



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)

Last Revised: 2012-12-18 15:53:16.0

## 8 Ch, $\pm 10$ V, 500 kS/s, 12-Bit C Series Analog Input Module

### NI 9201



- Signal conditioning for high voltage ( $\pm 60$  V), thermocouples, RTDs, accelerometers, microphones, strain gages, current inputs
- Advanced features such as smart TEDS sensor capability, antialiasing filters, open-thermocouple detection
- $\pm 10$  V, or  $\pm 60$  V analog input ranges
- 12-, 16-, or 24-bit (delta-sigma) resolution
- Up to 800 kS/s multiplexed or up to 100 kS/s simultaneous-sampling analog-to-digital converter (ADC)
- Up to 32 channels per module
- Up to 2,300 Vrms isolation (withstand), up to 250 Vrms isolation (continuous)
- NIST-traceable calibration certificate for guaranteed accuracy

### Overview

The NI 9201 is an NI C Series module for eight-channel analog input at a maximum aggregate rate of 500 kS/s. It represents an effective combination of channel count and speed at a low price for an economical multifunction system. As with the majority of C Series modules, the NI 9201 is protected from harmful voltage spikes of up to 2,300 Vrms. This means that no harmful voltage within the isolation rating can harm other modules in the system, the chassis, or any connected computer equipment. In addition to the absolute protection from the isolation, there is up to 100 V of overvoltage protection for errant signal connection or unexpected outputs to the individual channels. The NI 9201 has two connector options: a 10-position screw terminal connector for direct connectivity and a 25-position D-Sub connector. The industry-standard 25-position D-Sub connector provides low-cost cabling to a wide variety of accessories from NI or other vendors. Several vendors also deliver custom D-Sub cable fabrication services and can offer cables with a pinout to match your exact application needs. NI recommends the NI 9932 strain-relief connector accessory for the NI 9201. The NI 9934 (or other 25-pin D-Sub connector) is required for use with the NI 9201 with D-Sub module. The NI 9934 includes a screw-terminal connector with strain relief as well as a D-Sub solder cup backshell for creating custom cable assemblies.

[Back to Top](#)

### Requirements and Compatibility

#### OS Information

Real-Time OS  
 Windows

#### Driver Information

NI-DAQmx  
 NI-RIO

#### Software Compatibility

LabVIEW  
 LabWindows/CVI  
 Measurement Studio  
 SignalExpress  
 Visual C++  
 Visual Studio  
 Visual Studio .NET

[Back to Top](#)

### Comparison Tables

Module	Signal Type	Channels	Sample Rate	Resolution (bits)
9201	Voltage	8	500 kS/s	12
9203	Current	8	200 kS/s	16

Module	Signal Type	Channels	Sample Rate	Resolution (bits)
9205	Voltage	32 SE/16 DI	250 kS/s	16
9206	CAT I isolated voltage	16 DI	250 kS/s	16
9215	Voltage	4	100 kS/s per channel	16
9217	RTD	4	400 S/s	24
9221	Voltage	8	800 kS/s	12
9227	Current	4	50 kS/s per channel	24
9233	IEPE	4	50 kS/s per channel	24
9235/9236	Quarter-bridge	8	10 kS/s per channel	24
9237	Bridge	4	50 kS/s per channel	24

[Back to Top](#)

## Application and Technology

High-accuracy C Series analog input modules for NI CompactDAQ and CompactRIO provide high-performance measurements for a wide variety of industrial, in-vehicle, and laboratory sensors and signal types. Each module includes built-in signal conditioning and an integrated connector with screw terminal or cable options for flexible and low-cost signal wiring. All modules feature CompactRIO Extreme Industrial Certifications and Ratings.

### C Series Compatibility

The C Series hardware family features more than 50 measurement modules and several chassis and carriers for deployment. With this variety of modules, you can mix and match measurements such as temperature, acceleration, flow, pressure, strain, acoustic, voltage, current, digital, and more to create a custom system. Install the modules in one of several carriers to create a single module USB, Ethernet, or Wi-Fi system, or combine them in chassis such as NI CompactDAQ and CompactRIO to create a mixed-measurement system with synchronized measurements. You can install up to eight modules in a simple, complete NI CompactDAQ USB data acquisition system to synchronize all of the analog output, analog input, and digital I/O from the modules. For a system without a PC, CompactRIO holds up to eight modules and features a built-in processor, RAM, and storage for an embedded data logger or control unit. For higher-speed control, CompactRIO chassis incorporate a field-programmable gate array (FPGA) that you can program with NI LabVIEW software to achieve silicon-speed processing on I/O data from C Series modules.

