
AIO-3691

Specifications

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AIO-3691 Specifications

Definitions

Warranted specifications describe the performance of a model under stated operating conditions and are covered by the model warranty.

Characteristics describe values that are relevant to the use of the model under stated operating conditions but are not covered by the model warranty.

- **Typical** specifications describe the performance met by a majority of models.
- **Nominal** specifications describe an attribute that is based on design, conformance testing, or supplemental testing.

Specifications are **Typical** unless otherwise noted.

Conditions

Specifications are valid at 23 °C unless otherwise noted.

High-Speed Serial Interface

Form factor	Mini-SAS HD
Number of ports	4
Serial lanes per port	4
Maximum data rate (recommended)	10.4167 Gb/s

Error performance	1×10^{-12}
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Power

Maximum Power Requirements



Note Power requirements are dependent on the adapter modules installed and the contents of the FPGA application.

Power supply	3.3 V
Current	3 A

Maximum Working Voltage



Note Maximum working voltage refers to the signal voltage plus the common-mode voltage.

Channel-to-earth	0 V to 3.3 V, Measurement Category I
Channel-to-channel	0 V to 3.3 V, Measurement Category I



Caution Do not use this device for connecting to signals in Measurement Categories II, III, or IV.



Note Measurement Categories CAT I and CAT O are equivalent. These test and measurement circuits are not intended for direct connection to the

MAINS building installations of Measurement Categories CAT II, CAT III, or CAT IV.

Physical

Dimensions (not including connectors)	24.51 cm × 8.51 cm × 6.99 cm (9.65 in. × 3.35 in. × 2.75 in.)
Weight	0.06 kg (0.13 lbs)



Notice 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

Ambient temperature range	0 °C to 40 °C (tested in accordance with IEC 60068-2-1 and IEC 60068-2-2)
Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
Pollution Degree	2

Indoor use only.

Operating Environment

Operating temperature range	
Used with a Single-Module ATCA Chassis	0 °C to 25 °C

Used with a 14-Slot ATCA Chassis	dependent on final system installation
Relative humidity range	10% to 90%, noncondensing (tested in accordance with IEC 60068-2-56)



Note Operating temperatures are only valid when the AIO-3691 module is used with the specified chassis.

Compliance and Certifications

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.

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 [Product Certifications and Declarations](#) section.

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.

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.)