
PXle-4464 User Manual

2025-07-23



Contents

Welcome to the PXle-4464 User Manual	3
PXle-4464 User Manual	4
Electromagnetic Compatibility Guidelines	5
Unpacking the Kit	7
Preparing the Environment	8
Verifying the Kit Contents	9
Other Equipment	10
Installing the Software	11
Installing the Hardware	12
Configuring the PXle-4464 in MAX	15
Connecting a Signal Source to the PXle-4464	16
PXle-4464 Input Connections	18
Environmental Management	20
EU and UK Customers	21
电子信息产品污染控制管理办法（中国RoHS）	22
NI Services	23

Welcome to the PXIe-4464 User Manual

The PXIe-4464 User Manual provides detailed descriptions of product functionality and step-by-step processes for use.

Looking for something else?

For information not found in the User Manual for your product, like specifications or API reference, browse Related Information.

Related information:

- [PXIe-4464 Specifications](#)
- [PXIe-4464 Calibration Procedure](#)
- [PXIe-4464 Supported Properties](#)

PXIe-4464 User Manual

This document explains how to install, configure, and set up the PXIe-4464 Sound and Vibration Module. Driver support for the PXIe-4464 was first available in NI-DAQmx 14.1. For the list of devices supported by a specific release, refer to the NI-DAQmx Readme, available on the version-specific download page or installation media. To download NI-DAQmx 14.1, visit ni.com/info and enter the Info Code PXIE4464. The PXIe-4464 is available with BNC connectors or Mini-XLR connectors.

Electromagnetic Compatibility Guidelines

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) stated in the product specifications. These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.

This product is intended for use in industrial locations. However, harmful interference may occur in some installations, when the product is connected to a peripheral device or test object, or if the product is used in residential or commercial areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Furthermore, any modifications to the product not expressly approved by NI could void your authority to operate it under your local regulatory rules.



Caution To ensure the specified EMC performance, operate this product only with shielded cables and accessories.



Caution To ensure the specified EMC performance, the length of all I/O cables must be no longer than 3 m (10 ft.).



Caution BNC version only — Electromagnetic interference can adversely affect the measurement accuracy of this product. The construction of a BNC coaxial cable is inherently unbalanced in that the outer conductor (LO) is used as a shield for the inner conductor (HI). However, for functional reasons, there is no input configuration of the PXIe-4464 that directly connects the LO terminal to the chassis ground. Without a direct connection to chassis ground, the outer conductor does not act as a shield for unwanted noise and may act as an antenna for coupling noise into the module inputs. For single-ended measurements, the noise immunity for the system can be improved by

directly connecting the outer conductor to the chassis or earth ground at the load end of the cable. For differential measurements, where such a connection is inherently not possible, the BNC cable can alternatively be wrapped in a separate grounded shield. In addition, you might need to use snap-on ferrite beads or other remedial measures to improve electromagnetic compatibility.

Unpacking the Kit

The PXIe-4464 module ships in an antistatic package to prevent electrostatic discharge from damaging module components. To prevent such damage when handling the module, ground yourself using a grounding strap or by holding a grounded object, and complete the following steps:

1. Touch the antistatic package to a metal part of the grounded object before removing the module from the package.
2. Remove the module from the package and inspect the module for loose components or any other sign of damage.



Caution Never touch the exposed pins of connectors.

3. Unpack any other items and documentation from the kit.

Notify NI if the module appears damaged in any way. Do not install a damaged module into your system. Store the module in the antistatic package when not in use.

Preparing the Environment

Ensure that the environment in which you are using the PXle-4464 meets the following specifications.

Operating ambient temperature	0 °C to 55 °C (IEC 60068-2-1, IEC 60068-2-2)
Operating relative humidity	10% to 90%, noncondensing (IEC 60068-2-56)
Altitude	2,000 m (800 mbar) (at 25 °C ambient temperature)
Pollution Degree	2

Indoor use only.



Caution Clean the hardware with a soft, nonmetallic brush. Make sure the hardware is completely dry and free from contaminants before returning it to service.



