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PCIe-6738

SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

PCIe-6738

16-Bit, 32-Channel, 1 MS/s Analog Output Device

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. Cautionary statements are localized into French for C-UL certification.



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.

Safety Voltages

Connect only voltages that are below these limits.

Channel-to-earth ground

±11 V, Measurement Category I

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.

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

EMC 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.



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 connected to a test object.

Power Requirements



Notice The protection provided by the PCIe-6738 can be impaired if it is used in a manner not described in the user documentation.

+3.3 V	3.0 W
+12 V	14.0 W

Physical

Printed circuit board dimensions	16.8 cm × 11.1 cm (6.60 in. × 4.38 in.)
Weight	110 g (3.8 oz)
I/O connector	1 68-pin VHDCI
Form factor	Standard height, half length, single slot
Integrated air mover (fan)	No

Environmental

This product meets the requirements of the following environmental standards for electrical equipment for measurement, control, and laboratory use.

Temperature

Operational, local ¹	0 °C to 55 °C (IEC 60068-2-1 and IEC 60068-2-2)
Storage	-20 °C to 70 °C (IEC 60068-2-1 and IEC 60068-2-2)

Operational humidity	10% to 90% RH, noncondensing (IEC 60068-2-78)
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Storage humidity	5% to 95% RH, noncondensing (IEC 60068-2-78)
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System slot airflow	0.4 m/s (80 LFM)
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Pollution Degree	2
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Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
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Indoor use only.

Safety

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 [Online Product Certification](#) 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; Industrial 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

¹ For PCI Express adapter cards with integrated air movers, NI defines the local operational ambient environment to be at the fan inlet. For cards without integrated air movers, NI defines the local operational ambient environment to be 25 mm (1 in.) upstream of the leading edge of the card. For more information about the local operational ambient environment definition for PCI Express adapter cards, visit ni.com/info and enter the Info Code `pciexpresslocalambient`.

- FCC 47 CFR Part 15C
- 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 [Online Product Certification](#) section.

CE Compliance

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)

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 such as the European Union Council Regulations No. 428/2009, the Malaysia Strategic Trade Act, and so forth.

Additionally, this product may also require export licensing before being returned to National Instruments. The issuance of a Return Material Authorization ("RMA") by National Instruments 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.

Online Product Certification

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for this product, visit [ni.com/certification](#), search by model number or product line, and click the appropriate link in the Certification column.

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](#).

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](#).)

Additional Resources

Visit [ni.com/manuals](#) for more information about the PCIe-6738, 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.

A Declaration of Conformity (DoC) is our claim of compliance with the Council of the European Communities using the manufacturer's declaration of conformity. This system affords the user protection for electromagnetic compatibility (EMC) and product safety. You can obtain the DoC for your product by visiting ni.com/certification. If your product supports calibration, you can obtain the calibration certificate for your product at ni.com/calibration.

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