PXIe-8842 Specifications

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These specifications apply to the PXIe-8842.

Revision History

Version	Date Changed	Description
379341A-01	November 2026	Created standalone specifications document.

Looking For Something Else?

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

Related information:

- PXIe-8842 User Manual
- PXIe-8822/42/62 Safety, Environmental, and Regulatory Information
- 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.
- **Measured**—describes the measured performance of a representative model.

Values are *Typical* unless otherwise noted.

Conditions

Specifications are valid under the following conditions unless otherwise noted.

- Power requirements in the specification don't include attached external devices.

Model Characteristics

Table 1. PXIe-8842 Model Characteristics

Processor	Intel® Core™ i5-11500HE
Cache	12 MB Smart Cache
Memory	8 GB standard (16 GB maximum), single channel DDR4-3200 MHz, non-ECC SODIMM
Storage	512 GB or greater M.2 NVMe SSD
Installed Operating Systems	Windows 10 IoT, Windows 11 IoT, or Linux RT
Trusted Platform Module	Optional TPM 2.0 (Infineon/ST TPM for global market, NationsTech TPM for China market)

Bus and Communication Interface

Table 2. PXI Express Backplane Interface and Link Configurations

Link Speed (PCIe)	5.0 GT/s
2-Link Configuration (PXIe)	x8, x8
4-Link Configuration (PXIe)	x4, x4, x4, x4

Table 3. Front Panel Bus and Communication Interfaces

Interface	Connector and Quantity	Notes
Thunderbolt 4	USB-C, 1 port	Thunderbolt 4 compliant; supports USB, PCI Express, and DisplayPort.
USB 2.0	4-pin Series A Type-A receptacle, 4 ports	Hi-Speed USB 2.0.
USB 3.2 Gen 1	9-pin Series A Type-A receptacle, 2 ports	SuperSpeed USB; backward-compatible with USB 2.0.
Ethernet	LAN RJ-45, 2 ports	Intel I225; 10/100/1000/2500 Mb/s Ethernet. Wake-on-LAN supported.
Serial	COM1, 9-pin D-sub (DB-9), 1 port	RS-232 serial.
GPIB / IEEE 488.2	25-pin Micro-D, 1 mini-GPIB (optional)	General-purpose interface bus, IEEE 488.2.
PXI trigger bus	SMB, 1 connector	Routes PXI triggers to or from the chassis backplane trigger bus.

Table 4. Dedicated Video Outputs

Interface	Connector and Quantity	Notes
Video	DisplayPort 1.4, 1 port	Intel HD graphics.

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 visit ni.com/product-certifications, search by model number, and click the appropriate

link.

PXIe-8842 Environmental Guidelines

Notice Failure to follow the mounting instructions in the *PXIe-8842 User Manual* can cause temperature derating.

Notice Use this product indoors only.

Notice Cover all empty slots using filler panels.

Environmental Characteristics

Table 5. Temperature

Operating Temperature	0 °C to 55 °C
Storage Temperature	-40 °C to 71 °C

Table 6. Humidity

Operating Humidity	10% to 90% relative, non-condensing
Storage Humidity	5% to 95% relative, non-condensing

Table 7. Pollution Degree

Pollution Degree	2

Table 8. Maximum Altitude

Maximum Altitude	4,600 m (570 mbar) (at 25 °C ambient) with chassis fans on high

Table 9. Shock and Vibration

Operating Vibration	5 Hz to 500 Hz, 0.3 g RMS
Non-Operating Vibration	5 Hz to 500 Hz, 2.4 g RMS

Operating shock	30 g, half-sine, 11 ms pulse, 3 shocks at 6 orientations, 18 total

Environmental Standards

This product meets the requirements of the following environmental standards for electrical equipment.

- IEC 60068-2-1 Cold
- IEC 60068-2-2 Dry heat
- IEC 60068-2-78 Damp heat (steady state)
- IEC 60068-2-64 Random operating vibration
- IEC 60068-2-6 Sinusoidal operating vibration
- IEC 60068-2-27 Operating shock

Note To verify marine approval certification for a product, refer to the product label or visit ni.com/certification and search for the certificate.

EMC Guidelines

Follow these guidelines to ensure the specified electromagnetic compatibility (EMC) performance.

Notice For EMC declarations and certifications, and additional information, refer to Product Certifications.

Notice Changes or modifications to the product not expressly approved by NI could void your authority to operate the product under your local regulatory rules.

Notice Electromagnetic interference can adversely affect 2.5 G Ethernet. As a result, this device may experience temporary performance degradation.

Notice Operate this product only with shielded cables and accessories.

Notice The length of all I/O cables except Ethernet must be no longer than 3 m (10 ft). The length of Ethernet cables can be longer than 30 m (100 ft).

EMC Compliance for Commercial and Light-Industrial Use

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference when the product is operated in its intended operational electromagnetic environment.

This product is intended for use in commercial and light-industrial locations. However, harmful interference may occur in some installations, when the product is connected to a peripheral device or test object, or if the product is used in residential areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

EMC Standards

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
- AS/NZS CISPR 11: Group 1, Class A emissions
- ICES-001: Class A emissions

Note Group 1 equipment 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 Europe, Australia, New Zealand, and Canada (per CISPR 11) Class A equipment is intended for use in non-residential locations.

Caution This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Attention Cet équipement n'est pas destiné à être utilisé dans des environnements résidentiels et peut ne pas fournir une protection adéquate à la réception radio dans de tels environnements.

Power Guidelines

Notice Power delivered to external loads though USB and Thunderbolt 4 ports should be included in system power budgets that include this controller module and peripheral modules.

Power Requirements

Table 10. PXIe-8842 Power Specifications

Voltage (V)	Current (Amps) Typical	Current (Amps) Maximum
+3.3 V	1.2 A	2.6 A
+5 V	0.9 A	3 A
+12 V	5.1 A	7.1 A
+5 Vaux	0.4 A	0.7 A

Battery Guidelines

Caution Fire, explosion, and severe burn hazard. Do not open, crush, insert improperly, recharge or disassemble the battery. Do not heat the battery or the product above 100 °C. Do not incinerate the battery or the product. Do not expose the battery contents to water. Take precautions to ensure correct polarity of the battery in the product. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Attention Risque d'incendie, d'explosion et de brûlures graves. Insérer la pile correctement. Ne pas ouvrir, écraser, recharger ou démonter la pile. Ne pas chauffer la pile ou le produit au-dessus de 100 °C. Ne pas incinérer la pile ou le produit. Éviter tout contact du contenu de la pile avec de l'eau. Prenez des précautions pour vous assurer que la polarité de la batterie dans le produit est correcte. Risque d'explosion si la pile est remplacée par un type de pile incorrect. Éliminer les piles usagées conformément aux instructions.

Caution The battery must be replaced by a trained service technician. Refer to the product documentation on ni.com/manuals for instructions for replacing the battery.

Attention La pile doit être remplacée par un technicien de maintenance qualifié. Reportez-vous à la documentation du produit sur ni.com/manuals pour obtenir les instructions pour changer la pile.

Battery Rating

Table 11. Battery Specifications

Manufacturer	Murata
Model	CR2032W/CR2032X
Cell chemistry system	Lithium Manganese Dioxide (LiMnO2)
Number of batteries	1

Physical Characteristics

Table 12. Dimensions, Slot Requirements, Compatibility

Board Dimensions	Four-wide 3U PXI Express module
Slot Requirements	One system slot plus three controller expansion slots
Compatibility	Fully compatible with *PXI Express Specification* 1.0

Table 13. Weight

Weight	753 g (1.66 lb) typical

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