# PXIe-8840 RT Specifications

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# Contents

# PXIe-8840 RT Specifications

**Note** Specifications are subject to change without notice.

**Caution** Using the PXIe-8840 RT controller in a manner not described in this user manual can impair the protection the controller provides.

## Features

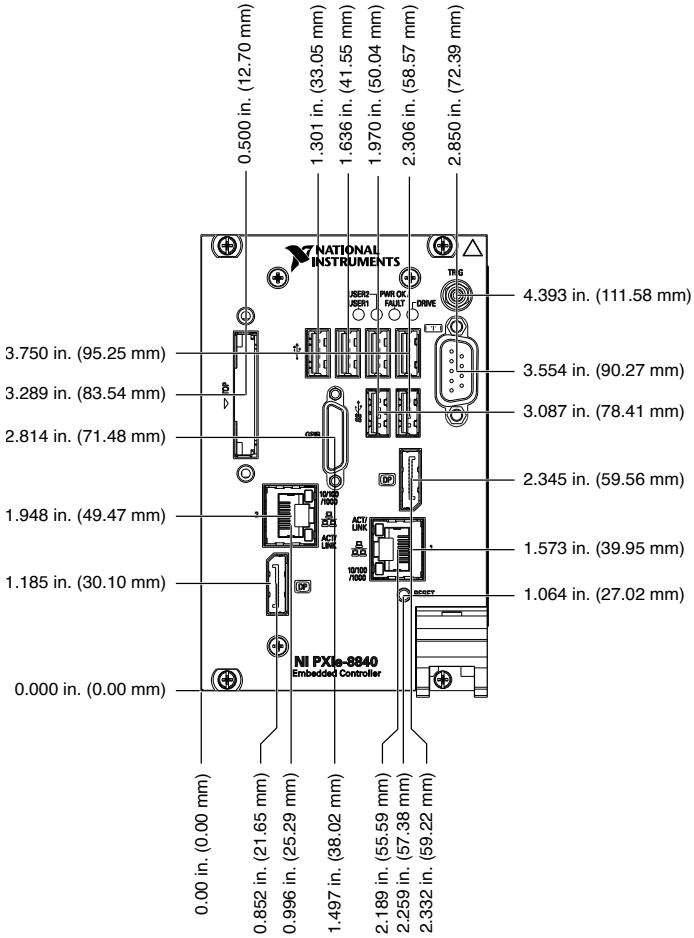
| PXIe-8840 RT | |
|---|---|
| CPU | Intel® Core™ i5 4400E (2.7 GHz dual-core processor) |
| On-die L2 cache | 3 MB |
| Single-Channel 1600 MHz DDR3L RAM, PC3 12800 | 4 GB standard, 8 GB maximum |
| Hard Drive | 250 GB Serial ATA, minimum* |
| Ethernet | Two 10/100/1000 BaseT ports |
| PXI Express 4 Link Configuration | x4, x4, x4, x4 |
| PXI Express 2 Link Configuration | x8, x8 |
| GPIB (IEEE 488 Controller) | Yes |
| Serial Port (RS-232) | Yes (1) |
| Parallel Port | No |
| Hi-Speed USB (2.0) Ports | Yes (4) |
| SuperSpeed USB (3.0) Ports | Yes (2) |
| ExpressCard/34 Slot (available on the PXIe-8840 RT ExpressCard variant only) | Yes |
| PS/2 Keyboard/Mouse Connector | No |
| PXI Trigger Bus Input/Output | Yes |

| PXIe-8840 RT | |
|---|---|
| Installed Operating System | LabVIEW Real-Time |
| * Extended-temperature 24/7 option provides 80 GB minimum SATA solid-state drive. | |

# Front Panel Dimensions

The following figure shows the front panel layout and dimensions of the PXIe-8840 RT. Dimensions are in inches (millimeters).

**Figure 1.** PXIe-8840 RT Front Panel Layout and Dimensions




# Electrical

**Note** Does not include any attached USB devices or ExpressCard.

| Voltage (V) | Current (Amps) Typical | Current (Amps) Maximum |
|---|---|---|
| +3.3 V | 1.03 A | 1.65 A |
| +5 V | 1.33 A | 2.48 A |
| +12 V | 2.87 A | 5.16 A |
| -12 V | 0 A | 0 A |
| +5 $V_{Aux}$ | 0.20 A | 0.41 A |

# Physical

| | |
|---|---|
| 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 |
| Weight | 1.32 kg (2.91 lb) typical |

# Environmental

| | |
|---|---|
| Maximum altitude | 2,000 m (800 mbar) (at 25 °C ambient) |
| Pollution Degree | 2 |

Indoor use only.

## Operating Environment

**Caution** The operating temperature must not be exceeded, even when used in a chassis with a higher temperature range.

| | |
|---|---|
| Ambient temperature range | 5 °C to 50 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2. Meets MIL-PRF-28800F Class 3 high temperature limit.) |
| Extended temperature option | 0 °C to 55 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2. Meets MIL-PRF-28800F Class 3 low temperature limit and MIL-PRF-28800F Class 2 high temperature limit.) |
| Relative humidity range | 10% to 90%, noncondensing (Tested in accordance with IEC-60068-2-56.) |

## Storage Environment

| | |
|---|---|
| Ambient temperature range | -40 °C to 65 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2. Meets MIL-PRF-28800F Class 3 low temperature limit.) |
| Extended Temperature Option | -40 °C to 71 °C (Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2. Meets MIL-PRF-28800F Class 3 limits.) |
| Relative humidity range | 5% to 95%, noncondensing (Tested in accordance with IEC 60068-2-56.) |

# Shock and Vibration

| | |
|---|---|
| Operating shock | 30 g peak, half-sine, 11 ms pulse (Tested in accordance with IEC 60068-2-27. Meets MIL-PRF-28800F Class 2 limits.) |
| **Random vibration** | |
| Operating | 5 Hz to 500 Hz, 0.3 $g_{rms}$ (with solid-state hard drive) |
| 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.) |

# Safety

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 C22.2 No. 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 61326-1 (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** 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.

**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** For EMC declarations and certifications, and additional information, refer to the Product Certifications and Declarations section.

## CE Compliance CE

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.

Battery Replacement and Disposal

- **Battery Directive**—This product contains a long-life coin cell battery. If you need to replace it, use the Return Material Authorization (RMA) process or contact an authorized NI service representative. For more information about compliance with the EU Battery Directive 2006/66/EC about Batteries and Accumulators and Waste Batteries and Accumulators, visit ni.com/environment/batterydirective.

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`.)

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