

SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

PXIe-5820

500 MHz, 1 GHz I/Q Bandwidth, Baseband PXI Vector Signal Transceiver

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment 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.

Icons



Notice Take precautions to avoid data loss, loss of signal integrity, degradation of performance, or damage to the model.



Caution Take precautions to avoid injury. Consult the model documentation for cautionary statements when you see this icon printed on the model.



ESD Sensitive Take precautions to avoid damaging the model with electrostatic discharge.

Safety



Caution Observe all instructions and cautions in the user documentation. Using the model in a manner not specified can damage the model and compromise the built-in safety protection. Return damaged models to NI for repair.



Attention Suivez toutes les instructions et respectez toutes les mises en garde de la documentation utilisateur. L'utilisation d'un modèle de toute autre façon que celle spécifiée risque de l'endommager et de compromettre la protection de sécurité intégrée. Renvoyez les modèles endommagés à NI pour réparation.



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



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



Caution To protect yourself and the computer from electrical hazards, the computer must remain unplugged until the installation is complete.



Attention Pour vous protéger et protéger l'ordinateur des risques électriques, l'ordinateur doit rester débranché jusqu'à ce que l'installation soit terminée.



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



Attention Si l'appareil a été utilisé, il peut avoir atteint des températures trop élevées pour être manipulé en toute sécurité, ce qui peut provoquer des brûlures. Laissez l'appareil refroidir avant de le retirer du châssis.

Safety Voltages

Connect only voltages that are below these limits.

Maximum input voltage (IF IN/OUT)	4 V pk-pk, differential, 2 V pk-pk, single-ended
Maximum input voltage (REF IN)	3.3 V pk-pk
Maximum input voltage (REF OUT)	1.65 V pk-pk
Maximum input voltage (PFI 0)	5.5 V
Maximum input voltage (MGT)	2 V
Maximum input voltage (DIO)	4.5 V
Measurement Category	CAT I/O




Caution Do not connect the PXIe-5820 to signals or use for measurements within Measurement Categories II, III, or IV.



Attention Ne connectez pas le PXIe-5820 à des signaux et ne l'utilisez pas pour effectuer des mesures dans les catégories de mesure II, III ou IV.


Measurement Category I is for measurements performed on circuits not directly connected to the electrical distribution system referred to as *MAINS* voltage. MAINS is a hazardous live electrical supply system that powers equipment. This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low-voltage sources, and electronics.

 **Note** Measurement Categories CAT I and CAT O are equivalent. These test and measurement circuits are for other circuits not intended for direct connection to the MAINS building installations of Measurement Categories CAT II, CAT III, or CAT IV.

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 UL and other 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) stated in the product specifications. These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.


This product is intended for use in 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 or commercial 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.


General EMC Notices

 **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.

ESD Notices

 **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.

Shielded Cable Notices

 **Notice** Operate this product only with shielded cables and accessories. Do not use unshielded cables or accessories unless they are installed in a shielded enclosure with properly designed and shielded input/output ports and connected to the product using a shielded cable. If unshielded cables or accessories are not properly installed and shielded, the EMC specifications for the product are no longer guaranteed.


Miscellaneous Accessory and Device Notices


 **Notice** You must install PXI EMC Filler Panels, NI part number 778700-01, in all open chassis slots.

Electromagnetic Compatibility 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
- FCC 47 CFR Part 15B: Class A emissions
- ICES-003: 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.

Environmental Guidelines

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

Notice To meet the shock and vibration specifications in this document, you must panel mount the system.

Notice All cabling should be strain-relieved near input connectors. Take care not to directionally bias cable connectors within input connectors when applying strain relief.

Environmental Characteristics

Temperature and Humidity

Temperature

Operating	
All compatible chassis ¹	0 °C to 45 °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

Random vibration

Operating	5 Hz to 500 Hz, 0.3 g RMS
Non-operating	5 Hz to 500 Hz, 2.4 g RMS
Operating shock	30 g, half-sine, 11 ms pulse

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 *Commitment to the Environment* 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.

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.

电子信息产品污染控制管理办法（中国 RoHS）

中国客户 National Instruments 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 National Instruments 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.)

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 60068-2-27 Operating shock
- MIL-PRF-28800F
 - Low temperature limits for operation Class 3, for storage Class 3
 - High temperature limits for operation Class 4, for storage Class 3

¹ For chassis with slot cooling capacity = 38 W, the fan speed must be set to HIGH to achieve this ambient temperature range. Limited to 45 °C with 38 W cooling.

- Random vibration for non-operating Class 3
- Shock for operating Class 2



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

Power Requirements

+3.3 V _{DC}	3.3 A
+12 V _{DC}	6.0 A

Physical Characteristics

Dimensions	
Length	4.1 cm (1.6 in.)
Width	13.0 cm (5.1 in.)
Height	21.6 cm (8.5 in.)
Weight	795 g (28.0 oz)

Maintenance

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.

CE Compliance

This product meets the essential requirements of applicable European Directives, as follows:

- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)
- 2011/65/EU; Restriction of Hazardous Substances (RoHS)

Export Compliance

This model 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 model may also be subject to additional license requirements of other countries' regulations.

Additionally, this model 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 model. 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.

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.

Additional Resources

Visit ni.com/manuals for more information about your model, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

Worldwide Support and Services

The NI website is your complete resource for technical support. At ni.com/support, you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

Visit ni.com/services for information about the services NI offers.

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

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