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**USRP-2901**

# SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

## USRP-2901

### 70 MHz to 6 GHz, 2-Channel USRP Software Defined Radio 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.

## Regulatory Icons

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**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

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**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.

## 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



**Notice** For UL and other safety certifications, refer to the product label or the [Product Certifications and Declarations](#) section.

## EMC Guidelines

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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.

## Electromagnetic and Radio Performance Notices

Refer to the following notices for cables, accessories, and prevention measures necessary to ensure the specified electromagnetic and radio performance.



**Notice** Operate this product only with shielded cables and accessories. The DC power input cables may be unshielded.



**Notice** To ensure the specified electromagnetic and radio performance, the length of all I/O cables must be no longer than 3 m.

**Notice** This product is not approved or licensed for transmission over the air using an antenna. As a result, operating this product with an antenna may violate local laws. Ensure that you are in compliance with all local laws before operating this product with an antenna.

**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.

## 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

**Notice** 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.

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

## Environmental Guidelines

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

## Environmental Characteristics

Operating Temperature	0 °C to 45 °C
Operating Humidity	10% to 90% relative humidity, noncondensing
Pollution Degree	2
Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)

## 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](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.

## 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](https://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](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

Total power, typical operation	
Typical	3 W to 3.5 W
Maximum	4.5 W
Power requirement	Accepts a 6 V, 3 A external DC power connector

**Caution** You must use either the power supply provided in the shipping kit, or another listed ITE power supply marked *LPS*, with the device.

**Attention** Vous devez utiliser avec l'appareil soit l'alimentation livrée dans le kit, soit une autre alimentation ITE (équipement informatique) agréée, portant le symbole *LPS*.

# Physical Characteristics

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## Physical dimensions

(L × W × H)	12.5 cm × 9.4 cm × 3.8 cm (7.0 in. × 4.9 in. × 1.5 in.)
Weight	676 g (1.5 lb)

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# Maintenance

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If you need to clean your device, wipe it with a dry towel.

# CE Compliance

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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)
- 2011/65/EU; Restriction of Hazardous Substances (RoHS)

# Product Certifications and Declarations

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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.

# Additional Resources

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Visit [ni.com/manuals](https://ni.com/manuals) for more information about your model, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

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