ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *National Instruments WLS-9163* at our website: ***Click HERE***

Technical Sales

(866) 531-6285
orders@ni.com

Requirements and Compatibility | Ordering Information | Detailed Specifications | Pinouts/Front Panel Connections
For user manuals and dimensional drawings, visit the product page resources tab on ni.com.

Last Revised: 2014-11-06 07:14:35.0

NI WLS/ENET-9163





- IEEE 802.11b/g (Wi-Fi) wireless communication interface (WLS-9163 only)
- Advanced security with 128-bit AES data encryption and IEEE 802.11i (WPA2) support (WLS-9163 only)
- 30 m indoor, 100 m line of sight wireless signal range (WLS-9163 only)
- 10/100BASE-T/X Ethernet port
- Up to 100 m Ethernet cabling distance per segment
- Streaming waveform measurements at up to 250 kS/s
- C Series signal conditioning for thermocouples, RTDs, accelerometers, microphones, strain gages, current, and more
- Two digital PFI lines for triggering and sample clock import/export

Overview

NI WLS-9163 and ENET-9163 single module carriers provide IEEE 802.11g and/or Ethernet connectivity back to a host PC for NI C Series measurement I/O modules. NI offers more than 50 C Series modules with direct sensor connections and built-in signal conditioning for a variety of measurements, including temperature, strain, acceleration, current, and voltage. You can use the modules interchangeably for a variety of measurement and control applications across several platforms, including NI CompactDAQ and CompactRIO, and an NI single module USB carrier. You can purchase WLS-9163 or ENET-9163 carriers and C Series modules separately or together as WLS-9xxx or ENET-9xxx devices.

Back to Top

Requirements and Compatibility

OS Information

- Windows 2000/XP
- Windows Vista x64/x86

Driver Information

- NI-DAQmx

Software Compatibility

- ANSI C/C++
- C#,Visual Basic,.NET
- LabVIEW
- LabWindows/CVI
- Measurement Studio
- SignalExpress

Back to Top

Application and Technology

Simple, Secure Wi-Fi Data Acquisition

Wi-Fi data acquisition is an extension of PC-based data acquisition to measurement applications where cables are inconvenient or uneconomical. NI Wi-Fi data acquisition (DAQ) devices combine IEEE 802.11g wireless or Ethernet communication; direct sensor connectivity; and the flexibility of NI-DAQmx driver software for remote monitoring of electrical, physical, mechanical, and acoustical signals. NI Wi-Fi DAQ devices can stream data on each channel at up to 250 kS/s. In addition, built-in NIST-approved 128-bit AES encryption and advanced network authentication methods offer the highest commercially available network security.

Simple, Complete Ethernet Data Acquisition

Ethernet data acquisition is an extension of PC-based data acquisition to measurement applications distributed over a large area or network. NI Ethernet DAQ devices combine industry-standard Ethernet communication, direct sensor connectivity, and the flexibility of NI-DAQmx software for remote monitoring and control of electrical, physical, mechanical, and acoustical signals. NI Ethernet DAQ devices can stream data on each channel at up to 250 kS/s across standard enterprise or home networks.

With the flexibility of NI-DAQmx programming and the ubiquity of 802.11 and Ethernet network infrastructure, NI Wi-Fi DAQ and Ethernet DAQ make it easy to incorporate remote connectivity into new or existing PC-based measurement or control systems.

NI WLS/ENET-9163 and C Series Hardware

Each NI WLS-9xxx wireless or ENET-9xxx Ethernet DAQ device is a combination of an NI WLS-9163 wireless carrier and an NI C Series measurement module. The ENET-9163 provides Ethernet connectivity back to a host PC; the WLS-9163 adds IEEE 802.11g connectivity. You can synchronize a WLS/ENET-9163 with other devices by using two onboard individually programmable digital trigger lines to export or import sample clocks, start triggers, pause triggers, and reference triggers.

C Series modules provide direct sensor connectivity and built-in signal conditioning for a variety of measurements, including temperature, strain, acceleration, current, and voltage. In addition to the WLS-9163 and ENET-9163, these modules may be used interchangeably for measurement and control applications with different chassis, including NI CompactDAQ and CompactRIO, and the NI USB-9162 carrier.