### Advanced Features

When used with CompactRIO, C Series analog input modules connect directly to reconfigurable I/O (RIO) FPGA hardware to create high-performance embedded systems. The reconfigurable FPGA hardware within CompactRIO provides a variety of options for custom timing, triggering, synchronization, filtering, signal processing, and high-speed decision making for all C Series analog modules. For instance, with CompactRIO, you can implement custom triggering for any analog sensor type on a per-channel basis using the flexibility and performance of the FPGA and the numerous arithmetic and comparison function blocks built into the LabVIEW FPGA Module.

### Key Features

High-accuracy, high-performance analog measurements for any CompactRIO embedded system, R Series expansion chassis, or NI CompactDAQ chassis  
 Screw terminals, BNC, D-Sub, spring terminals, strain relief, high voltage, cable, solder cup backshell, and other connectivity options  
 Available channel-to-earth ground double-isolation barrier for safety, noise immunity, and high common-mode voltage range  
 CompactRIO Extreme Industrial Certifications and Ratings  
 Built-in signal conditioning for direct connection to sensors and industrial devices

Visit [ni.com/compactrio](http://ni.com/compactrio) or [ni.com/compactdaq](http://ni.com/compactdaq) for up-to-date information on module availability, example programs, application notes, and other developer tools.

### Connectivity Accessories

NI CompactDAQ and CompactRIO systems are designed to provide flexible options for low-cost field wiring and cabling. Most C Series modules have a unique connector block option that offers secure connections to your C Series system. Table 2 contains all of the connector blocks for C Series I/O modules.

Accessory	Description
NI 9932	10-position strain relief and high-voltage screw-terminal connector kit
NI 9933	37-pin D-Sub connector kit with strain relief and D-Sub shell
NI 9934	25-pin D-Sub connector kit with strain relief and D-Sub shell
NI 9935	15-pin D-Sub connector kit with strain relief and D-Sub shell
NI 9936	10-position screw-terminal plugs (quantity 10)
NI 9939	16-position connector kit with strain relief

**Note:** To meet shock and vibration requirements, you must affix ferrules to the ends of the wires on all screw-terminal connectors.

Table 2. Connector Blocks for C Series I/O Modules

Table 3 lists the recommended connector block accessories for each C Series analog input module.

C Series Analog Input Module	Recommended Module Accessory
NI 9201	NI 9932, NI 9936
NI 9201 with D-Sub	NI 9934 <sup>1</sup>
NI 9211	NI 9932, NI 9936
NI 9215	NI 9932, NI 9936
NI 9217	NI 9939
NI 9221	NI 9932, NI 9936
NI 9221 with D-Sub	NI 9934 <sup>1</sup>

<sup>1</sup>Requires a 25-pin D-Sub connector such as the NI 9934 accessory kit.

Table 3. Recommended Connector Block Accessories

The NI 9932 kit provides strain relief and operator protection from high-voltage signals for any 10-position screw-terminal module.



Figure 1. NI 9932 10-Position Strain Relief and High-Voltage Screw-Terminal Connector Kit

The NI 9933 includes a screw-terminal connector with strain relief as well as a D-Sub solder cup backshell for creating custom cable assemblies for any module with a 37-pin D-Sub connector.



Figure 2. NI 9933 37-Pin D-Sub Connector Kit with Strain Relief and D-Sub Shell

The NI 9934 includes a screw-terminal connector with strain relief as well as a D-Sub solder cup backshell for creating custom cable assemblies for any module with a 25-pin D-Sub connector.



Figure 3. NI 9934 25-Pin D-Sub Connector Kit with Strain Relief and D-Sub Shell

The NI 9935 includes a screw-terminal connector with strain relief as well as a D-Sub solder cup backshell for creating custom cable assemblies for any module with a 15-pin D-Sub connector.



Figure 4. NI 9935 15-Pin D-Sub Connector Kit with Strain Relief and D-Sub Shell

The NI 9936 consists of 10-position screw-terminal plugs for any 10-position screw-terminal module.



Figure 5. NI 9936 10-Position Screw-Terminal Plugs

Visit [ni.com/compactrio](http://ni.com/compactrio) or [ni.com/compactdaq](http://ni.com/compactdaq) for up-to-date information on accessories.

