

NI 9201

8-Ch, ± 10 V, 500 kS/s, 12-Bit Analog Input Module, C Series

- 8 analog inputs, ± 10 V input range
- 500 kS/s aggregate sampling rate
- 12-bit resolution, single-ended inputs, screw terminal or D-Sub connectors
- Hot-swappable operation; overvoltage protection; isolation
- NIST-traceable calibration
- -40 to 70 °C operating range



Overview

The NI 9201 is a C Series module for 8-channel analog input at a maximum aggregate rate of 500 kS/s. The NI 9201 represents a good 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.

There are two connector options for the NI 9201 – 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 available from NI or other vendors. A number of vendors also provide custom D-Sub cable fabrication services, and can provide cables with a pin-out that matches 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.

Specifications

Specifications Documents

- Specifications
- Data Sheet

Specifications Summary

General

Product Name	NI 9201
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Product Family	Industrial I/O
Form Factor	CompactDAQ , CompactRIO
Operating System/Target	Windows , Real-Time
Measurement Type	Voltage
Isolation Type	Ch-Earth Ground Isolation
RoHS Compliant	Yes
Product Name	NI 9201 D-Sub
Product Family	Industrial I/O
Form Factor	CompactDAQ , CompactRIO
Operating System/Target	Windows , Real-Time
Measurement Type	Voltage
Isolation Type	Ch-Earth Ground Isolation
RoHS Compliant	Yes
Analog Input	
Channels	8 , 0
Single-Ended Channels	8
Differential Channels	0
Resolution	12 bits
Sample Rate	500 kS/s
Max Voltage	10 V
Maximum Voltage Range	-10 V , 10 V
Maximum Voltage Range Accuracy	0.053 V
Minimum Voltage Range	-10 V , 10 V
Minimum Voltage Range Accuracy	0.053 V
Simultaneous Sampling	No
Channels	8 , 0
Single-Ended Channels	8
Differential Channels	0
Resolution	12 bits
Sample Rate	500 kS/s
Max Voltage	10 V

Maximum Voltage Range	-10 V , 10 V
Maximum Voltage Range Accuracy	0.053 V
Minimum Voltage Range	-10 V , 10 V
Minimum Voltage Range Accuracy	0.053 V
Simultaneous Sampling	No
Analog Output	
Channels	0
Channels	0
Digital I/O	
Bidirectional Channels	0
Input-Only Channels	0
Output-Only Channels	0
Number of Channels	0 , 0 , 0
Bidirectional Channels	0
Input-Only Channels	0
Output-Only Channels	0
Number of Channels	0 , 0 , 0
Counter/Timers	
Counters	0
Counters	0
Physical Specifications	
Length	9 cm
Width	2.3 cm
I/O Connector	Screw terminals
Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	70 °C
Minimum Storage Temperature	-40 °C
Maximum Storage Temperature	85 °C
Length	9 cm
Width	2.3 cm
I/O Connector	25-pin D-Sub

Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	70 °C
Minimum Storage Temperature	-40 °C
Maximum Storage Temperature	85 °C
Timing/Triggering/Synchronization	
Triggers cDAQ Chassis	No
Triggers cDAQ Chassis	No

Pricing

Select one of the following options for product configuration and pricing:

Select Module and Accessories Below »
OR
Configure and Price a Complete CompactDAQ/CompactRIO System »



Module



Accessories



Chassis, Controllers, Modules



Software & Services

Step 1: Verify Device and Quantity Selection

Part Number	Description	Est Ship Days	US Dollars*	Qty
	NI 9201			
779013-01	Screw Terminal NI Recommended	1 - 2	\$ 379	1
779372-01	D-Sub connector	1 - 2	\$ 379	0

Each NI 9201 requires: 1 Connectivity Accessory



NI 9201



Connectivity Accessory

Each NI 9201 with DSub requires: 1 Connectivity Accessory



NI 9201 with DSub



Connectivity Accessory

Step 2: Select Connectivity Accessory

Part Number	Description	Est Ship Days	US Dollars*	Qty
Screw Terminals				
779017-01	NI 9932 Backshell with 10-pos connector block (qty 1) NI Recommended	1 - 2	\$ 29	1

Step 3: Select Optional Accessories

Part Number	Description	Est Ship Days	US Dollars*	Qty
Connectivity Accessories				
779105-01	NI 9936 - 10 screw-terminal plugs for any 10-position screw-terminal module	1 - 2	\$ 49	0

* You have selected the United States as the country where you will use the product(s). Pricing may have changed since you printed this document on 01/20/2011. Please visit ni.com to see current pricing.

