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SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

USRP-2974

10 MHz to 6 GHz, x86 Processor, GPS-Disciplined OCXO, USRP Software Defined Radio Stand-Alone 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

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

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.

Electromagnetic and Radio Equipment Compatibility Guidelines

This device was designed to support an efficient use of the radio spectrum to avoid harmful interference. This device was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the device specifications. These requirements and limits are designed to provide reasonable protection against harmful interference when the device is operated in its intended operational electromagnetic environment.

This device is intended for use in industrial locations. However, harmful interference may occur in some installations or when the device is connected to a peripheral device or a test object. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this device in strict accordance with the instructions in the device documentation.

Furthermore, any changes or modifications to the device 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 except those connected to the Ethernet and GPS antenna ports must be no longer than 3 m.

Notice This product is approved or licensed for transmission over the air using the 5V GPS Antenna, part number 783480-01. As a result, operating this product with a different antenna may violate local laws. Ensure that you are in compliance with all local laws before operating this product with a different 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.

NATIONAL INSTRUMENTS

Power

Notice The protection provided by this product may be impaired if it is used in a manner not described in this document.

Voltage range	14.25 V to 15.75 V DC
Current	10 A, maximum
Power	150 W, maximum

Notice The power supply must also meet any safety and compliance requirements for the country of use.

Note NI recommends using the USRP-2974 with the provided power supply (Power Supply, part number 723613-01). Contact NI if a replacement is needed.

Physical Characteristics

If you need to clean the module, wipe it with a dry towel.

Physical dimensions	
(L × W × H)	29.08 cm × 21.84 cm × 7.98 cm (11.45 in. × 8.60 in. × 3.14 in.)
Weight	3.34 kg (7.35 lb)

Environment

Operating temperature range	0 °C to 50 °C
Maximum altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
Relative humidity range	10% to 90%, noncondensing
Pollution Degree	2

Indoor use only.

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`.)

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 UL and other 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

- AS/NZS CISPR 11: Group 1, 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.

Radio Equipment Compatibility Standards

This product meets the requirements of the following Radio Equipment standards:
- EN 301 489-1: Common Technical Requirements for Radio Equipment
- EN 301 489-19: Specific conditions for Receive Only Mobile Earth Stations (ROMES)
- EN 303 413: Satellite Earth Stations and Systems (SES); Global Navigation Satellite System (GNSS) receivers

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

Antenna	5V GPS receiver antenna, part number 783480-01
Software	LabVIEW Communications System Design Suite - USRP-2974 Single-Device Streaming sample project
Frequency band(s)	1,575.42 MHz

Notice Every country has different laws governing the transmission and reception of radio signals. Users are solely responsible for using their USRP system in compliance with all applicable laws and regulations. Before you attempt to transmit and/or receive on any frequency, National Instruments recommends that you determine what licenses may be required and what restrictions may apply. National Instruments does not accept any responsibility for the user's use of our products. The user is solely responsible for complying with local laws and regulations.

CE Compliance CE

This product meets the essential requirements of applicable European Directives, as follows:
- 2011/65/EU; Restriction of Hazardous Substances (RoHS)
- 2014/53/EU; Radio Equipment Directive (RED)

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.

Additional Resources

Visit *ni.com/manuals* for more information about your device, 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.

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.

377561B-01 September 26, 2018