[Back to Top](#)

## Ordering Information

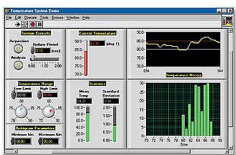
For a complete list of accessories, visit the product page on [ni.com](http://ni.com).

Products	Part Number	Recommended Accessories	Part Number
<b>NI 9201</b>			
<b>NI 9201 with Screw Terminals</b> Requires: 1 Connectivity Accessories ;	779013-01	<b>Connectivity Accessories:</b> screwTerminal - NI 9932 Strain relief, operator protection (qty 1)	779017-01

[Back to Top](#)

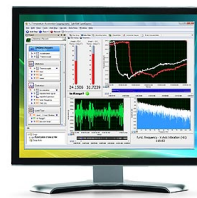
## Software Recommendations

### LabVIEW Professional Development System for Windows



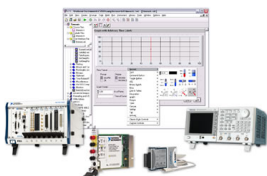
Advanced software tools for large project development  
Automatic code generation using DAQ Assistant and Instrument I/O Assistant  
Tight integration with a wide range of hardware  
Advanced measurement analysis and digital signal processing  
Open connectivity with DLLs, ActiveX, and .NET objects  
Capability to build DLLs, executables, and MSI installers

### NI LabVIEW SignalExpress for Windows



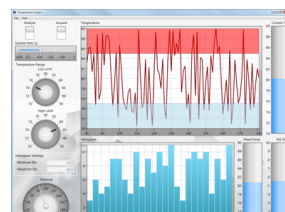
Quickly configure projects without programming  
Control over 400 PC-based and stand-alone instruments  
Log data from more than 250 data acquisition devices  
Perform basic signal processing, analysis, and file I/O  
Scale your application with automatic LabVIEW code generation  
Create custom reports or easily export data to LabVIEW, DIAdem or Microsoft Excel

### NI LabWindows™/CVI for Windows



Real-time advanced 2D graphs and charts  
Complete hardware compatibility with IVI, VISA, DAQ, GPIB, and serial  
Analysis tools for array manipulation, signal processing statistics, and curve fitting  
Simplified cross-platform communication with network variables  
Measurement Studio .NET tools (included in LabWindows/CVI Full only)  
The mark LabWindows is used under a license from Microsoft Corporation.

### NI Measurement Studio Professional Edition



Customizable graphs and charts for WPF, Windows Forms, and ASP.NET Web Forms UI design  
Analysis libraries for array operations, signal generation, windowing, filters, signal processing  
Hardware integration support with native .NET data acquisition and instrument control libraries  
Automatic code generation for all NI-DAQmx data acquisition hardware  
Intelligent and efficient data-logging libraries for streaming measurement data to disk  
Support for Microsoft Visual Studio .NET 2012/2010/2008

[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](http://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](http://ni.com/calibration).

### Technical Support

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

**Support** - Visit [ni.com/support](http://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](http://forums.ni.com) for a diverse set of discussion boards on topics you care about.

**Online Community** - Visit [community.ni.com](http://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](http://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](http://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](http://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](http://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](http://ni.com/alliance).

[Back to Top](#)

## Detailed Specifications

The following specifications are typical for the range -40 to 70 °C unless otherwise noted. All voltages are relative to COM unless otherwise noted. The specifications are the same for the NI 9201 and the NI 9221 unless otherwise noted.

### Input Characteristics

Number of channels	8 analog input channels
ADC resolution	12 bits
Type of ADC	Successive approximation register (SAR)

Sample rate (aggregate)		
Module	Maximum Sample Rate (R Series Expansion Chassis)	Maximum Sample Rate (All Other Chassis)
NI 9201, single channel	475 kS/s	800 kS/s

Sample rate (aggregate)		
Module	Maximum Sample Rate (R Series Expansion Chassis)	Maximum Sample Rate (All Other Chassis)
NI 9201, scanning	475 kS/s	500 kS/s
NI 9221	475 kS/s	800 kS/s

Input range

NI 9201	±10 V
NI 9221	±60 V

Operating voltage ranges <sup>1</sup>					
Module	Measurement Voltage, Channel-to-COM			Maximum Voltage, Channel-to-Earth Ground or COM-to-Earth Ground	
	Min (V)	Typ (V)	Max (V)	Screw Terminal	DSUB
NI 9201	±10.3	±10.53	±10.8	250 V <sub>rms</sub>	±60 VDC
NI 9221	±61.4	±62.50	±63.8		