Figure 1. Each NI Wi-Fi DAQ device combines an NI WLS-9163 carrier and an NI C Series module to provide wireless sensor measurements.

You can purchase WLS/ENET-9163 carriers and select C Series modules separately or together in a kit as WLS/ENET-9xxx devices.

Wireless Security

NI Wi-Fi DAQ devices implement the highest commercially available wireless network security standard, IEEE 802.11i (commonly known as WPA2 or WPA2 Enterprise), including network authentication and data encryption. IEEE 802.1X authentication ensures that only authorized devices have network access, and encryption prevents data packets from being intercepted. NI Wi-Fi DAQ devices support multiple Extensible Authentication Protocol (EAP) methods that provide for mutual authentication between the data acquisition devices and wireless access points (WAPs). These devices also support the Advanced Encryption Standard (AES), a 128-bit cryptographic algorithm endorsed by the National Institute of Standards and Technology for use in many U.S. government facilities. By using standard security protocols, NI Wi-Fi DAQ devices make it easy to add wireless measurements to existing IT networks safely.

Recommended Software

NI Wi-Fi and Ethernet DAQ devices use the same NI-DAQmx API as hundreds of other NI PCI, PXI, and USB DAQ devices, so incorporating a networked data acquisition device into a new or existing measurement system is easy. National Instruments measurement services software, built around NI-DAQmx driver software, includes intuitive application programming interfaces, configuration tools, I/O assistants, and other tools designed to reduce system setup, configuration, and development time.



Figure 2. NI Wi-Fi and Ethernet DAQ devices stream continuous waveform data back to a host computer.

National Instruments recommends using the latest version of NI-DAQmx driver software for application development in NI LabVIEW, LabVIEW SignalExpress, LabWindows™/CVI, and Measurement Studio software. To obtain the latest version of NI-DAQmx, visit **ni.com/support/daq/versions**. NI measurement services software speeds up your development with features including the following:

- A configuration-based interface to create fast and accurate measurements with no programming using the DAQ Assistant
- Automatic code generation to create your application in LabVIEW; LabWindows/CVI; LabVIEW SignalExpress; and C#, Visual Studio .NET, ANSI C/C++, or Visual Basic using Measurement Studio
- Multithreaded streaming technology for 1,000 times performance improvements
- More than 3,000 free software downloads that are available at **ni.com/zone** to jump-start your project
- A single programming interface for hundreds of PCI, PXI, USB, Ethernet, and Wi-Fi data acquisition hardware devices

NI Wi-Fi and Ethernet DAQ devices are compatible with the following versions (or later) of NI application software: LabVIEW 8.2, LabWindows/CVI 7.x, and Measurement Studio 7.x. They are also compatible with ANSI C/C++, C#, Visual Basic .NET, and Visual Basic 6.0.

Back to Top

Ordering Information

For a complete list of accessories, visit the product page on ni.com.

Products	Part Number	Recommended Accessories	Part Number

Wireless and Ethernet C Series Carriers		
NI ENET-9163 Ethernet Carrier for C Series Modules	780501-01	No accessories required.
NI WLS-9163 IEEE 802.11b/g Carrier for C Series Modules	780495-01	No accessories required.
Region-Specific Power Cord (Required)		
Australia, 240 VAC	763066-01	No accessories required.
Europe, 240 VAC	763067-01	No accessories required.
U.S., 120 VAC	763000-01	No accessories required.
North America, 240 VAC	763068-01	No accessories required.
Japan, 100 VAC	763634-01	No accessories required.
UK, 240 VAC	763064-01	No accessories required.
Switzerland, 220 VAC	763065-01	No accessories required.

Back to Top

Support and Services

System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at ni.com/advisor to find a system assurance program to meet your needs.

Calibration

NI measurement hardware is calibrated to ensure measurement accuracy and verify that the device meets its published specifications. To ensure the ongoing accuracy of your measurement hardware, NI offers basic or detailed recalibration service that provides ongoing ISO 9001 audit compliance and confidence in your measurements. To learn more about NI calibration services or to locate a qualified service center near you, contact your local sales office or visit ni.com/calibration.

Technical Support

Get answers to your technical questions using the following National Instruments resources.

