SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

NI ELVIS III

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.
- —*Warning*—Take precautions to avoid electrical shock.
- —*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-Ground	60 VDC maximum

Note Detailed specifications for the I/O can be found in the NI ELVIS III *Hardware Specifications* at www.ni.com/documentation/en/ni-elvis-iii. Exceeding the rating of the I/O terminal as listed in the detailed specifications may damage the equipment.

Caution Do not connect the NI ELVIS III to signals or use for measurements within Measurement Categories II, III, or IV.

Attention Ne connectez pas le NI ELVIS III à des signaux et ne l'utilisez pas pour effectuer des mesures dans les catégories de mesure II, III ou IV.

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.

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 and Radio Equipment Compatibility Guidelines

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

NATIONAL INSTRUMENTS

This product is intended for use in commercial and light-industrial locations. However, harmful interference may occur in some installations or when the product 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 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.

Radio and EMC Performance Notices

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

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

Notice The length of all instrument I/O cables must be no longer than 3 m (10 ft).

Notice Electromagnetic interference can adversely affect the measurement accuracy of the oscilloscope on this device.

Electromagnetic Compatibility Standards

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use; for radio equipment; and for telecommunication terminal equipment:

- 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

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 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 in non-residential locations.

Radio Equipment Compatibility Standards

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

- ETSI EN 301 489-1: Common Technical Requirements for Radio Equipment
- ETSI EN 301 489-17: Specific Conditions for Broadband Data Transmission Systems
- ETSI EN 300 328: Data Transmission Equipment Operating in the 2.4 GHz ISM Band
- ETSI EN 301 893: 5 GHz RLAN
- FCC 47 CFR Part 15C: Intentional Radiators
- FCC 47 CFR Part 15E: Intentional Radiators
- RSS-247: DTSs, FHSS, and LE-LAN

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

Antenna	750393-01
Software	NI LabVIEW 2018 ELVIS III Toolkit or later
Frequency band(s)	2.4 GHz/5 GHz
Radio frequency power	2.5 dBi, maximum for 2.4 GHz band/2.0 dBi, maximum for 5 GHz band

Environmental Guidelines

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

Environmental Characteristics

Temperature and Humidity	
Temperature	
Operating	10 °C to 35 °C
Storage	-20 °C to 70 °C
Humidity	
Operating	10% RH to 90% RH, noncondensing
Storage	10% RH to 90% RH, noncondensing

Pollution Degree	2
Maximum altitude	5,000 m

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`.)

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 60068-2-78 Damp heat (steady state)

Note To verify marine approval certification for a product, refer to the product label or visit *ni.com/certification* and search for the certificate.

Regulatory Information

United States

FCC Radiation Exposure Statement

Caution The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, this device should be used in such a manner that the potential for human contact during normal operation is minimized. This device has been evaluated for and shown compliant with the FCC RF Exposure limits under mobile exposure conditions (antennas are greater than 20 cm from a persons body). This device has also been evaluated for and shown compliant with the FCC RF exposure limits under portable exposure conditions (antennas are within 20 cm of a persons body) when installed in certain specific configurations. Details of the authorized configurations can be found at *https://fjallfoss.fcc.gov/oetcf/eas/reports/GenericSearch.cfm* by entering the FCC ID number on the device.

Attention La puissance de sortie rayonnée de cet appareil est inférieure aux limites d'exposition aux fréquences radio de la FCC. Néanmoins, cet appareil doit être utilisé de manière à minimiser la possibilité de contact humain pendant son fonctionnement normal. Cet appareil a été évalué et il a été démontré qu'il est conforme aux limites d'exposition RF de la FCC dans des conditions d'exposition mobiles (les antennes se trouvent à plus de 20 cm du corps humain). Cet appareil a également été évalué et, de nouveau, il a été démontré qu'il est conforme aux limites d'exposition RF de la FCC dans des conditions d'exposition portable (les antennes se trouvent à moins de 20 cm du corps humain) lorsqu'il est installé dans certaines configurations spécifiques. Entrez le numéro d'identification FCC de l'appareil sur *https://fjallfoss.fcc.gov/oetcf/eas/reports/GenericSearch.cfm* pour obtenir des détails sur les configurations autorisées.

