
sbRIO-9220

Getting Started

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Overview

This document explains how to connect to the sbRIO-9220.



Note Before you begin, read the **sbRIO-9220 Safety, Environmental, and Regulatory Information** document on ni.com/manuals and complete the software and hardware installation procedures in your chassis documentation.



Note The guidelines in this document are specific to the sbRIO-9220. The other components in the system might not meet the same safety ratings. Refer to the documentation for each component in the system to determine the safety and EMC ratings for the entire system.



Notice Electrostatic Discharge (ESD) can damage the sbRIO-9220. To prevent damage, use industry-standard ESD prevention measures during installation, maintenance, and operation.

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sbRIO-9220 Pinout

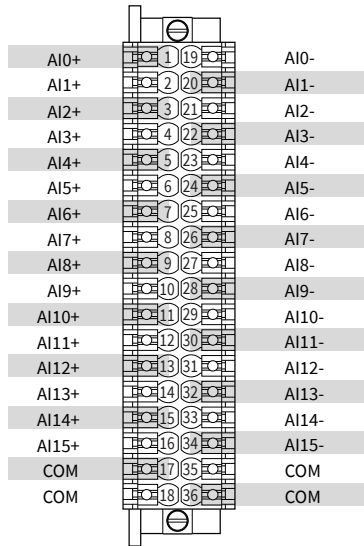
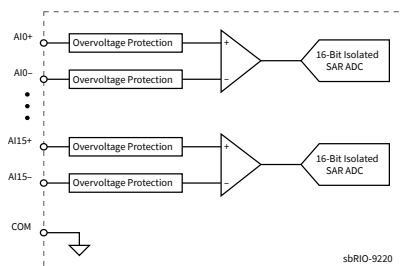


Table 1. Signal Descriptions

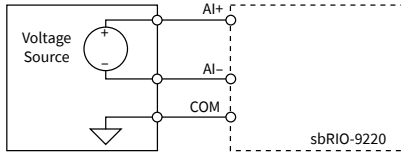
Signal	Description
AI+	Positive analog input signal connection
AI-	Negative analog input signal connection
COM	Common reference connection to isolated ground

sbRIO-9220 Block Diagram

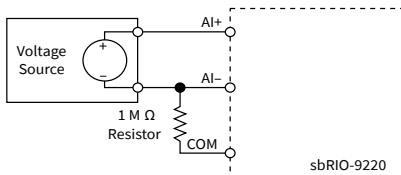
Input signals on each channel are buffered, conditioned, and then sampled by an ADC. Each AI channel provides an independent signal path and ADC, enabling you to sample all channels simultaneously.



Grounded Differential Connections

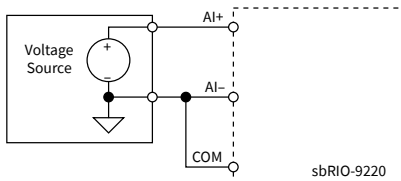


Floating Differential Connections



Connect the negative lead to COM through a 1 MΩ resistor to keep the signal source within the common-mode voltage range. The sbRIO-9220 does not read data accurately if the signal source is outside of the common-mode voltage range.

Single-Ended Connections



Connect the ground signal to COM to keep the signal source within the common-mode voltage range.

Connection Guidelines

- Make sure that devices you connect to the sbRIO-9220 are compatible with the module specifications.
- You must use 2-wire ferrules to create a secure connection when connecting more than one wire to a single terminal.
- Push the wire into the terminal when using a solid wire or a stranded wire with a ferrule.
- Open the terminal by pressing the push button when using stranded wire without a ferrule.

NI Services

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