- **Support** - Visit ni.com/support to access the NI KnowledgeBase, example programs, and tutorials or to contact our applications engineers who are located in NI sales offices around the world and speak the local language.
- **Discussion Forums** - Visit forums.ni.com for a diverse set of discussion boards on topics you care about.
- **Online Community** - Visit community.ni.com to find, contribute, or collaborate on customer-contributed technical content with users like you.

Repair

While you may never need your hardware repaired, NI understands that unexpected events may lead to necessary repairs. NI offers repair services performed by highly trained technicians who quickly return your device with the guarantee that it will perform to factory specifications. For more information, visit ni.com/repair.

Training and Certifications

The NI training and certification program delivers the fastest, most certain route to increased proficiency and productivity using NI software and hardware. Training builds the skills to more efficiently develop robust, maintainable applications, while certification validates your knowledge and ability.

- **Classroom training in cities worldwide** - the most comprehensive hands-on training taught by engineers.
- **On-site training at your facility** - an excellent option to train multiple employees at the same time.
- **Online instructor-led training** - lower-cost, remote training if classroom or on-site courses are not possible.
- **Course kits** - lowest-cost, self-paced training that you can use as reference guides.
- **Training memberships** and training credits - to buy now and schedule training later.

Visit ni.com/training for more information.

Extended Warranty

NI offers options for extending the standard product warranty to meet the life-cycle requirements of your project. In addition, because NI understands that your requirements may change, the extended warranty is flexible in length and easily renewed. For more information, visit ni.com/warranty.

OEM

NI offers design-in consulting and product integration assistance if you need NI products for OEM applications. For information about special pricing and services for OEM customers, visit ni.com/oem.

Alliance

Our Professional Services Team is comprised of NI applications engineers, NI Consulting Services, and a worldwide National Instruments Alliance Partner program of more than 700 independent consultants and integrators. Services range from start-up assistance to turnkey system integration. Visit ni.com/alliance.

Detailed Specifications

These specifications are typical at 25 °C unless otherwise noted.

For C Series I/O module specifications, refer to the documentation included with the modules.

Note These specifications are for the NI WLS/ENET-9163 carrier only, unless otherwise noted.

Analog Input	
Input FIFO size	4095 samples >16 bit, 8191 samples ≤16 bit
Sample rate [1]	
NI WLS/ENET-9163 carrier	5 MS/s (multi-channel, aggregate), maximum
With NI WLS/ENET-9215	100 kS/s, maximum
Timing accuracy [2]	50 ppm of sample rate
Timing resolution [2]	50 ns
Number of channels supported	Determined by the C Series I/O module
Digital Triggers	
Static Characteristics	
Number of terminals	2 bi-directional, individually settable
Pull-down resistor	49.9 kΩ ±0.5%
Input voltage protection [3]	±20 V on each pin
Power-on state	Input
Required minimum input pulse width	100 ns
PFI Functionality	
PFI 1	Sample Clock In, Sample Clock Out [4]
PFI 0	Start Trigger In, Start Trigger Out, Pause In, Reference Trigger In

Maximum Operation Conditions		
Level	**Min**	**Max**
I_{OL} output low current	—	8 mA
I_{OH} output high current	—	–8 mA

Digital Input Characteristics		
Level	**Min**	**Max**
V_{IL} input low voltage	0 V	0.8 V
V_{IH} input high voltage	2 V	5 V
I_{IL} input low current (V_{in} = 0 V)	—	–15 µA
I_{IH} input high current (V_{in} = 5 V)	—	120 µA

Digital Output Characteristics		
Parameter	**Voltage Level**	**Current Level**
V_{OL}	0.5 V	6 mA
V_{OH}	4.0 V	–6 mA

Wireless (NI WLS-9163 Carrier Only)	
Radio mode	IEEE 802.11b, 802.11g
Wireless mode	Ad-Hoc and Infrastructure
Frequency range	2.412–2.462 GHz
Channel [5]	1–14
Security	WEP-40, WEP-104, WPA, WPA2
EAP Type	LEAP, PEAP [6] , TTLS [7] , TLS
Center frequency	
11b	2412–2484 MHz
11g	2412–2472 MHz
Channel interval	
11b	5 MHz
11g	5 MHz
Modulation type	
11g	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)
11b	DSSS (CCK, DQPSK, DBPSK)

