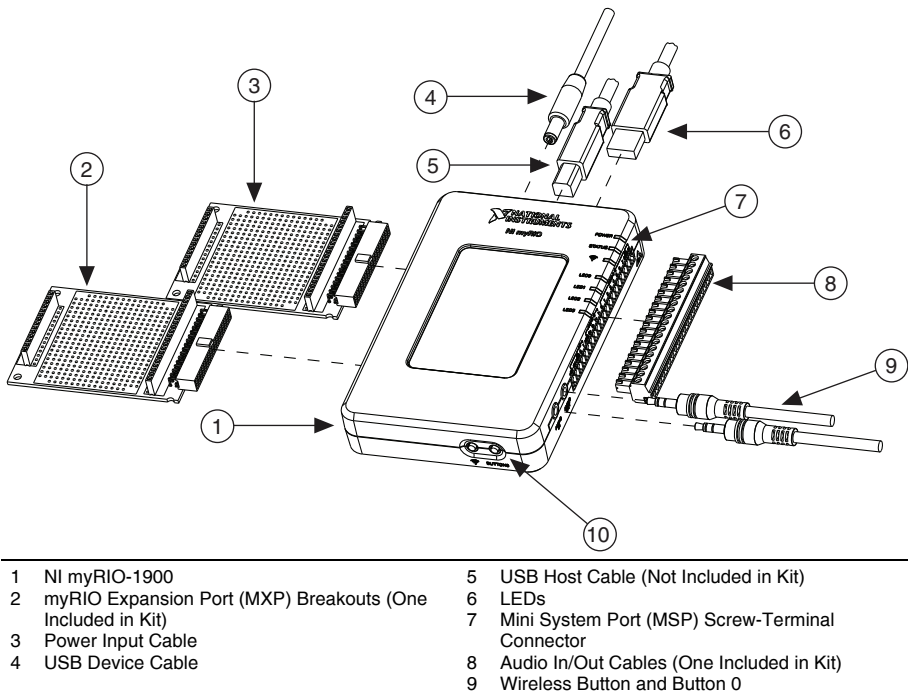# USER GUIDE AND SPECIFICATIONS
NI myRIO-1900

The National Instruments myRIO-1900 is a low-cost portable reconfigurable I/O (RIO) device that you can use to design control, robotics, and mechatronics systems. This document contains pinouts, connectivity information, dimensions, mounting instructions, and specifications for the NI myRIO-1900.

Figure 1. NI myRIO-1900

1	NI myRIO-1900	5	USB Host Cable (Not Included in Kit)
2	myRIO Expansion Port (MXP) Breakouts (One Included in Kit)	6	LEDs
3	Power Input Cable	7	Mini System Port (MSP) Screw-Terminal Connector
4	USB Device Cable	8	Audio In/Out Cables (One Included in Kit)
		9	Wireless Button and Button 0

Safety Information

⚠ **Caution**   Do not operate the hardware in a manner not specified in this document and in the user documentation. Misuse of the hardware can result in a hazard. You can compromise the safety protection if the hardware is damaged in any way. If the hardware is damaged, return it to National Instruments for repair.

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.

Electromagnetic Compatibility Guidelines

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 commercial and industrial locations. There is no guarantee that harmful interference will not occur in a particular installation or when the product is connected to 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 modifications to the product not expressly approved by National Instruments could void your authority to operate it under your local regulatory rules.

⚠ **Caution** This product was tested for EMC compliance using myRIO application software. The maximum length for USB cables is 2.0 m (6.6 ft), and the maximum length for signal wires is 30.0 cm (11.8 in.).

Hardware Overview

NI myRIO-1900 provides analog input (AI), analog output (AO), digital input and output (DIO), audio, power output, and wireless 802.11a,b,g,n in a compact embedded device.

The following figure shows the arrangement and functions of NI myRIO-1900 components.

Figure 2. NI myRIO-1900 Hardware Block Diagram
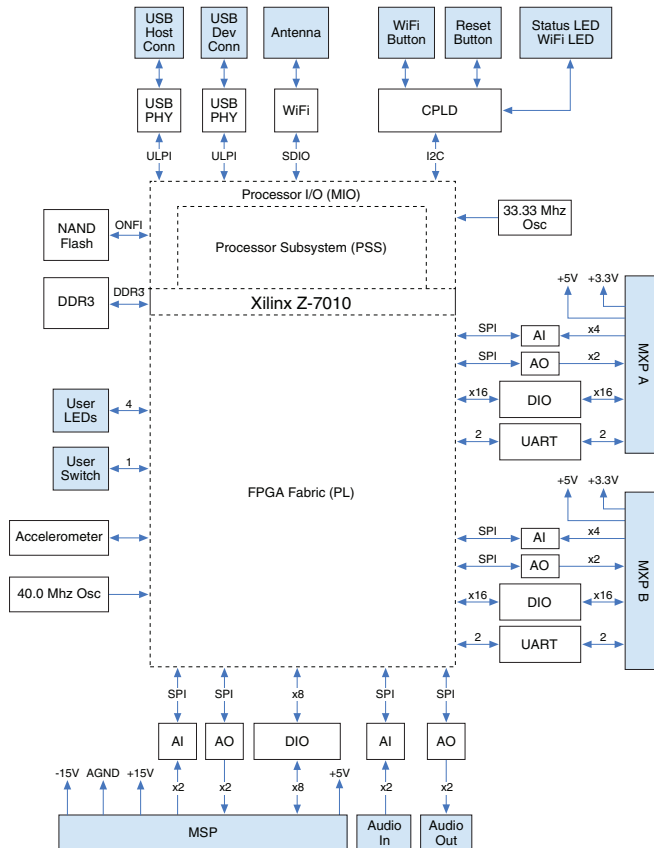
Connector Pinouts

NI myRIO-1900 Expansion Port (MXP) connectors A and B carry identical sets of signals. The signals are distinguished in software by the connector name, as in `ConnectorA/DIO1` and `ConnectorB/DIO1`. Secondary functions are implemented using myRIO application software. Refer to the software documentation for information about configuring and using secondary functions. The following figure and table show the signals on MXP connectors A and B.

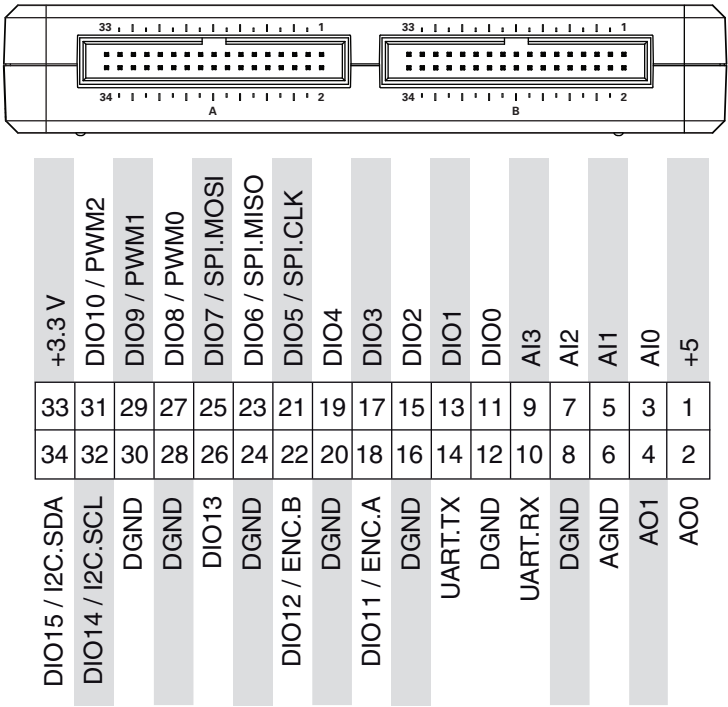**Figure 3.** Primary/Secondary Signals on MXP Connectors A and B

+3.3 V	DIO10 / PWM2	DIO9 / PWM1	DIO8 / PWM0	DIO7 / SPI.MOSI	DIO6 / SPI.MISO	DIO5 / SPI.CLK	DIO4	DIO3	DIO2	DIO1	DIO0	AI3	AI2	AI1	AI0	+5
33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1
34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2
DIO15 / I2C.SDA	DIO14 / I2C.SCL	DGND	DGND	DIO13	DGND	DIO12 / ENC.B	DGND	DIO11 / ENC.A	DGND	UART.TX	DGND	UART.RX	DGND	AGND	AO1	AO0

Table 1. Descriptions of Signals on MXP Connectors A and B

Signal Name	Reference	Direction	Description
+5V	DGND	Output	+5 V power output.
AI <0..3>	AGND	Input	0–5 V, referenced single-ended input channels. Refer to the *Analog Input Channels* section for more information.
AO <0..1>	AGND	Output	0–5 V analog output. Refer to the *Analog Output Channels* section for more information.
AGND	N/A	N/A	Reference for analog input and output.
+3.3V	DGND	Output	+3.3 V power outputs.
DIO <0..15>	DGND	Input or Output	General-purpose digital lines. Secondary functions are implemented using myRIO application software. Refer to the software documentation for information about configuring and using secondary functions.
UART.RX	DGND	Input	UART receive input.
UART.TX	DGND	Output	UART transmit output.
DGND	N/A	N/A	Reference for digital signals, +5 V, and +3.3 V.

The following figure and table show the signals on Mini System Port (MSP) connector C.

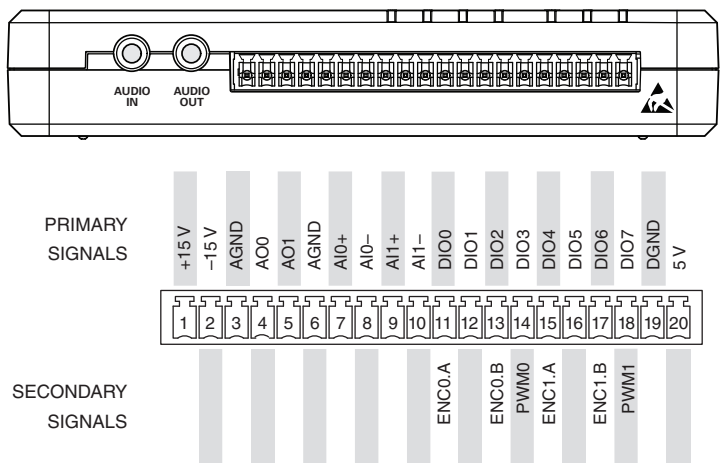**Figure 4.** Primary/Secondary Signals on MSP Connector C

