

INSTALLATION GUIDE

BNC-2144

The BNC-2144 is a 32-channel rack-mount adapter for interfacing to the NI PXI-449X family.

The BNC-2144 has the following features:

- 32 analog input channels (BNC)
- 19 in. rack-mount housing

What You Need to Get Started

To set up and use the BNC-2144, you need the following items:

- Hardware
 - BNC-2144
 - NI PXI-449X Dynamic Signal Acquisition (DSA) device
- Documentation
 - *BNC-2144 Installation Guide*
 - *Read Me First: Safety and Radio-Frequency Interference*
 - *NI PXI-449X Specifications*
 - *NI Dynamic Signal Acquisition User Manual*
 - *DAQ Getting Started Guide*
- Tools
 - 1/8 in. flathead screwdriver
- Cables
 - Infiniband-to-Infiniband cables (part numbers 197516A-01, 197516A-02)
 - BNC-to-BNC cables (part numbers 779697-01, 779697-02)

If you do not have NI-DAQmx 8.6 or later, or one of the documents, you can download them from ni.com, or contact an NI sales representative.

Theory of Operation



Caution Refer to the *Read Me First: Safety and Radio-Frequency Interference* document before removing equipment covers or connecting/disconnecting any signal wires. Refer to the [Specifications](#) section of this document for important safety and compliance information.

Figure 1 shows the BNC-2144 front and back panels.

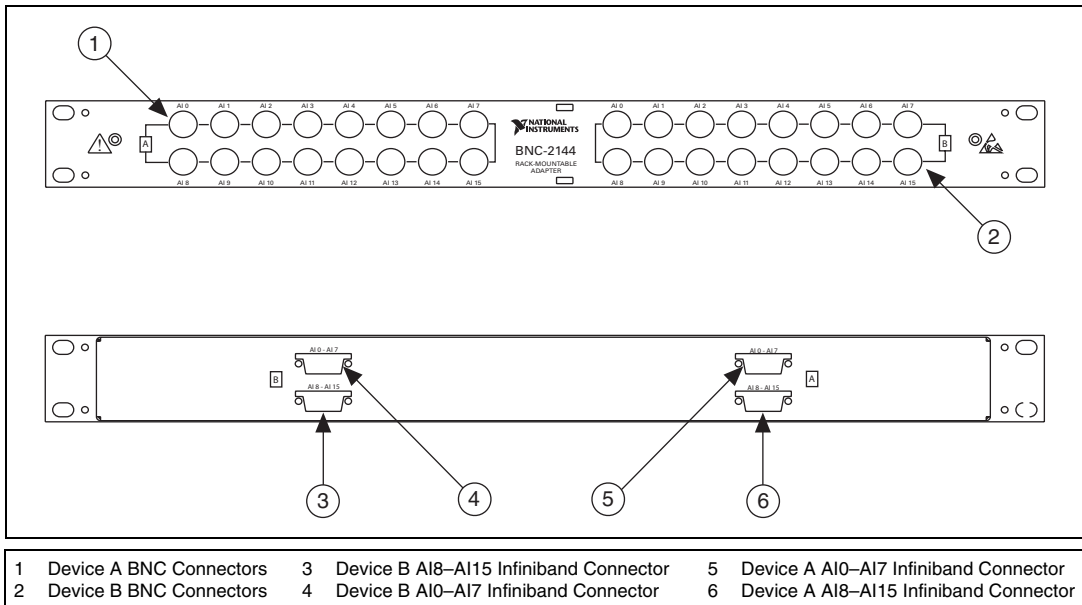


Figure 1. BNC-2144 Parts Location Diagram

Connecting Signals

Figure 2 shows an example of a measurement system with the BNC-2144.

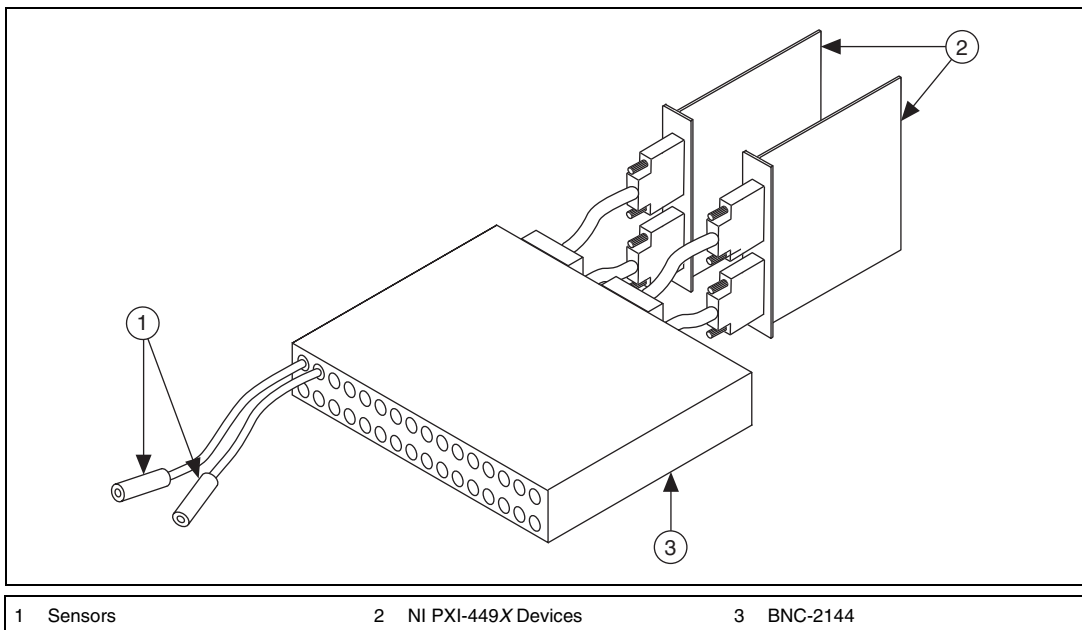


Figure 2. Connecting the BNC-2144

Specifications

This section lists the specifications for the BNC-2144. These specifications are typical at 25 °C unless otherwise stated.

Analog Input

Input channels	32
Maximum input voltage	
Positive terminal	$\pm 10 V_{pk}$
Negative terminal	$\pm 1 V_{pk}$
Overvoltage protection	
Positive terminal	$\pm 30 V_{pk}$
Negative terminal	$\pm 5 V_{pk}$
Maximum cable length	61 m (200 ft), typical

Crosstalk

Gain (dB)	Crosstalk for Adjacent/ Nonadjacent Channels (dBc)*,†	
	1 kHz	92.2 kHz
30	-110/-110	-85/-96
0, 10, 20	-115/-120	-85/-100

* Source impedance $\leq 1 k\Omega$
† Input amplitude is -1 dBFS.

Physical

Dimensions	48.3 × 4.4 × 6.4 cm (19.0 × 1.7 × 2.5 in.)
Weight	0.89 kg (1.96 pounds)

I/O Connectors

I/O connections	32 BNC connectors and 4 Infiniband 4x connectors
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Environmental

Operating temperature	0 to 55 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Storage temperature	-20 to 70 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Relative humidity	10 to 90%, noncondensing (Tested in accordance with IEC-60068-2-56.)
Altitude	2,000 m (at 25 °C ambient temperature)
Pollution Degree (indoor use only)	2

Safety

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 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 any 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.

电子信息产品污染控制管理办法（中国 RoHS）



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