TX power		
Specification	**Channel**	**Maximum Radio Output**
11g	1	12 dBm
	2	16 dBm
	3, 4	15.5 dBm
	5–7	15 dBm
	8–10	14.5 dBm
	11–13	14 dBm
11b	1–14	16 dBm

Receiver Sensitivity	
11b, FER<8%	
11 Mbps	–82 dB/min
5.5 Mbps	–84 dB/min
2 Mbps	–86 dB/min
1 Mbps	–88 dB/min
11g, PER<10%	
54 Mbps	–68 dB/min
48 Mbps	–68 dB/min
36 Mbps	–75 dB/min
24 Mbps	–79 dB/min
18 Mbps	–82 dB/min
12 Mbps	–84 dB/min
9 Mbps	–87 dB/min
6 Mbps	–88 dB/min

Antenna (NI WLS-9163 Carrier Only)	
Connector	Female RP-SMA connector

Electrical performance	
Property	**Performance**
VSWR	Max. 2.0 (2.4–2.5 GHz)
Impedance	50 Ω nominal
Directivity	Omni
Max. gain	2.0 dBi (2.4–2.5 GHz)

Ethernet	
Network interface	100 Base-TX, full-duplex; 100 Base-TX, half-duplex; 10 Base-T, full-duplex; 10 Base-T, half-duplex
Network protocols	TCP/IP, UDP
Network ports used	HTTP:80 (configuration only), HTTPS:43 (configuration only), TCP:31415, UDP:44515
Network IP configuration	DHCP + Link–Local, DHCP, Static, Link–Local
Communication rates	10/100 Mbps, auto-negotiated
Maximum cabling distance	100 m/segment
Module I/O States	
At power-on	Module-dependent. Refer to the documentation included with the C Series I/O module.

Power Requirements

Caution You must use a National Electric Code (NEC) UL Listed Class 2 power supply with NI WLS/ENET-9000 Series devices.

Note Some C Series I/O modules have additional power requirements. For more information about the C Series I/O module power requirements, refer to the documentation included with the C Series I/O module.

Input voltage range	9 V to 30 V
Maximum required input power	4.5 W
Power input mating connector	2 position combicon, Phoenix Contact part number: 1714977
Physical Characteristics	
Weight	Approx. 242 g (8.5 oz)
Weight with antenna (NI WLS-9163 Only)	Approx. 256 g (9 oz)
Dimensions	182 mm × 95 mm × 37 mm (7.18 in. × 3.75 in. × 1.50 in.)
With rubber feet attached	+3.56 mm (+0.140 in.)
Antenna	
Antenna connector (antenna not attached)	+5.71 mm (+0.225 in.)
Attached, fully extended	+108.7 mm (+4.28 in.)

Note Refer to the *Dimensions* section for device dimensions with the antenna attached.

Safety

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

Safety Standards

The NI WLS/ENET-9163 carrier 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
- EN 50371 [8]

Note For UL and other safety certifications, refer to the product label, or go to ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

Safety Voltages

Connect only voltages that are within these limits.

V terminal to C terminal	30 V max, Measurement Category I

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.

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

RF Safety Warning (NI WLS-9163 Carrier Only)

This equipment complies with FCC radiation exposure limits set for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This product generates and radiates radio frequency energy. To comply with the radio frequency radiation exposure guidelines in an uncontrolled environment, this equipment should be installed and operated with at least 20 cm and more between the radiator and the person's body (excluding extremities: hands, wrists, feet, and legs).

Environmental

The NI WLS/ENET-9163 carrier is intended for indoor use only. For outdoor use, mount the system in a suitably rated enclosure.

Operating temperature (IEC-60068-2-1 and IEC-60068-2-2)	0 to 55 °C
Storage temperature (IEC-60068-2-1 and IEC-60068-2-2)	– 10 to 70 °C
Ingress protection	IP 30
Operating humidity (IEC-60068-2-56)	10 to 90% RH, noncondensing
Storage humidity (IEC-60068-2-56)	5 to 90% RH, noncondensing
Maximum altitude	2,000 m
Pollution Degree (IEC 60664)	2

Shock and Vibration

To meet these specifications, you must panel mount the NI WLS/ENET-9163 carrier and affix ferrules to the ends of the terminal lines.

