines	7 input/output
Clock lines	1 input/output
Front panel sync connectors	2 input/output (4 port only)
I/O compatibility	TTL
Input voltage limits	Max 6.5 V, Min -0.5 V
Power-on state	Input (High-Z)
Response	Rising Edge triggers

## Environmental

### Operating Environment

Ambient temperature range	0 °C to 50 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2.)
Relative humidity range	10% to 90%, noncondensing (Tested in accordance with IEC 60068-2-56.)
Altitude	2,000 m (800 mbar) at 25 °C ambient temperature
Pollution Degree	2

Indoor use only.

### Storage Environment

Ambient temperature range	-40 °C to 70 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2.)
Relative humidity range	5% to 95%, noncondensing (Tested in accordance with IEC 60068-2-56.)

# Safety Compliance Standards

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This device 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 UL and other safety certifications, refer to the device label or the [Product Certifications and Declarations](#) section.

# Electromagnetic Compatibility

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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** 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** 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.



**Notice** For EMC declarations and certifications, and additional information, refer to the [Product Certifications and Declarations](#) section.

# CE Compliance

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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

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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](https://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.

## Environmental Management

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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](https://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](https://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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