Note Refer to the *PXle-4464 Specifications* at ni.com/docs for complete specifications.

Verifying the Kit Contents

The following items are necessary to set up and use the PXle-4464:

- PXle-4464 analog output module
- NI-DAQmx installation media
- ***PXle-4464 User Manual***



Note You can download any needed documents from ni.com/docs.

Other Equipment

The following additional items, not included in the module kit, are necessary to operate the PXIe-4464:

- PXI Express chassis with
 - Controller, or
 - MXI-Express (card or built-in)
- (Optional) LabVIEW



Note For a list of LabVIEW versions supported by a specific version of NI-DAQmx, refer to the NI-DAQmx Readme, available on the version-specific download page at ni.com/downloads or on the installation media.

Installing the Software

Software support for the PXIe-4464 is provided by NI-DAQmx. The **DAQ Getting Started Guide**, which you can download at ni.com/docs, offers step-by-step NI-DAQmx instructions for installing software and hardware, configuring channels and tasks, and getting started developing an application. For detailed NI software version support, refer to the NI-DAQmx Readme.

You must install the software before using the hardware.



Note You must be an Administrator to install NI software on your computer.

1. Install an ADE, such as LabVIEW or LabWindowsTM/CVITM.
2. Install the latest service packs for your operating system.
3. Insert the driver software media into your computer. The installer should open automatically.

If the installation window does not appear, navigate to the drive, double-click it, and double-click `autorun.exe`.

4. Follow the instructions in the installation prompts.



Note Windows users may see access and security messages during installation. Accept the prompts to complete the installation.

5. When installation completes, select **Restart** in the dialog box that asks if you want to restart, shut down, or restart later.

Installing the Hardware



Note To maintain forced air cooling in the PXI Express system, refer to the ***Maintain Forced-Air Cooling*** document.



Caution To prevent damage to the device caused by ESD or contamination, handle the device using the edges or the metal bracket.

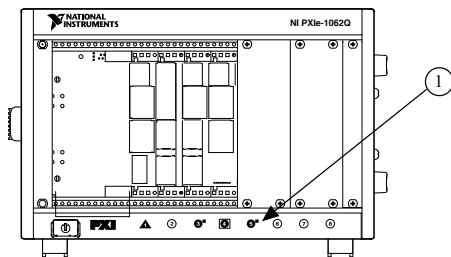
1. Ensure the AC power source is connected to the chassis before installing the module. The AC power cord grounds the chassis and protects it from electrical damage while you install the module.
2. Power off the chassis.



Caution To protect yourself, the chassis, and the module from electrical hazards, leave the chassis powered off until you finish installing the module.

3. Inspect the slot pins on the chassis backplane for any bends or damage prior to installation. Do not install a module if the backplane is damaged.
4. Remove the black plastic connectors from all the captive screws on the module front panel.
5. Identify a supported slot in the chassis. You can place the PXIe-4464 module in only the supported slot types identified in Table 1. Figure 1 shows the slot type symbols of the various slot types. Refer to your chassis documentation for more details.

Figure 1. PXI/PXIe Chassis Slot Type Symbol Location




1. Slot Type Symbols Locations

Table 1. PXIe-4464 Supported Slot Types

PXI Chassis Slot Type Symbol	Supported Slot Type Description
●	PXI Express Peripheral
● ^H	PXI/PXI Express Hybrid Peripheral
■	PXI Express System Timing or Peripheral

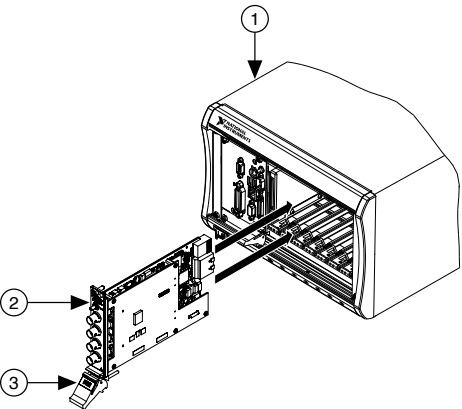
- 6. Touch any metal part on the chassis to discharge any static electricity.
- 7. Ensure that the injector/ejector handle is in the unlatched (downward) position.