Table 2. Descriptions of Signals on MSP Connector C

Signal Name	Reference	Direction	Description
+15V/–15V	AGND	Output	+15 V/–15 V power output.
AI0+/AI0–; AI1+/AI1–	AGND	Input	±10 V, differential analog input. Refer to the *Analog Input Channels* section for more information.
AO <0..1>	AGND	Output	±10 V analog output. Refer to the *Analog Output Channels* section for more information.
AGND	N/A	N/A	Reference for analog input and output.
+5V	DGND	Output	+5 V power output.
DIO<0..7>	DGND	Input or Output	General-purpose digital lines. Secondary functions are implemented using myRIO application software. Refer to the software documentation for information about configuring and using secondary functions.
DGND	N/A	N/A	Reference for digital signals and +5 V supply.

Table 3. Descriptions of Signals on Audio Connector

Signal Name	Reference	Direction	Description
AUDIO IN	N/A	Input	Audio input—Left and right audio inputs on stereo connector.
AUDIO OUT	N/A	Output	Audio output—Left and right audio outputs on stereo connector.

Analog Input Channels

The NI myRIO-1900 has analog input channels on myRIO Expansion Port (MXP) connectors A and B, Mini System Port (MSP) connector C, and a stereo audio input connector. The analog inputs are multiplexed, meaning a single analog-to-digital converter (ADC) samples all channels.

MXP connectors A and B have four single-ended analog input channels per connector, AI0–AI3, which you can use to measure 0–5 V signals. MSP connector C has two high-impedance, differential analog input channels, AI0 and AI1, which you can use to measure signals up to ±10 V. The audio inputs are left and right stereo line-level inputs.

Note For important information about improving measurement accuracy by reducing noise, go to ni.com/info and enter the Info Code analogwiring.

Figure 5 shows the analog input topology of the NI myRIO-1900.

Figure 5. NI myRIO-1900 Analog Input Circuitry
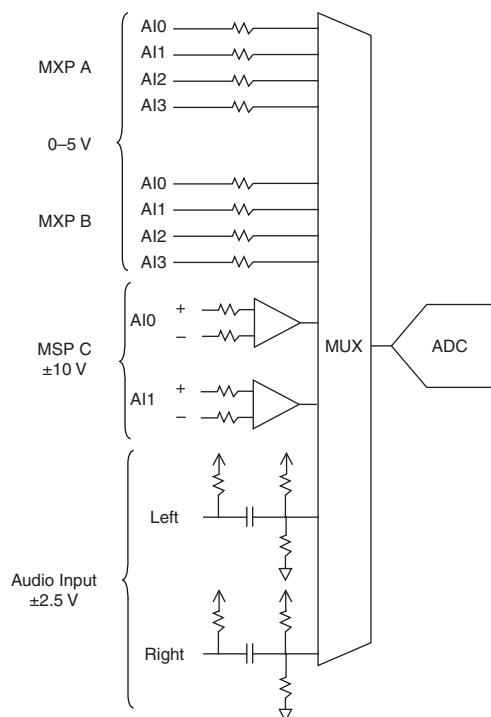
Analog Output Channels

The NI myRIO-1900 has analog output channels on myRIO Expansion Port (MXP) connectors A and B, Mini System Port (MSP) connector C, and a stereo audio output connector. Each analog output channel has a dedicated digital-to-analog converter (DAC), so they can all update simultaneously.

MXP connectors A and B have two analog output channels per connector, AO0 and AO1, which you can use to generate 0–5 V signals. MSP connector C has two analog output channels, AO0 and AO1, which you can use to generate signals up to ±10 V. The audio outputs are left and right stereo line-level outputs capable of driving headphones.

Figure 6 shows the analog output topology of the NI myRIO-1900.

Figure 6. NI myRIO-1900 Analog Output Circuitry
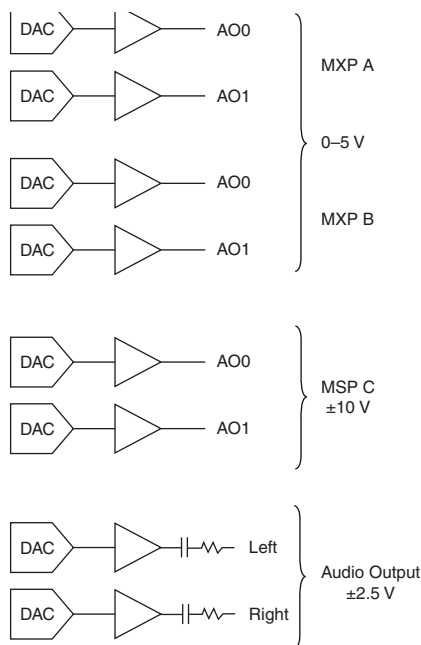
⚠ **Caution** Before using headphones to listen to the audio output of the NI myRIO-1900, ensure that the audio output is at a safe level. You can adjust the level of the audio output using myRIO application software. Listening to audio signals at a high volume may result in permanent hearing loss.

DIO Lines

The NI myRIO-1900 has DIO lines on the MXP and MSP connectors. MXP connectors A and B have 16 DIO lines per connector. Each MXP DIO line has a 40 kΩ pullup resistor to 3.3 V. MSP connector C has eight DIO lines. Each MSP DIO line has a 40 kΩ pulldown resistor to ground. DGND is the reference for all the DIO lines. You can program all the lines individually as inputs or outputs. Secondary digital functions include Serial Peripheral Interface Bus (SPI), I2C, pulse-width modulation (PWM), and quadrature encoder input. Refer to the NI myRIO software documentation for information about configuring the DIO lines.

Figure 7 shows the circuitry of one DIO line on MXP connector A or B.

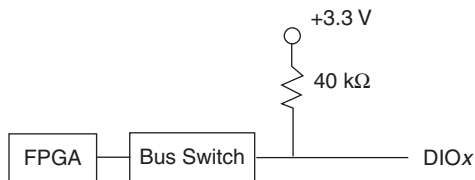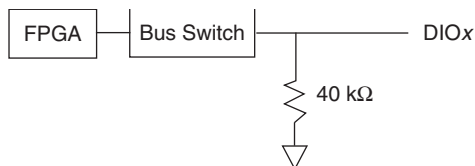**Figure 7.** One DIO Line on MXP Connector A or B

Figure 8 shows the circuitry of one DIO line on MSP connector C.

Figure 8. One DIO Line on MSP Connector C

Using the Reset Button

Pressing and releasing the Reset button restarts the processor and the FPGA.

Pressing and holding the Reset button for 5 s, then releasing it, restarts the processor and the FPGA and forces the NI myRIO-1900 into safe mode. When the NI myRIO-1900 is in safe mode, you can communicate with it using the UART lines on MXP connector A.

Using the Wireless Button and LED

<<Refer to online doc here. I will create an Info Code for this when I return, 7/22 or 7/24. --RSH>>

Using Button 0

You can use myRIO application software to program Button to meet the needs of your application. Button 0 produces a logic TRUE when depressed and a logic FALSE when not depressed. Button 0 is not debounced.

Understanding LED Indications

Power LED

The Power LED is lit while the NI myRIO-1900 is powered on. This LED indicates that the power supply connected to the device is adequate.

Status LED

The Status LED is off during normal operation. The NI myRIO-1900 runs a power-on self test (POST) when you apply power to the device. During the POST, the Power and Status LEDs turn on. When the Status LED turns off, the POST is complete. The NI myRIO-1900 indicates specific error conditions by flashing the Status LED a certain number of times every few seconds, as shown in Table 4.

Table 4. Status LED Indications

Number of Flashes Every Few Seconds	Indication
2	The device has detected an error in its software. This usually occurs when an attempt to upgrade the software is interrupted. Reinstall software on the device.
3	The device is in safe mode.
4	The software has crashed twice without rebooting or cycling power between crashes. This usually occurs when the device runs out of memory. Review your RT VI and check the memory usage. Modify the VI as necessary to solve the memory usage issue.
Continuously flashing or solid	The device has detected an unrecoverable error. Contact National Instruments.

LEDs 0–3

You can use LEDs 0–3 to help debug your application or easily retrieve application status. Use myRIO application software to define the functions of LEDs 0–3.

Using the USB Host Port

You can use the NI myRIO-1900 USB host port to connect machine-vision cameras, Web cameras, and common USB mass-storage devices.

The NI myRIO-1900 USB host port supports machine-vision cameras that conform to the USB3 Vision standard and Web cameras that conform to the USB Video Device Class (UVC) protocol.

The NI myRIO-1900 USB host port also supports USB Flash drives and USB-to-IDE adapters formatted with FAT16 and FAT32 file systems. LabVIEW usually maps USB devices to the /U, /V, /W, or /X drive, starting with the /U drive if it is available.

NI my RIO-1900 Physical Dimensions

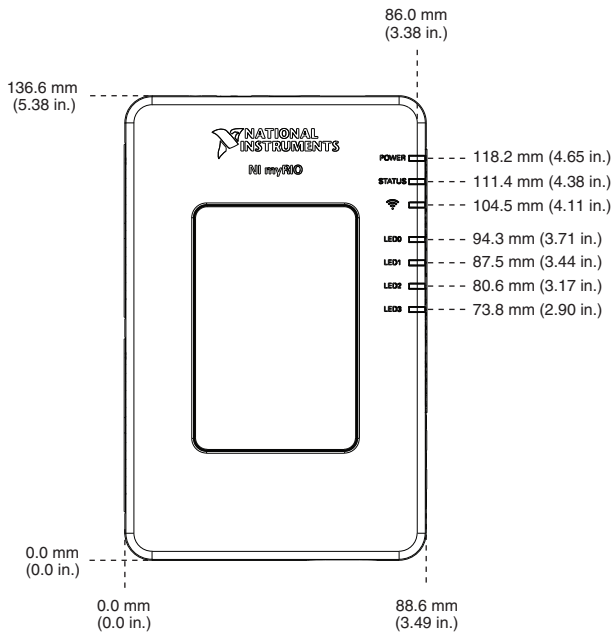**Figure 9.** NI myRIO-1900 Dimensions, Front

86.0 mm
(3.38 in.)

136.6 mm
(5.38 in.)

POWER --- 118.2 mm (4.65 in.)
STATUS --- 111.4 mm (4.38 in.)
--- 104.5 mm (4.11 in.)

LED0 --- 94.3 mm (3.71 in.)
LED1 --- 87.5 mm (3.44 in.)
LED2 --- 80.6 mm (3.17 in.)
LED3 --- 73.8 mm (2.90 in.)

0.0 mm
(0.0 in.)

0.0 mm
(0.0 in.)

88.6 mm
(3.49 in.)

Figure 10. NI myRIO-1900 Dimensions, Rear
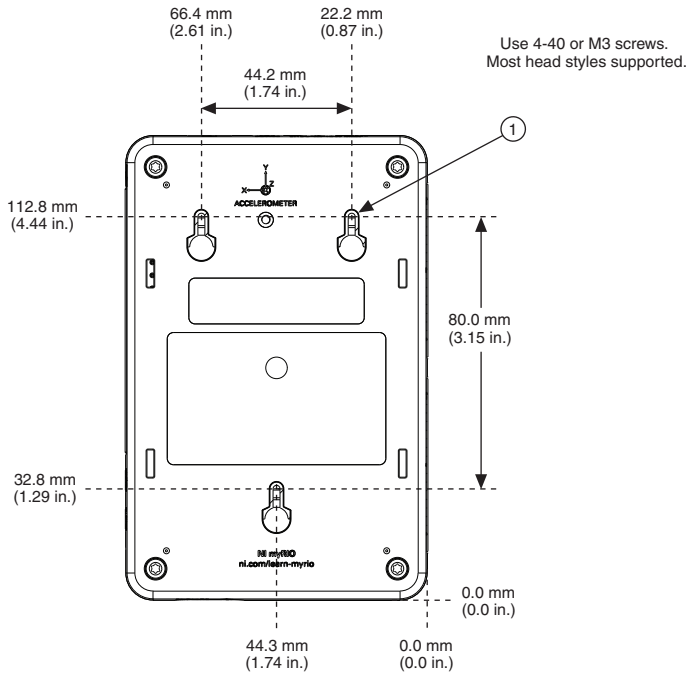
Figure 11. NI myRIO-1900 Dimensions, MSP Side
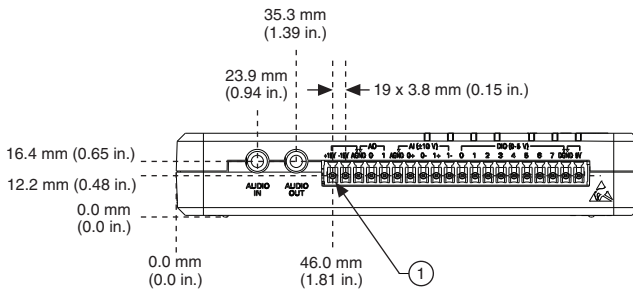
Figure 12. NI myRIO-1900 Dimensions, MXP Side
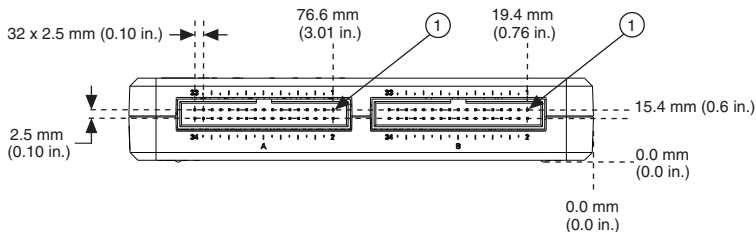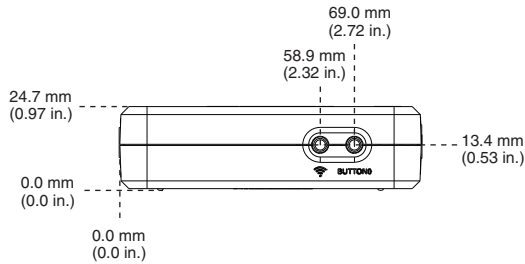
Figure 13. NI myRIO-1900 Dimensions, I/O Side
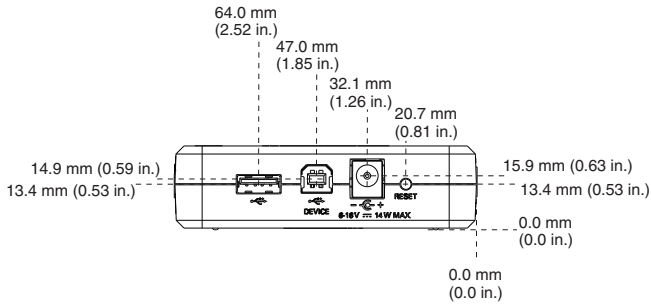
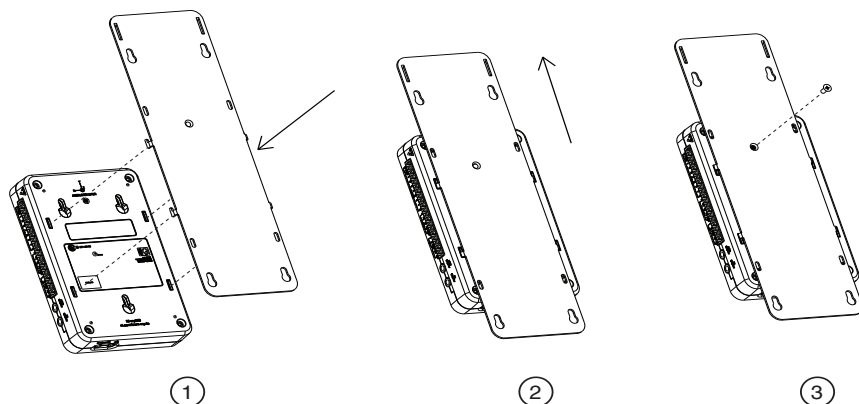**Figure 14.** NI myRIO-1900 Dimensions, User Side

Mounting the NI myRIO-1900
Using the Panel Mounting Kit

You can use the Panel Mounting Kit for NI myRIO-1900 to mount the device on a flat surface such as a panel or wall. Install the panel mounting kit on the NI myRIO-1900 as shown in Figure 15.

Figure 15. Installing the Panel Mounting Kit on the NI myRIO-1900

You must use the included 4-40 x 1/4 in. screw to attach the panel mounting kit to the NI myRIO-1900. Tighten the screw to 0.76 N · m (6.7 lb · in.) of torque. Do not exceed 0.87 N · m (7.7 lb · in.) of torque.

Fasten the panel mounting kit to the panel or wall using screws appropriate for the surface. The following figure shows the dimensions of the NI myRIO-1900 with the panel mounting kit installed.

Figure 16. Dimensions of NI myRIO-1900 with Panel Mounting Kit
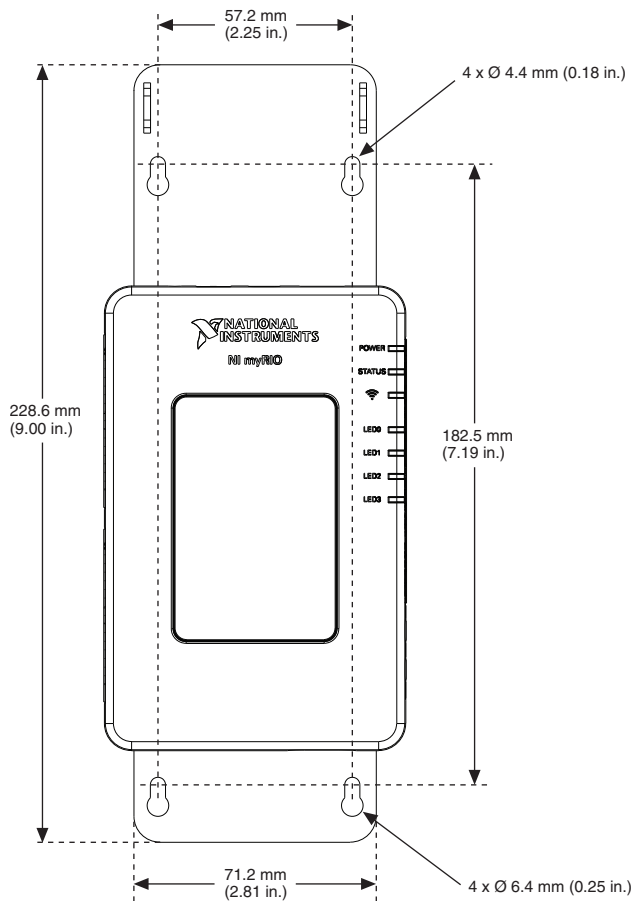
Cables and Accessories

Table 5. Table caption

Accessory	Description	NI Part Number
Power supply	Power supply for NI myRIO-1900	723403-01
MXP breakouts	Set of five MXP breakout boards for NI myRIO-1900	782696-01

Table 5. Table caption (Continued)

Accessory	Description	NI Part Number
MSP connector	MSP replacement connector plug for NI myRIO-1900	765788-01
Panel mounting kit	Panel mounting kit for NI myRIO-1900	783091-01

Specifications

The following specifications are typical for the 0 to 40 °C operating tempreature range unless otherwise noted.

Processor

Processor type.. Xilinx Zynq 7010

Processor speed... 667 MHz

Processor cores 2

Memory

Nonvolatile memory .... 256 MB

DDR3 memory .... 512 MB

    DDR3 clock frequency .... 533 MHz

    DDR3 data bus width .... 16 bits

For information about the lifespan of the nonvolatile memory and about best practices for using nonvolatile memory, go to `ni.com/info` and enter the Info Code `SSDBP`.

FPGA

FPGA type .... Xilinx Z-7010

Number of flip-flops... 35,200

Number of LUTs... 17,600

Number of DSPs... 80

Available block RAM .... 240 KB

Wireless Characteristics

Radio mode.. IEEE 802.11 b,g,n

Frequency band.. ISM 2.4 GHz

Channel width.. 20 MHz

Channels 11–24

TX power	+10 dBm max (10 mW)
Outdoor range	Up to 150 m (line of sight)
Antenna directivity	Omnidirectional
Modulation type	DSSS (O–QPSK)
Security	WPA, WPA2, WPA2-Enterprise

USB Ports

| USB host port | USB 2.0 Hi-Speed |
| USB device port | USB 2.0 Hi-Speed |

Analog input

Aggregate sample rate	500 kS/s
Resolution	12 bits
Overload protection	±16 V

MXP connectors

Configuration	Four single-ended inputs per connector
Input impedance	>500 kΩ acquiring at 500 kS/s
	1 MΩ powered on and idle
	4.7 kΩ powered off
Recommended source impedance	3 kΩ or less
Range	0 V to +4.9988 V (codes 0 to 4095)
Absolute accuracy	1% of range
Bandwidth	>300 kHz minimum