Step 4: Place Order or Obtain Quote

Step 2: Select Connectivity Accessory

Part Number	Description	Est Ship Days	US Dollars*	Qty
Screw Terminals				
779104-01	NI 9934 25pin D-Sub connector kit NI Recommended	1 - 2	\$ 109	1

Step 3: Select Optional Accessories

Part Number	Description	Est Ship Days	US Dollars*	Qty
Cable				
192568-01	SH25F-25M-1 25-Pin Female to Male Shielded I/O Cable, 1 m	5 - 10	\$ 29	0
192568-02	SH25F-25M-2 25-Pin Female to Male Shielded I/O Cable, 2 m	5 - 10	\$ 39	0
Connectivity Accessories				
781081-01	25-pin DSUB to Screw Terminal Block, DIN Rail Mount	5 - 10	\$ 59	0

* You have selected the United States as the country where you will use the product(s). Pricing may have changed since you printed this document on 01/20/2011. Please visit ni.com to see current pricing.

Step 4: Place Order or Obtain Quote

Order Online or by Fax

- 1 . Navigate to ni.com/products and select "Order by Part Number" found under the "Business Center" section.
- 2 . Once you have added your items to your cart, see the "Your Cart Options" section to place your order, obtain a quote, or print a fax form.

Order by Phone
Call (866) 531-6285 to place your order or obtain a quote.

Services

System Assurance Programs

Reduce your setup time and total cost of ownership, and get a system you can use out of the box with National Instruments system assurance programs. System assurance programs include:

- Installation and integration test of all individual hardware
- Courtesy installation of system driver sets and application development environments
- Extended warranty and calibration coverage for up to five years
- Custom documentation plus a custom restore and startup utility

This service is only available for PXI, NI CompactRIO, and NI Compact FieldPoint systems.

- [Learn More about System Configuration and Deployment Services](http://www.ni.com/services/configuration.htm) [<http://www.ni.com/services/configuration.htm>]
- [Customize Your CompactRIO System](http://ohm.ni.com/advisors/crio) [<http://ohm.ni.com/advisors/crio>]
- [Customize Your Compact FieldPoint System](http://ohm.ni.com/advisors/cfp) [<http://ohm.ni.com/advisors/cfp>]
- [Customize Your PXI System](http://ohm.ni.com/advisors/pxi) [<http://ohm.ni.com/advisors/pxi>]
- [Talk to an Expert about Custom System Configurations](#) [[javascript:openCallMeWindowCTA\(document.referrer,%20'US'\)](#)]

Extended Warranties

National Instruments designs and manufactures all products to minimize failures, however unexpected failures can still occur. Extended warranties provide a fixed economical price at the time of system purchase, covering any repair costs for up to three years. In addition, they offer the following benefits:

- Significant cost savings compared to individual repair incidents
- Fault location, diagnostics, and repair by NI any time the system product fails
- All parts and labor costs covered as well as any adjustments needed to restore the hardware to manufacturing specifications

For more information about your warranty options:

- [Learn More about Warranty Services](http://www.ni.com/services/warranty.htm) [<http://www.ni.com/services/warranty.htm>]
- [Talk to an Expert about Extended Warranties](#) [[javascript:openCallMeWindowCTA\(document.referrer,%20'US'\)](#)]
- [View Warranty Repair Policies](http://www.ni.com/services/warranty_repair_policies.htm) [http://www.ni.com/services/warranty_repair_policies.htm]

Calibration

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. NI provides manual calibration procedures, services to recalibrate your products, and automated calibration software to calibrate many NI measurement products.

- [Learn More about Calibration Services](http://www.ni.com/services/calibration.htm) [<http://www.ni.com/services/calibration.htm>]

Training

NI training is the fastest, most certain route to productivity with NI tools and successful application development.

- [Learn More about NI Training and Certification](http://www.ni.com/training/) [<http://www.ni.com/training/>]
- [Find a Course Near You and View Schedules](http://sine.ni.com/apps/utf8/nisv.custed) [<http://sine.ni.com/apps/utf8/nisv.custed>]

Repair Services

Return your registered product under warranty at no additional labor and parts cost. NI offers fault location, diagnostics, and repair any time the system fails as well as any adjustments needed to restore the hardware to manufacturing specifications.

- [Learn More about Repair Services](http://www.ni.com/services/warranty.htm) [<http://www.ni.com/services/warranty.htm>]
- [Contact NI to Obtain a Return Material Authorization \(RMA\) Form and Shipping Instructions](http://sine.ni.com/apps/utf8/nicc.call_me) [http://sine.ni.com/apps/utf8/nicc.call_me]

- [View Your RMA Support Request Status Online](http://www.ni.com/support/servicereq/) [http://www.ni.com/support/servicereq/]
- [Register Your Product](http://www.ni.com/register/) [http://www.ni.com/register/]

Technical Support

[ni.com/support](http://www.ni.com/support/) [http://www.ni.com/support/]

Resources

Additional Product Information

- [Manuals](#) (7)
- [Dimensional Drawings](#) (2)
- [Product Certifications](#) (2)

Related Information

- [NI CompactRIO](#)
- [CompactDAQ System Advisor](#)
- [CompactRIO Technical Library](#)
- [Configure your complete CompactRIO System](#)