Caution When installing the module, make sure both edges are positioned inside the guides and that the module components do not come into contact with adjacent modules.

- 8. Place the module edges into the module guides at the top and bottom of the chassis. Slide the module into the slot until it is fully inserted.

Figure 2. Sliding the PXIe-4463 into the Chassis



- 1. Chassis
- 2. Hardware Module (BNC model shown)
- 3. Injector/Ejector Handle in Down (Unlatched) Position

- 9. Latch the module in place by pulling up on the ejector handle.
- 10. Secure the device front panel to the chassis using the front-panel mounting screws.



Note Tightening the top and bottom mounting screws increases mechanical stability and also serves to electrically connect the front panel to the chassis, which can improve the signal quality and electromagnetic performance.

11. Cover all empty slots using EMC filler panels or slot blockers to maximize cooling air flow, depending on your application.
12. Power on the chassis.

Configuring the PXIe-4464 in MAX

Use Measurement & Automation Explorer (MAX) to configure your NI hardware. MAX informs other programs about which devices reside in the system and how they are configured. MAX is automatically installed with NI-DAQmx.

1. Launch MAX.
2. In the Configuration pane, expand **Devices and Interfaces** to see a list of installed devices. Installed devices appear under the name of their associated chassis.



Note If you are using the PXIe-4464 with the LabVIEW Real-Time Module, expand **Remote Systems**. Find your target IP address or name, expand it, and then expand **Devices and Interfaces**.

3. Expand your **Chassis** tree item. MAX lists all devices installed in the chassis. Your default device names may vary.



Note If you do not see your hardware listed, press <F5> to refresh the list of installed devices. If the device still is not listed, power off the system, ensure the device is correctly installed, and restart.

4. Record the device identifier MAX uses to identify the hardware. Use this identifier when programming the PXIe-4464.

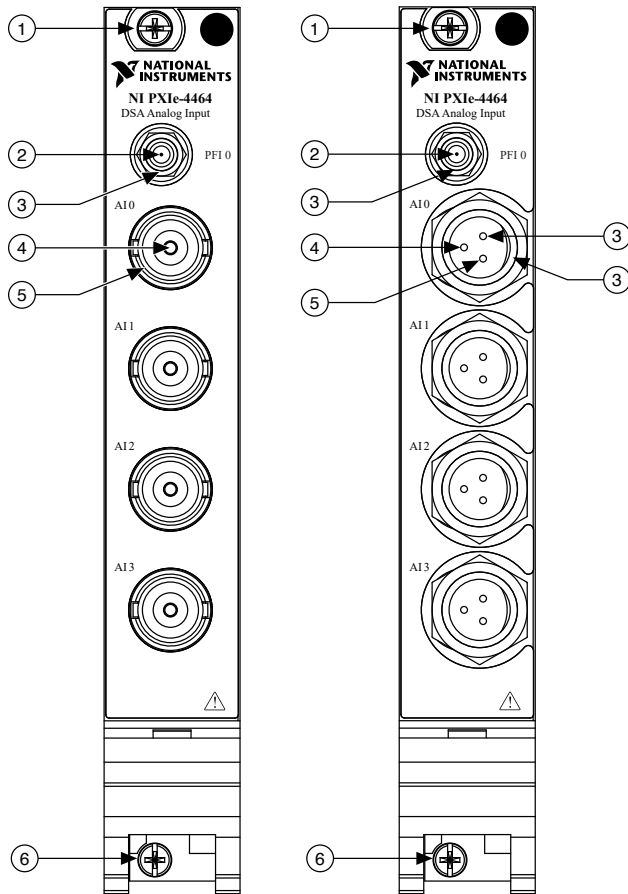
Connecting a Signal Source to the PXIe-4464

The following figure shows the PXIe-4464 front panel connections with BNC and Mini-XLR connectors.



Note Refer to the *PXIe-4464 Specifications* for information about the operating input range and overvoltage protection.

