
PXIe-7890 Safety, Environmental, and Regulatory Information

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PXIe-7890

Safety, Environmental, and Regulatory Information

Read this document before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards. Visit ni.com/manuals for more information about your product, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

Icons

Refer to the following descriptions if one of these icons is marked on your product or used in this guide.

-  **Notice**—Take precautions to avoid data loss, loss of signal integrity, degradation of performance, or damage to the product.
-  **Caution**— Take precautions to avoid injury. Consult the product documentation for cautionary statements when you see this icon printed on the product. Cautionary statements are localized into French for compliance with Canadian requirements.
-  **Caution: Hot Surface**— Take precautions to avoid physical burns.
-  **ESD Sensitive**—Take precautions to avoid damaging the product with electrostatic discharge.

Safety Guidelines



Caution Observe all instructions and cautions in the user documentation. Using the product in a manner not specified can damage the product and compromise the built-in safety protection.



Attention Suivez toutes les instructions et respectez toutes les mises en garde de la documentation d'utilisation. L'utilisation du produit de toute autre façon que celle spécifiée risque de l'endommager et de compromettre la protection de sécurité intégrée.



Caution If the product has been in use, it may exceed safe handling temperatures and cause burns. Allow the product to cool before handling.



Attention Si le produit a été utilisé, il peut avoir atteint des températures trop élevées pour être manipulé en toute sécurité, ce qui peut provoquer des brûlures. Laissez le produit refroidir avant de le manipuler.

Current Ratings

Connector 0 and 4 (DIO 0 to 31)	
Maximum continuous sinking current	
Per channel	4 mA
Sum of all channels (per connector)	128 mA for 32 channels
Maximum continuous sourcing current	
Per channel	4 mA
Sum of all channels (per connector)	128 mA for 32 channels
Connector 1 (2 MS/s/chAO 0 to 15)	
Current drive	
Per channel	±15 mA
Sum of all channels	240 mA for 16 channels

Connector 3 (4 MS/s/chAO 0 to 15)	
Current drive	
Per channel	±100 mA
Sum of all channels	1.6 A for 16 channels

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 the [Product Certifications and Declarations](#) section.

EMC Guidelines


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.


Furthermore, any changes or modifications to the product not expressly approved by NI could void your authority to operate it under your local regulatory rules.


EMC Notices


Refer to the following notices for cables, accessories, and prevention measures necessary to ensure the specified EMC performance.


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


 **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** The performance of this product can be disrupted if subjected to Electrostatic Discharge (ESD) during operation. To prevent damage, industry-standard ESD prevention measures must be employed during installation, maintenance, and operation.

 **Notice** This product may become more sensitive to electromagnetic disturbances in the operational environment when test leads are attached or when the product is connected to a test object.

 **Notice** Operate this product only with shielded cables and accessories.

 **Notice** The length of all I/O cables must be no longer than 3 m (10 ft.).

 **Notice** Do not connect the power input to a DC mains supply or to any supply requiring a connecting cable longer than 3 m (10 ft.). A DC mains

supply is a local DC electricity supply network in the infrastructure of a site or building.

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.

Environmental Guidelines



Notice Failure to follow the mounting instructions in the product documentation can cause temperature derating.



Notice This product is intended for use in indoor applications only.

Environmental Characteristics

Temperature

Operating	0 °C to 55 °C
Storage	-40 °C to 71 °C
Humidity	
Operating	10% to 90%, noncondensing
Storage	5% to 95%, noncondensing
Pollution Degree	2
Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
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

Environmental Standards

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

- 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.

Maximum Power Requirements

+3.3 V	2.3 A
+12.0 V	4.2 A
Maximum total power	58 W



Note Power requirements depend on the contents of the LabVIEW FPGA VI used in your application.



Note Power is 58 W, maximum. Consumption is from both PXI Express backplane power connectors.

Physical Characteristics

Dimensions and Weight

Dimensions (not including connectors)	2U, two slot, PXI Express module 4.0 cm × 13.0 cm × 21.6 cm (0.8 in. × 5.1 in. × 8.5 in.)
Weight	771 g (27.2 oz)

Export Compliance

This product is subject to control under the U.S. Export Administration Regulations (15 CFR Part 730 et. seq.) administered by the U.S. Department of Commerce's Bureau of Industry and Security (BIS) (www.bis.doc.gov) and other applicable U.S. export control laws and sanctions regulations. This product may also be subject to additional license requirements of other countries' regulations.


Additionally, this product may also require export licensing before being returned to NI. The issuance of a Return Material Authorization (RMA) by NI does not constitute export authorization. The user must comply with all applicable export laws prior to exporting or re-exporting this product. See ni.com/legal/export-compliance for more information and to request relevant import classification codes (e.g. HTS), export classification codes (e.g. ECCN), and other import/export data.

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.)

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.

NI Services

Visit ni.com/support to find support resources including documentation, downloads, and troubleshooting and application development self-help such as tutorials and examples.

Visit ni.com/services to learn about NI service offerings such as calibration options, repair, and replacement.

Visit ni.com/register to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

NI corporate headquarters is located at 11500 N Mopac Expwy, Austin, TX, 78759-3504, USA.