NATIONAL INSTRUMENTS PXIe-6570 PXI Digital Pattern Instrument Instruction Manual

Contents

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SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

PXIe-6570

100 MVector/s, PXI Digital Pattern Instrument

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.

Regulatory Icons

Caution–Take precautions to avoid injury. Consult the model documentation for cautionary statements when you see this icon printed on the model. Cautionary statements are localized into French for compliance with Canadian requirements.

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

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.

Safety Voltages

Connect only voltages that are within these limits.

Supported measurement range[1]	-2 V to 7 V

Caution Do not connect the PXIe-6570 to signals or use for measurements within Measurement Categories II, III, or IV.

Electromagnetic Compatibility 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 National Instruments could void your authority to operate it under your local regulatory rules.

Notice To ensure the specified EMC performance, 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.

Notice To ensure the specified EMC performance, the length of all I/O cables must be no longer than 3 m (10 ft).

Notice To ensure the specified EMC performance, you must install PXI EMC Filler Panels, National Instruments part number 778700-01, in all open chassis slots.

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[1] If the total voltage sourced or driven on any pin relative to GND exceeds the supported measurement range, instrument performance may be degraded.

Physical Characteristics

PXIe slots	2
Dimensions	131 mm × 42 mm × 214 mm (5.16 in. × 1.65 in. × 8.43 in.)
Weight	920 g (32.45 oz.)

Power Requirements

The PXIe-6570 draws current from a combination of the 3.3 V and 12 V power rails. The maximum current drawn from each of these rails can vary depending on the PXIe-6570 mode of operation. The total power consumption will not exceed the input power specification.

Input power	68 W
Current Draw	
3.3 V	4.4 A
12 V	4.7 A

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.

Environment

Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
Pollution Degree	2
Indoor use only.	

Operating Environment

Ambient temperature range	0 °C to 45 °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 4 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 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 grms (Tested in accordance with IEC 60068-2-64.)
Nonoperating	5 Hz to 500 Hz, 2.4 grms (Tested in accordance with IEC 60068-2-64. Test profile exceeds the requirements of MIL-PRF-28800F, Class 3.)

Safety 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

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, certifications, and additional information, refer to the Online Product Certification 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)

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/certification**, search by model number or product line, and click the appropriate link in the Certification column.

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.

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 Minimize Our Environmental Impact 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.

RoHS

National Instruments (RoHS) National Instruments RoHS ni.com/environment/rohs_china (For information about China RoHS compliance, go to ni.com/environment/rohs_china.)

Additional Resources

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

Refer to the Getting Started Guide for the PXIe-6570 at ni.com/manuals for information about how to begin using your PXIe-6570.

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.

NI corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504. NI also has offices located around the world. For support in the United States, create your service request at ni.com/support or dial 1 866 ASK MYNI (275 6964). For support outside the United States, visit the Worldwide Offices section of ni.com/niglobal to access the branch office websites, which provide up-to-date contact information.

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Documents / Resources

	NATIONAL INSTRUMENTS PXIe-6570 PXI Digital Pattern Instrument [pdf] Instruction Manual PXIe-6570, PXIe-6570 PXI Digital Pattern Instrument, PXI Digital Pattern Instrument, Digital Pattern Instrument, Pattern Instrument, Instrument

References

- Engineer Ambitiously - NI
- Engineer Ambitiously - NI
- Product Certifications - NI
- Engineering a Healthy Planet - NI
- Managing Critical Substances - NI
- Managing Critical Substances - NI
- Product Take-Back Program and Recycling - NI
- Product Documentation - NI
- Contact Us - NI
- National Instruments Patents - NI
- Log In - National Instruments
- NI Services - NI
- Support - NI
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