Overvoltage protection (channel-to-COM)

±100 V

NI 9201 accuracy (excludes noise)		
Measurement Conditions	Percent of Reading (Gain Error)	Percent of Range* (Offset Error)
Calibrated typ (25 °C, ±5 °C)	±0.04%	±0.07%
Calibrated max (-40 to 70 °C)	±0.25%	±0.25%
Uncalibrated typ (25 °C, ±5 °C)	±0.26%	±0.46%
Uncalibrated max (-40 to 70 °C)	±0.67%	±1.25%
* Range equals 10.53 V		

NI 9221 accuracy (excludes noise)		
Measurement Conditions	Percent of Reading (Gain Error)	Percent of Range* (Offset Error)
Calibrated typ (25 °C, ±5 °C)	±0.04%	±0.07%
Calibrated max (-40 to 70 °C)	±0.25%	±0.25%
Uncalibrated typ (25 °C, ±5 °C)	±0.26%	±0.43%
Uncalibrated max (-40 to 70 °C)	±0.67%	±1.06%
* Range equals 62.50 V		

Stability

Gain drift	±34 ppm/°C
Offset drift	
NI 9201	±100 µV/°C
NI 9221	±580 µV/°C

Input bandwidth (-3 dB)

NI 9201	690 kHz min
NI 9221	950 kHz min

Input impedance

Resistance	1 MΩ
Capacitance	5 pF

Input noise (code-centered)

RMS	0.7 LSB <sub>rms</sub>
Peak-to-peak	5 LSB

No missing codes

12 bits

DNL	-0.9 to 1.5 LSB
INL	±1.5 LSB
Crosstalk (at 10 kHz)	-75 dB
Settling time (to 1 LSB)	
NI 9201	2 µs
NI 9221	1.25 µs
MTBF	1,092,512 hours at 25 °C; Bellcore Issue 2, Method 1, Case 3, Limited Part Stress Method



**Note** Contact NI for Bellcore MTBF specifications at other temperatures or for MIL-HDBK-217F specifications.

## Power Requirements

Power consumption from chassis

Active mode	1 W max
Sleep mode	1 mW max
Thermal dissipation (at 70 °C)	
Active mode	1 W max
Sleep mode	32 mW max

## Physical Characteristics

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



**Note** For two-dimensional drawings and three-dimensional models of the C Series module and connectors, visit [ni.com/dimensions](http://ni.com/dimensions) and search by module number.

Screw-terminal wiring	12 to 24 AWG copper conductor wire with 10 mm (0.39 in.) of insulation stripped from the end
Torque for screw terminals	0.5 to 0.6 N · m (4.4 to 5.3 lb · in.)
Ferrules	0.25 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Weight	
NI 9201/9221 with screw terminal	150 g (5.3 oz)
NI 9201/9221 with DSUB	145 g (5.1 oz)

## Safety

### Safety Voltages

Connect only voltages that are within the following limits.

Channel-to-COM	±60 VDC max
<b>NI 9201/9221 with Screw Terminal Isolation Voltages</b>	
Channel-to-channel	None
Channel-to-earth ground	
Continuous	250 V <sub>rms</sub> , Measurement Category II
Withstand	2,300 V <sub>rms</sub> , verified by a 5 s dielectric withstand test

Measurement Category II is for measurements performed on circuits directly connected to the electrical distribution system. This category refers to local-level electrical distribution, such as that provided by a standard wall outlet, for example, 115 V for U.S. or 230 V for Europe.



**Caution** Do *not* connect the NI 9201/9221 with screw terminal to signals or use for measurements within Measurement Categories III or IV.

### NI 9201/9221 with DSUB Isolation Voltages

Channel-to-channel	None
Channel-to-earth ground	
Continuous	60 VDC, Measurement Category I
Withstand	1,000 V <sub>rms</sub> , verified by a 5 s dielectric withstand test

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 NI 9201/9221 with DSUB to signals or use for measurements within Measurement Categories II, III, or IV.