MSP connector

Configuration	Two differential inputs
Input impedance	>1 GΩ powered on
	4.7 kΩ powered off
Range	−10 V to +9.995 V (codes −2048 to +2047)
Absolute accuracy	2% of range
Bandwidth	>50 kHz typical, 20 kHz minimum

Audio input

Configuration	Two single-ended inputs
Input impedance	10 kΩ at DC
Range	−2.5 V to +2.4988 V (codes −2048 to +2047)

Analog output

| Maximum sample rate | >340 kS/s |
| Resolution | 12 bits |

Overload protection .... ±16 V

MXP connectors

    Configuration.. Two single-ended outputs per connector

    Range .... 0 V to 4.9988 V (codes 0 to 4095)

    Absolute accuracy.................................... 1% of range

MSP connector

    Configuration.. Two single-ended outputs

    Range .... −10 V to +9.995 V (codes −2048 to +2047)

    Absolute accuracy.................................... 2% of range

Audio output

    Configuration.. Two single-ended outputs

    Output impedance..................................... $(100\ \Omega + 22\ \mu F)$ in parallel with 10 kΩ

    Bandwidth.. 50 Hz to >50 kHz into 32 Ω load

                                                 5 Hz to >50 kHz into high-impedance load

Digital I/O

Number of lines .... 40, 2 ports of 16 DIO lines on MXP connectors A and B; 1 port of 8 DIO lines on MSP connector C

Direction control.. Each line individually programmable as input or output

Logic level .... 5 V compatible LVTTL input; 3.3 V LVTTL output

Input logic levels

    Input low voltage, V_{IL} .... 0 V min; 0.8 V max

    Input high voltage, V_{IH} .... 2.0 V min; 5.25 V max

Output logic levels

    Output high voltage, V_{OH}

    sourcing 4 mA .... 2.4 V min; 3.465 V max

    Output low voltage, V_{OL}

    sourcing 4 mA .... 2.4 V min; 3.465 V max

    Input high voltage, V_{IH} .... 0.0 V min; 0.4 V max

Input protection.. ±16 V

Maximum hardware update rate .... 8 MS/s

Maximum baud rate for UART .... <<TK>>

Maximum frequencies for secondary digital functions

    SPI .... 4 MHz

    PWM.. 100 kHz

Quadrature encoder input........................100 kHz

I²C ....400 kHz

Accelerometer

Number of axes...3

Range ....±8 g

Resolution ....12 bits

Update rate...800 S/s

Noise ....<<TK from Charles Y.>>

Power Output

Maximum current for +5V output ....100 mA per connector
<<More TK?>>

Power Requirements

NI myRIO-1900 requires a power supply connected to the power connector.

⚠️ **Caution**   You must use either the power supply provided in the shipping kit, or another UL Listed ITE power supply marked *LPS*, with the NI myRIO-1900.

⚠️ **Caution**   Exceeding the power limits may cause unpredictable behavior by the device. <<Ask D. Lohbeck if we can a) move to Power Output section above or b) remove.>>

Power supply voltage range..............................6–16 VDC

Maximum power consumption ....14 W

Environmental

Do not operate the NI myRIO-1900 face-down.
Ambient temperature near device
(IEC 60068-2-1, IEC 600682-2).......................0 to 40 °C

Storage temperature
(IEC 60068-2-1, IEC 600682-2).......................−20 to 70 °C

Operating humidity
(IEC 60068-2-56)..10 to 90% RH, noncondensing

Storage humidity
(IEC 60068-2-56)..10 to 90% RH, noncondensing

Maximum altitude..2,000 m

Pollution Degree (IEC 60664) 2

Indoor use only.

Physical Characteristics

Weight.. 193 g (6.8 oz)

Safety

Safety Standards

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

*   IEC 61010-1, EN 61010-1
*   UL 61010-1, CSA 61010-1

Note For UL and other safety certifications, refer to the product label or the *Online Product Certification* section.

Caution Using the NI myRIO-1900 in a manner not described in this document may impair the protection the NI myRIO-1900 provides.

Hazardous Locations

The NI myRIO-1900 is not certified for use in hazardous locations.

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 55022 (CISPR 22): Group 1, Class A emissions
*   EN 55011 (CISPR 11): Group 1, Class A emissions
*   AS/NZS CISPR 11: Group 1, Class A emissions
*   AS/NZS CISPR 22: Group 1, Class A emissions
*   FCC 47 CFR Part 15B: Class A emissions
*   ICES-001: Class A emissions

Note For EMC declarations and certifications, refer to the *Online Product Certification* section.

CE Compliance ϵ

This product meets the essential requirements of applicable European Directives as follows:

*   2006/95/EC; Low-Voltage Directive (safety)
*   2004/108/EC; Electromagnetic Compatibility Directive (EMC)
*   1999/5/EC; Radio and Telecommunications Terminal Equipment Directive (R&TTE)

Online Product Certification

To obtain product certifications and the Declaration of Conformity (DoC) for this product, visit `ni.com/certification`, search by model number or product line, and click the appropriate link in the Certification column.

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 products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers, National Instruments WEEE initiatives, and compliance with WEEE Directive 2002/96/EC on Waste and Electronic Equipment, 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`.)

