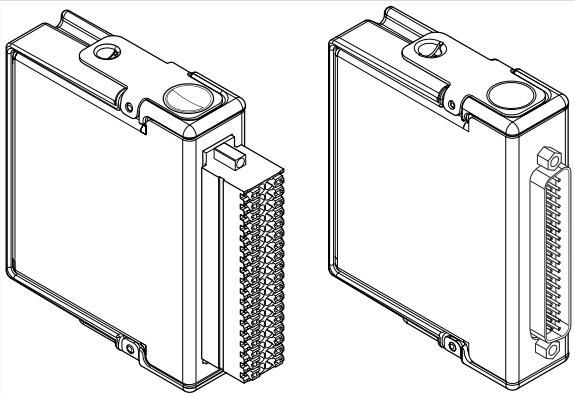
NI-9208 Specifications

2023-03-09

Contents

NI-9208 Datasheet



- 16 channels, current inputs, 500 S/s
- High-resolution mode with 50/60 Hz rejection; Vsup pins for external power routing (2 A/30 V max)
- ±20 mA, 24-bit resolution
- 250 V RMS, CAT II, channel-to-earth isolation (spring terminal); 60 V DC, CAT I, channel-to-earth isolation (DSUB)
- DSUB or spring terminal connectivity
- -40 °C to 70 °C operating range, 5 g vibration, 50 g shock

The NI-9208 current input C Series module has 16 channels of ±20 mA input with built-in 50/60 Hz rejection for noise rejection.

The NI-9208 has a standard 37-pin DSUB connection for use with available cables and connector blocks, or the NI 9937 DSUB connector kit. The NI 9937 contains a DSUB to screw terminal accessory as well as a protective shell. With this kit, you can create a custom cable that plugs directly into the module, eliminating the need for a separate terminal block.

Kit Contents	• NI 9208 • NI 9208 Getting Started Guide
Accessories	• NI 9940 Backshell Connector Kit (Spring Terminal) • NI 9923 Screw-Terminal Block (DSUB)

NI C Series Overview

NI provides more than 100 C Series modules for measurement, control, and communication applications. C Series modules can connect to any sensor or bus and allow for high-accuracy measurements that meet the demands of advanced data acquisition and control applications.

- Measurement-specific signal conditioning that connects to an array of sensors and signals
- Isolation options such as bank-to-bank, channel-to-channel, and channel-to-earth ground
- -40 °C to 70 °C temperature range to meet a variety of application and environmental needs
- Hot-swappable

The majority of C Series modules are supported in both CompactRIO and CompactDAQ platforms and you can move modules from one platform to the other with no modification.

CompactRIO

CompactRIO combines an open-embedded architecture with small size, extreme ruggedness, and C Series modules in a platform powered by the NI LabVIEW reconfigurable I/O (RIO) architecture. Each system contains an FPGA for custom timing, triggering, and processing with a wide array of available

modular I/O to meet any embedded application requirement.

CompactDAQ

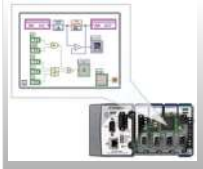
CompactDAQ is a portable, rugged data acquisition platform that integrates connectivity, data acquisition, and signal conditioning into modular I/O for directly interfacing to any sensor or signal. Using CompactDAQ with LabVIEW, you can easily customize how you acquire, analyze, visualize, and manage your measurement data.

Software

LabVIEW Professional Development System for Windows

- Use advanced software tools for large project development
- Generate code automatically using DAQ Assistant and Instrument I/O Assistant
- Use advanced measurement analysis and digital signal processing
- Take advantage of open connectivity with DLLs, ActiveX, and .NET objects
- Build DLLs, executables, and MSI installers

NI LabVIEW FPGA Module

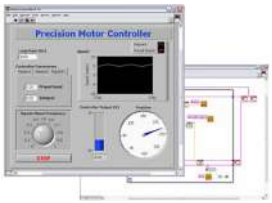


- Design FPGA applications for NI RIO hardware

NI LabVIEW FPGA Module

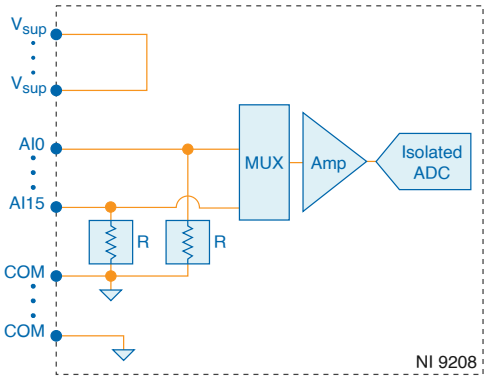
- Program with the same graphical environment used for desktop and real-time applications
- Execute control algorithms with loop rates up to 300 MHz
- Implement custom timing and triggering logic, digital protocols, and DSP algorithms
- Incorporate existing HDL code and third-party IP including Xilinx IP generator functions
- Purchase as part of the LabVIEW Embedded Control and Monitoring Suite

NI LabVIEW Real-Time Module



- Design deterministic real-time applications with LabVIEW graphical programming
- Download to dedicated NI or third-party hardware for reliable execution and a wide selection of I/O
- Take advantage of built-in PID control, signal processing, and analysis functions
- Automatically take advantage of multicore CPUs or set processor affinity manually
- Take advantage of real-time OS, development and debugging support, and board support
- Purchase individually or as part of a LabVIEW suite

NI-9208 Block Diagram



The input signals are scanned, amplified, conditioned, and then sampled by a single 24-bit ADC. The module provides overvoltage protection for each channel. Only one channel can be in an overvoltage condition at a time.