### Hazardous Locations

U.S. (UL)

Class I, Division 2, Groups A, B, C, D, T4; Class I, Zone 2, AEx nC IIC T4




Canada (C-UL)	Class I, Division 2, Groups A, B, C, D, T4; Class I, Zone 2, Ex nC IIC T4
Europe (DEMKO)	EEx nC IIC T4

### 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.

### Electromagnetic Compatibility

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

EN 61326 (IEC 61326): Class A emissions; Industrial immunity  
EN 55011 (CISPR 11): Group 1, Class A emissions  
AS/NZS CISPR 11: Group 1, Class A emissions  
FCC 47 CFR Part 15B: Class A emissions  
ICES-001: Class A emissions


 **Note** For the standards applied to assess the EMC of this product, refer to the *Online Product Certification* section.

 **Note** For EMC compliance, operate this device with double-shielded cables.

### 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 Directive (EMC)

 **Note** For the standards applied to assess the EMC of this product, refer to the *Online Product Certification* section.

### Online Product Certification

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for this product, visit [ni.com/certification](http://ni.com/certification), search by module number or product line, and click the appropriate link in the Certification column.

### Shock and Vibration

To meet these specifications, you must panel mount the system. If you are using the NI 9201/9221 with screw terminal, you also must either affix ferrules to the ends of the terminal wires or use the NI 9932 backshell kit to protect the connections.

Operating vibration

Random (IEC 60068-2-64)	5 g <sub>rms</sub> , 10 to 500 Hz
Sinusoidal (IEC 60068-2-6)	5 g, 10 to 500 Hz
Operating shock (IEC 60068-2-27)	30 g, 11 ms half sine, 50 g, 3 ms half sine, 18 shocks at 6 orientations

### Environmental

National Instruments C Series modules are intended for indoor use only but may be used outdoors if installed in a suitable enclosure. Refer to the manual for the chassis you are using for more information about meeting these specifications.

Operating temperature (IEC 60068-2-1, IEC 60068-2-2)	-40 to 70 °C
Storage temperature (IEC 60068-2-1, IEC 60068-2-2)	-40 to 85 °C
Ingress protection	IP 40
Operating humidity (IEC 60068-2-56)	10 to 90% RH, noncondensing
Storage humidity (IEC 60068-2-56)	5 to 95% RH, noncondensing
Maximum altitude	2,000 m
Pollution Degree	2

### 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](http://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 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](http://ni.com/environment/weee.htm).

### 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](http://ni.com/environment/rohs_china)。(For information about China RoHS compliance, go to [ni.com/environment/rohs\\_china](http://ni.com/environment/rohs_china).)

## Calibration

You can obtain the calibration certificate for this device at [ni.com/calibration](https://ni.com/calibration).

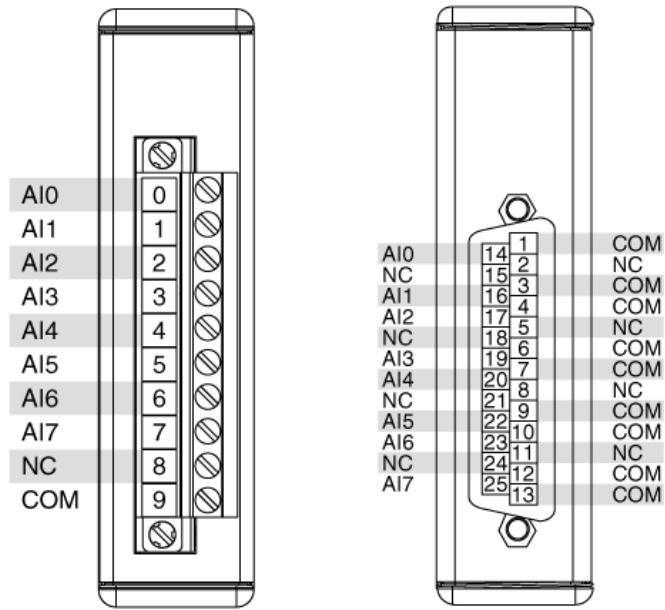
Calibration interval

1 year

<sup>1</sup> Refer to the *Safety Guidelines* section in the *NI 9201/9221 Operating Instructions and Specifications* for more information about safe operating voltages.

[Back to Top](#)

## Pinouts/Front Panel Connections



NI 9201/9221 Terminal and Pin Assignments

[Back to Top](#)

©2010 National Instruments. All rights reserved. CompactRIO, CVI, FieldPoint, LabVIEW, Measurement Studio, National Instruments, National Instruments Alliance Partner, NI, ni.com, NI CompactDAQ, 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](#) © 2012 National Instruments Corporation. All rights reserved.



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)