Operational shock	30 g peak, half-sine, 11 ms pulse (Tested in accordance with IEC-60068-2-27. Test profile developed in accordance with MIL-PRF-28800F.)
Random vibration	
Operating	5 to 500 Hz, 0.3 g_{rms}
Nonoperating	5 to 500 Hz, 2.4 g_{rms} (Tested in accordance with IEC-60068-2-64. Nonoperating test profile exceeds the requirements of MIL-PRF-28800F, Class 3.)

Electromagnetic Compatibility

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

- EN 61326 EMC requirements; Minimum Immunity
- EN 55011 Emissions; Group 1, Class A
- CE, C-Tick, ICES, and FCC Part 15 Emissions; Class A
- EN 301489-01 [9] , EN 301489-17 [9]
- FCC 15-247 [9] , IC RSS-210 [9] , EN 300328 [9]

Note For EMC compliance, operate this device according to product documentation. For country-specific restrictions, go to ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column

Electronic Compatibility Information

This hardware has been tested and found to comply with the applicable regulatory requirements and limits for electromagnetic compatibility (EMC) as indicated in the hardware's Declaration of Conformity (DoC). These requirements and limits are designed to provide reasonable protection against harmful interference when the hardware is operated in the indicated electromagnetic environment. In special cases, for example when either highly sensitive or noisy hardware is being used in close proximity, additional mitigation measures may have to be employed to minimize the potential for electromagnetic interference.

While this hardware is compliant with the applicable regulatory EMC requirements, there is no guarantee that interference will not occur in a particular installation. To minimize the potential for the hardware to cause interference to radio and television reception or to experience unacceptable performance degradation, install and use this hardware in strict accordance with the instructions in the hardware documentation and the DoC.

If this hardware does cause interference with licensed radio communications services or other nearby electronic hardware, which can be determined by turning the hardware off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the antenna of the receiver (the device suffering interference).
- Relocate the transmitter (the device generating interference) with respect to the receiver.
- Plug the transmitter into a different outlet so that the transmitter and the receiver are on different branch circuits.

This hardware may generate emissions that exceed regulatory requirements or may become more sensitive to disturbances in the local electromagnetic environment when test leads are attached or when connected to a test object.

Operation of this hardware in a residential area is likely to cause harmful interference. Users are required to correct the interference at their own expense or cease operation of the hardware.

Changes or modifications not expressly approved by National Instruments could void the user's authority to operate the hardware under the local regulatory rules.

CE Compliance

This product meets the essential requirements of applicable European Directives, as amended for CE marking, as follows:

2006/95/EC; Low-Voltage Directive (safety)

- 2004/108/EC; Electromagnetic Compatibility (EMC) Directive
- 1999/5/EC [10] ; Radio and Telecommunications Terminal Equipment (R&TTE) Directive