Interference Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note The FCC regulations provide that changes or modifications not expressly approved by NI could void your authority to operate this equipment.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the equipment experiencing the interference.
- Increase the distance between the wireless adapter and the equipment experiencing the interference.
- Connect the equipment to an outlet on a circuit different from which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada

Industry Canada (IC) Notices

Class A digital circuitry of this device complies with Canadian ICES-003.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, the radio transmitter(s) in this device may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Radio Frequency (RF) Exposure Information

The radiated output power of this device is below the Industry Canada (IC) radio frequency exposure limits. This device has been evaluated for and shown compliant with the IC Radio Frequency (RF) Exposure limits. The device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been certified for use in Canada. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address: *http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng*

Additional Canadian information on RF exposure also can be found at the following web address: *http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html*

Avis d'Industry Canada (IC)

La circuiterie numérique de Classe A de cet appareil est conforme à la norme canadienne ICES-003.

Cet appareil est conforme aux normes d'exemption de licence RSS d'Industry Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Conformément aux réglementations d'Industry Canada, les émetteurs radio de cet appareil ne peuvent fonctionner qu'à l'aide d'une antenne dont le type et le gain maximal (ou minimal) pour ces émetteurs - transmetteurs sont approuvés par Industry Canada. Pour réduire le risque d'interférence éventuelle pour les autres utilisateurs, le type et le gain de l'antenne doivent être choisis de manière à ce que la puissance isotrope rayonnée équivalente (p.i.r.e.) minimale nécessaire à une bonne communication soit fournie.

Informations sur l'exposition à la fréquence radio (FR)

La puissance rayonnée de sortie de cet appareil est inférieure aux limites d'exposition à la fréquence radio d'Industry Canada (IC). Cet appareil a été évalué et jugé conforme aux limites d'exposition à la fréquence radio (FR) d'IC. Cet appareil devrait être utilisé de manière à ce que le risque de contact humain au cours d'un fonctionnement normal soit réduit.

Cet appareil est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industry Canada, rendez-vous sur : *http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng*

Pour des informations canadiennes supplémentaires sur l'exposition FR, rendez-vous sur : *http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html*

Japan

This equipment contains specified radio equipment that has been certified to the Technical Regulation Conformity Certification under the Radio Law.

South Korea

해당 무선설비는 운용 중 전파혼신 가능성이 있음.

Taiwan R.O.C.

台灣：國家通訊傳播委員會

低功率電波輻性電機管理辦法

第十二條經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25G ~5.35G 頻帶內操作之無線資訊傳輸設備僅適於室內使用

Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

EU Regulatory Statements

cs Česky [Czech]	National Instruments tímto prohlašuje, že tento NI ELVIS III je ve shodě se základními požiadavkami a dalšími příslušnými ustanoveními směrnice 2014/53/EU.
da Dansk [Danish]	Undertegnede National Instruments erklærer herved, at følgende udstyr NI ELVIS III overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU.
de Deutsch [German]	Hiermit erklärt National Instruments, dass sich das Gerät NI ELVIS III in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EU befindet.
et Eesti [Estonian]	Käesolevaga kinnitabNational Instruments seadme NI ELVIS III vastavust direktiivi 2014/53/EU põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en English	Hereby, National Instruments, declares that this NI ELVIS III is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
es Español [Spanish]	Por medio de la presente National Instruments declara que el NI ELVIS III cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ National Instruments ΔΗΛΩΝΕΙ ΟΤΙ NI ELVIS III ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU.
fr Français [French]	Par la présente National Instruments déclare que l'appareil NI ELVIS III est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU.
it Italiano [Italian]	Con la presente National Instruments dichiara che questo NI ELVIS III è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.
lv Latviski [Latvian]	Ar šo National Instruments deklarē, ka NI ELVIS III atbilst Direktīvas 2014/53/EU būtiskajām prasībām un citiem ar to saistītajiem noteikumiem
lt Lietuvių [Lithuanian]	Šiuo National Instruments deklaruoja, kad šis NI ELVIS III atitinka esminius reikalavimus ir kitas 2014/53/EU Direktyvos nuostatas.
nl Nederlands [Dutch]	Hierbij verklaart National Instruments dat het toestel NI ELVIS III in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU.
mt Malti [Maltese]	Hawnhekk, National Instruments, jiddikjara li dan NI ELVIS III jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 2014/53/EU.
hu Magyar [Hungarian]	Alulírott, National Instruments nyilatkozom, hogy a NI ELVIS III megfelel a vonatkozó alapvetõ követelményeknek és az 2014/53/EU irányelv egyéb elõírásainak.
pl Polski [Polish]	Niniejszym National Instruments. oświadcza, że NI ELVIS III jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/EU.
pt Português [Portuguese]	National Instruments declara que este NI ELVIS III está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/EU.
sl Slovensko [Slovenian]	National Instruments izjavlja, da je ta NI ELVIS III v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU.
sk Slovensky [Slovak]	National Instruments týmto vyhlasuje, že NI ELVIS III spĺňa základné požiadavkami a všetky príslušné ustanovenia Smernice 2014/53/EU.
fi Suomi [Finnish]	National Instruments vakuuttaa täten että NI ELVIS III tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen
sv Svenska [Swedish]	Härmed intygar National Instruments att denna NI ELVIS III står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU.
Íslenska [Icelandic]	Hér með lýsir National Instruments yfir því að NI ELVIS III er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU.
no Norsk [Norwegian]	National Instruments erklærer herved at utstyret NI ELVIS III er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EU.

Note Refer to the Declaration of Conformity (DoC) for this product for any additional regulatory compliance information. To obtain 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.

Power Requirements

Power supply voltage range	19 V ± 5%
Power consumption	
Maximum	76 W
Typical	20 W[1]

Note NI recommends using the NI ELVIS III with the provided power supply (786817-01). Contact NI if a replacement is needed.

Physical Characteristics

Weight	3.02 kg (6.66 lbs)

Figure 1. Top Dimensions

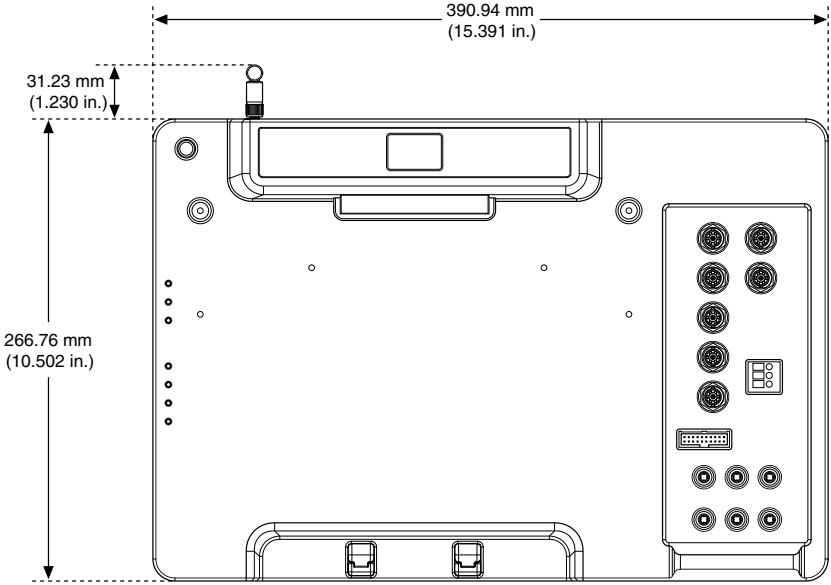
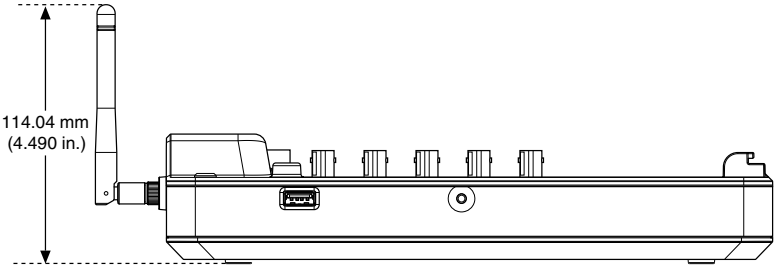
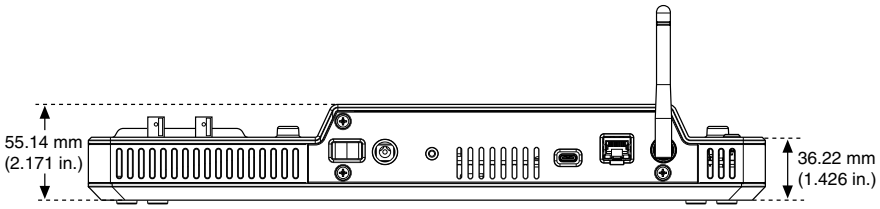


Figure 2. Side Dimensions



[1] Including assumed typical application board user power consumption.

Figure 3. Rear Dimensions



Maintenance

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

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)

Export Compliance

This model 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 model may also be subject to additional license requirements of other countries' regulations.

Additionally, this model may also require export licensing before being returned to NI. The issuance of a Return Material Authorization (RMA) by NI does not constitute export authorization. The user must comply with all applicable export laws prior to exporting or re-exporting this model. 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.

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 *www.ni.com/documentation/en/ni-elvis-iii* 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.

378048C-01 July 10, 2019