Regulatory Information

United States

FCC Radio Exposure

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 person's body). This device cannot be co-located with any other transmitter unless approved by FCC.

This product does not contain any user serviceable components. Any unauthorized product changes or modifications will invalidate the warranty and all applicable regulatory certifications and approvals.

FCC 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 B 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.

This wireless adapter generates, uses, and can radiate radio frequency energy. If the wireless adapter is not installed and used in accordance with the instructions, the wireless adapter may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this wireless adapter does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by taking 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 computer with the wireless adapter to an outlet on a circuit different from that to which the equipment experiencing the interference is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Canada

Industry Canada (IC) Notices

This product complies with Industry Canada RSS-210.

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)

Cet appareil est conforme aux norme RSS210 d'Industrie Canada.

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`

EU Regulatory Statements

cs	Česky [Czech]	*National Instruments* tímto prohlašuje, _e tento NI myRIO-1900 je ve shodě se základními po_adavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da	Dansk [Danish]	Undertegnede *National Instruments* erklćrer herved, at fľlgende udstyr NI cDAQ-9191 overholder de vćsentlige krav og ľvrige relevante krav i direktiv 1999/5/EF.
de	Deutsch [German]	Hiermit erklärt *National Instruments*, dass sich das Gerät NI myRIO-1900 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et	Eesti [Estonian]	Käesolevaga kinnitab*National Instruments* seadme NI myRIO-1900 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en	English	Hereby, *National Instruments*, declares that this NI myRIO-1900 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es	Español [Spanish]	Por medio de la presente *National Instruments* declara que el NI myRIO-1900 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el	Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *National Instruments* ΔΗΛΩΝΕΙ ΟΤΙ ΝΙ myRIO-1900 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr	Français [French]	Par la présente *National Instruments* déclare que l'appareil NI myRIO-1900 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it	Italiano [Italian]	Con la presente *National Instruments* dichiara che questo NI myRIO-1900 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
lv	Latviski [Latvian]	Ar šo *National Instruments* deklarē, ka NI myRIO-1900 atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
lt	Lietuvių [Lithuanian]	Šiuo *National Instruments* deklaruoja, kad šis NI myRIO-1900 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl	Nederlands [Dutch]	Hierbij verklaart *National Instruments* dat het toestel NI myRIO-1900 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt	Malti [Maltese]	Hawnhekk, *National Instruments*, jiddikjara li dan NI myRIO-1900 jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu	Magyar [Hungarian]	Alulírott, *National Instruments* nyilatkozom, hogy a NI myRIO-1900 megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

	Polski [Polish]	Niniejszym *National Instruments*. oświadcza, że NI myRIO-1900 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
	Português [Portuguese]	*National Instruments* declara que este NI myRIO-1900 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
	Slovensko [Slovenian]	*National Instruments* izjavlja, da je ta NI myRIO-1900 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
	Slovensky [Slovak]	*National Instruments* týmto vyhlasuje, _e NI myRIO-1900 spĺňa základné po_iadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
	Suomi [Finnish]	*National Instruments* vakuuttaa täten että NI myRIO-1900 tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
	Svenska [Swedish]	Härmed intygar *National Instruments* att denna NI myRIO-1900 står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
	Íslenska [Icelandic]	Hér með lýsir *National Instruments* yfir því að NI myRIO-1900 er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
	Norsk [Norwegian]	*National Instruments* erklærer herved at utstyret NI myRIO-1900 er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

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.

Japan

The certified radio equipment is embedded in this device.

201WW 08215142 本機器には認証済み無線設備が内蔵されています

Singapore

Complies with
IDA Standards
DA105692

Taiwan R.O.C.

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

Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones:
1) es posible que este equipo o dispositivo no cause interferencia perjudicial y
2) este equipo debe aceptar cualquier interferencia, incluyendo la que pueda causar su propia
operación no deseada.

Brazil

ANATEL 1039-04-2407

(01) 0789834989010 8

Brasil–Aviso da Anatel

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra
interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a
sistemas operando em caráter primário.

Warranty

For customers other than private individual users in the EU: The NI myRIO-1900 is warranted
against defects in materials and workmanship fora period of one year from the date of shipment,
as evidenced by receipts or other documentation. National Instruments will, at its option, repair
or replace equipment that proves to be defective during the warranty period. This warranty
includes parts and labor.

For private individual users in the EU: Based on your statutory rights,National Instruments
will—through its distributor—cure defects in materials and workmanship within two years from
delivery.

Where to Go for Support

The National Instruments Web site 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.

A Declaration of Conformity (DoC) is our claim of compliance with the Council of the European Communities using the manufacturer's declaration of conformity. This system affords the user protection for electromagnetic compatibility (EMC) and product safety. You can obtain the DoC for your product by visiting `ni.com/certification`. If your product supports calibration, you can obtain the calibration certificate for your product at `ni.com/calibration`.

National Instruments corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504. National Instruments also has offices located around the world to help address your support needs. For telephone support in the United States, create your service request at `ni.com/support` and follow the calling instructions or dial 512 795 8248. For telephone support outside the United States, visit the Worldwide Offices section of `ni.com/niglobal` to access the branch office Web sites, which provide up-to-date contact information, support phone numbers, email addresses, and current events.