
PXle-8510

Specifications

2026-08-11



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These specifications apply to the PXle-8510 2-port and 6-port vehicle multiprotocol interface device.

Revision History

Version	Date changed	Description
377641C-01	June 2026	Added pinouts.



Note Specifications are subject to change without notice.

Looking For Something Else?

For information not found in the specifications for your product, such as operating instructions, browse *Related Information*.

Related information:

- [NI-XNET User Manual](#)
- [Software and Driver Downloads](#)
- [Dimensional Drawings](#)
- [Product Certifications](#)
- [Letter of Volatility](#)
- [Discussion Forums](#)
- [NI Learning Center](#)

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

Values are *Typical* unless otherwise noted.

Conditions

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

PXle-8510 Pinout

Use the pinout to connect to terminals on the PXle-8510.

Figure 1. PXle-8510 2 Port Connector Pinout

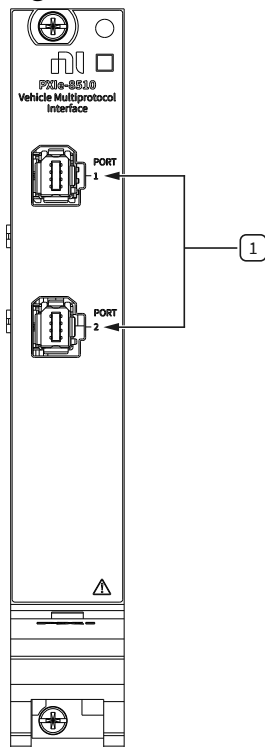


Figure 2. PXIe-8510 6 Port Connector Pinout

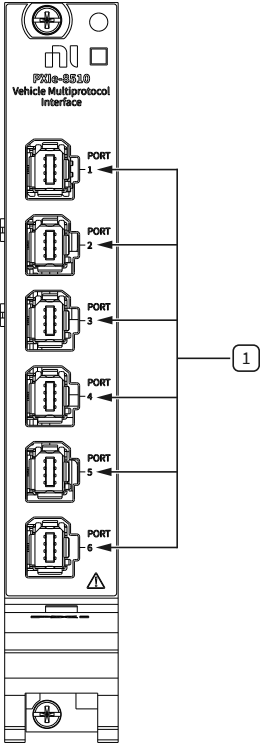


Table 1. Signal Descriptions

Port	Description
1	NI-XNET ports you can use as CAN or LIN ports, depending on the accessory you connect. The pinout varies depending on the accessory. Refer to the accessory documentation for pinout information. Refer to <i>CAN Interface Pinouts</i> and <i>LIN Interface Pinouts</i> in the <i>NI-XNET User Manual</i> for detailed signal information for your module.

Bus Interface

Form factor	x1 PXI Express peripheral module, specification rev 1.0 compliant
Slot compatibility	x1 and x4 PXI Express or PXI Express hybrid slots

Power Requirements

Power Requirements (2 Port)

Voltage (V)	Current (A), Max (Typical)
+3.3	1.03 (0.42)
+12	0.24 (0.17)

Power Requirements (6 Port)

Voltage (V)	Current (A), Max (Typical)
+3.3	1.6 (0.76)
+12	0.5 (0.34)

Physical

Dimensions (not including connectors)	16 cm × 10 cm (6.3 in. × 3.9 in.) 3U CompactPCI slot
Weight	
6 channel	150 g (5.3 oz.)
2 channel	140 g (4.9 oz.)
Measurement Category	I ¹



Caution Do not connect the PXle-8510 to signals or use for measurements

1. 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.

within Measurement Categories II, III, or IV.



Attention Ne connectez pas le PXIe-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 PXIe-8510 can be impaired if it is used in a manner not described in the user documentation.



Attention La protection apportée par le PXIe-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.

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 PXIe-8510. For more information about transceiver cables, refer to the transceiver cable operating instructions.

Environmental

Operating Environment

Ambient temperature range	0 °C to 55 °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.)

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 grms

Nonoperating	5 Hz to 500 Hz, 2.4 grms (Tested in accordance with IEC 60068-2-64. Nonoperating test profile exceeds the requirements of MIL-PRF-28800F, Class 3.)
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Safety Compliance Standards

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

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

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)
- 2011/65/EU; Restriction of Hazardous Substances (RoHS)
- 2014/53/EU; Radio Equipment Directive (RED)
- 2014/34/EU; Potentially Explosive Atmospheres (ATEX)

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.)