EU Regulatory Statements

cs Česky [Czech]	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da Dansk [Danish]	Undertegnede *[fabrikantens navn]* erklærer herved, at følgende udstyr *[udstyrets typebetegnelse]* overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de Deutsch [German]	Hiermit erklärt *[Name des Herstellers]*, dass sich das Gerät *[Gerätetyp]* in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et Eesti [Estonian]	Käesolevaga kinnitab *[tootja nimi = name of manufacturer]* seadme *[seadme tüüp = type of equipment]* vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en English	Hereby, *[name of manufacturer]*, declares that this *[type of equipment]* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es Español [Spanish]	Por medio de la presente *[nombre del fabricante]* declara que el *[clase de equipo]* cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *[name of manufacturer]* ΔΗΛΩΝΕΙ ΟΤΙ *[type of equipment]* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr Français [French]	Par la présente *[nom du fabricant]* déclare que l'appareil *[type d'appareil]* est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it Italiano [Italian]	Con la presente *[nome del costruttore]* dichiara che questo *[tipo di apparecchio]* è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
lv Latviski [Latvian]	Ar šo *[name of manufacturer / izgatavotāja nosaukums]* deklarē, ka *[type of equipment / iekārtas tips]* atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
lt Lietuvių [Lithuanian]	Šiuo *[manufacturer name]* deklaruoja, kad šis *[equipment type]* atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl Nederlands [Dutch]	Hierbij verklaart *[naam van de fabrikant]* dat het toestel *[type van toestel]* in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt Malti [Maltese]	Hawnhekk, *[isem tal-manifattur]*, jiddikjara li dan *[il-mudel tal-prodott]* jikkonforma mal-ħtiġijiet essenzjali u ma provedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu Magyar [Hungarian]	Alulírott, *[gyártó neve]* nyilatkozom, hogy a *[... típus]* megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
pl Polski [Polish]	Niniejszym *[nazwa producenta]* oświadcza, że *[nazwa wyrobu]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt Português [Portuguese]	*[Nome do fabricante]* declara que este *[tipo de equipamento]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl Slovensko [Slovenian]	*[Ime proizvajalca]* izjavlja, da je ta *[tip opreme]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
sk Slovensky [Slovak]	*[Meno výrobcu]* týmto vyhlasuje, že *[typ zariadenia]* spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	*[Valmistaja = manufacturer]* vakuuttaa täten että *[type of equipment = laitteen tyyppimerkintä]* tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv Svenska [Swedish]	Härmed intygar *[företag]* att denna *[utrustningstyp]* står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir *[name of manufacturer]* yfir því að *[type of equipment]* er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
no Norsk [Norwegian]	*[Produsentens navn]* erklærer herved at utstyret *[utstyrets typebetegnelse]* 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.

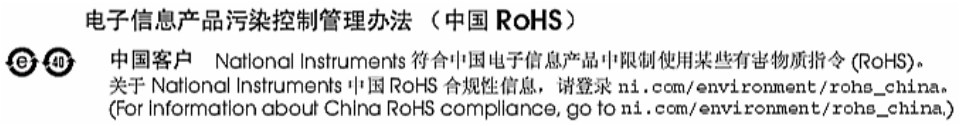
Environmental Management

National Instruments is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial not only to the environment but also to NI customers.

For additional environmental information, refer to the *NI and the Environment* 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)

At the end of their life cycle, all products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers and National Instruments WEEE initiatives, visit ni.com/environment/weee.htm.



[1] Performance dependent on type of installed C Series I/O modules and number of channels in the task.

[2] Does not include group delay. Refer to C Series I/O module documentation for more information.

[3] Stresses beyond those listed under *Input voltage protection* may cause permanent damage to the device.

[4] Module-dependent.

[5] Due to regulations, the valid channels depend upon in which country the device is operating.

[6] Only PEAPv0/MS-CHAPv2 is supported.

[7] Only CHAP and MS-CHAPv2 are supported.

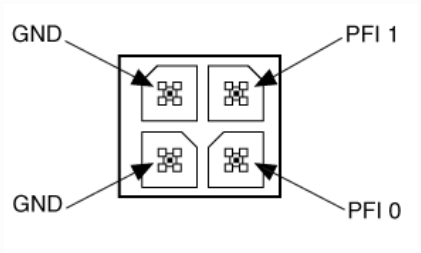
[8] NI WLS-9163 carrier only.

[9] NI WLS-9163 carrier only.

[10] NI WLS-9163 only.

Back to Top

Pinouts/Front Panel Connections



Trigger Connector Pinout

Back to Top

©2010 National Instruments. All rights reserved. CVI, CompactRIO, FieldPoint, LabVIEW, Measurement Studio, National Instruments, National Instruments Alliance Partner, NI, ni.com, NI CompactDAQ, NI-DAQ, and SignalExpress are trademarks of National Instruments. The mark LabWindows is used under a license from Microsoft Corporation. Windows is a registered trademark of Microsoft Corporation in the United States and other countries. Other product and company names listed are trademarks or trade names of their respective companies. A National Instruments Alliance Partner is a business entity independent from National Instruments and has no agency, partnership, or joint-venture relationship with National Instruments.

My Profile | RSS | Privacy | Legal | Contact NI © 2014 National Instruments Corporation. All rights reserved.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP