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# NI-9796

# Specifications

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# NI 9796 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 for the range -40 °C to 70 °C unless otherwise noted.

## Wireless Radio Characteristics

RF Operating Frequency	
Frequency range	2.400 GHz to 2.4835 GHz
Communication standard	Bluetooth <sup>®</sup> Low Energy wireless technology
RF transmitter power	
Maximum RF output power	18 dBm

RF power control range	36 dB
<b>RF receiver</b>	
Maximum input power	-5 dBm
Sensitivity (0.1% BER, 1 Mbps mode)	-99 dBm

## Software

Application software	NI InsightCM version 3.4 only
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## Controller Support

Compatible controller	cRIO-9065
Number of NI 9796 supported per chassis	1
Required controller slot position	First



**Note** The NI 9796 must be the only module in the controller. The other slots of the controller must be empty.

## 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 Standards

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

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



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

## Radio Equipment Compatibility Standards

This product meets the requirements of the following Radio Equipment standards:

- FCC 47 CFR Part 15C: Intentional Radiators
- RSS-247: DTSSs, FHSs, and LE-LAN

This radio equipment is for use in accordance with the following parameters:

Antenna	2.4 GHz, 1.5 dBi, 50 $\Omega$ RP-SMA Antenna (part number 148977-01)
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Software	NI InsightCM 3.4
Frequency band(s)	2.400 GHz to 2.4835 GHz
Radio frequency power	20 dBm

## Environmental Characteristics

Temperature		
Operating		-40 °C to 70 °C
Storage		-40 °C to 85 °C
Humidity		
Operating	10% RH to 90% RH, noncondensing	
Storage	5% RH to 95% RH, noncondensing	
Ingress protection		IP40
Pollution Degree		2
Maximum altitude		5,000 m
Shock and Vibration		
Operating vibration		

Random	5 g RMS, 10 Hz to 500 Hz
Sinusoidal	5 g, 10 Hz to 500 Hz
Operating shock	30 g, 11 ms half sine; 50 g, 3 ms half sine; 18 shocks at 6 orientations

To meet these shock and vibration specifications, you must panel mount the system.

## 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 60068-2-30 Damp heat, cyclic (12 + 12h cycle)
- IEC 60068-2-64 Random operating vibration
- IEC 60068-2-6 Sinusoidal operating vibration
- IEC 60068-2-27 Operating shock

## 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](https://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](https://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](https://ni.com/environment/rohs_china)。 (For information about China RoHS compliance, go to [ni.com/environment/rohs\\_china](https://ni.com/environment/rohs_china).)

## Power Requirements

Power consumption from chassis	
Active mode	525 mW
Sleep mode	0.2 mW
Thermal dissipation (at 70 °C)	
Active mode	475 mW
Sleep mode	0.2 mW

## Physical Characteristics

Dimensions (L × W × H)	83.5 mm × 22.9 mm × 88.1 mm (3.29 in. × 0.90 in. × 3.47 in.)
Weight	
Without antenna	138 g (4.9 oz)



With antenna	146 g (5.2 oz)
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## 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](https://ni.com/product-certifications), search by model number, and click the appropriate link.

## NI Services

Visit [ni.com/support](https://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](https://ni.com/services) to learn about NI service offerings such as calibration options, repair, and replacement.

Visit [ni.com/register](https://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.