Figure 3. PXIe-4464 BNC and Mini-XLR Connector Front Panel



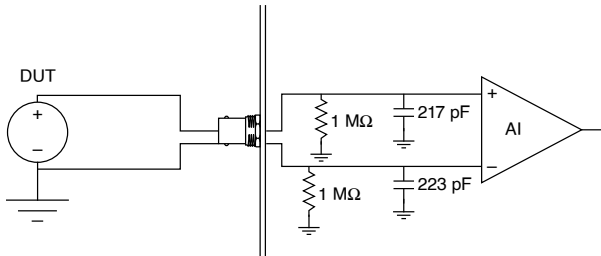
1. Top Module Mounting Screw
2. PFI
3. Chassis Ground
4. AI+
5. AI-

6. Bottom Module Mounting Screw

PXIe-4464 Input Connections

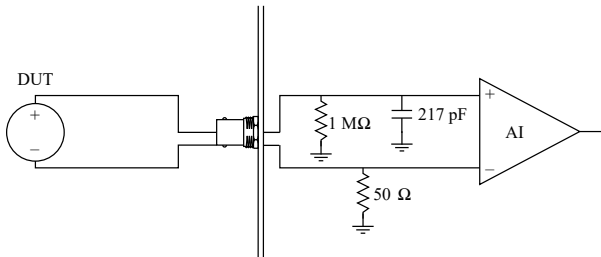
The following figure shows the PXIe-4464 input connection with the terminal configuration in differential mode. Refer to the ***NI-DAQmx Help*** for more information about terminal configuration.

Figure 4. PXIe-4464 Input Connection in Differential Mode



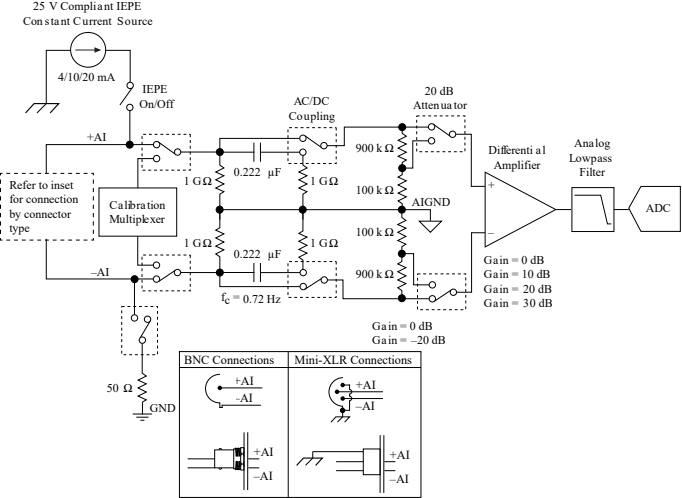
The following figure shows an PXIe-4464 input connection with the terminal configuration in pseudodifferential mode.

Figure 5. PXIe-4464 Input Connection in Pseudodifferential Mode



The following figure shows the PXIe-4464 analog input circuitry block diagram. Depending on the connector type, connect the signals as shown in the inset.

Figure 6. PXIe-4464 Analog Input Block Diagram




Environmental Management


NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the ***Engineering a Healthy Planet*** web page at 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.

EU and UK Customers

-  **Waste Electrical and Electronic Equipment (WEEE)**—At the end of the product life cycle, all NI products must be disposed of according to local laws and regulations. For more information about how to recycle NI products in your region, visit ni.com/environment/weee.

电子信息产品污染控制管理办法（中国RoHS）

-  **中国RoHS**— NI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NI中国RoHS合规性信息，请登录 ni.com/environment/rohs_china。 (For information about China RoHS compliance, go to ni.com/environment/rohs_china.)

NI Services

Visit ni.com/support to find support resources including documentation, downloads, and troubleshooting and application development self-help such as tutorials and examples.

Visit ni.com/services to learn about NI service offerings such as calibration options, repair, and replacement.

Visit ni.com/register to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

NI corporate headquarters is located at 11500 N Mopac Expwy, Austin, TX, 78759-3504, USA.