PXIe-8238
Getting Started

Contents

PXIe-8238 Getting Started Guide

This document includes instructions for installing and configuring your PXIe-8238 module.

Products Covered

This document covers the following products:

- PXIe-8238 (142470**x**-010L)

> ✏️ **Note** Following the model number above is the specific NI assembly number in parentheses. Ensure that the specifications of interest match the NI assembly number printed on the board. **x** denotes all letter revisions of the assembly.

Getting Started

This section includes instructions for unpacking and installing your PXIe-8238 module. It also describes the module's front panel connectors.

Unpacking

The PXIe-8238 ships in an antistatic package to prevent electrostatic discharge from damaging device components. To prevent such damage when handling the device, ground yourself using a grounding strap or by holding a grounded object, such as your computer chassis, and complete the following steps:

1. Touch the antistatic package to a metal part of the chassis before removing the device from the package.

   > ⚠️ **Caution** Never touch the exposed pins of connectors.

2. Remove the device from the package and inspect the device for loose components or any other sign of damage.

3. Notify NI if the device appears damaged in any way. Do **not** install a damaged device into your chassis.

Electrical

Power Rail	Typical Value	Max Value
+3.3 VDC	0.62 A	0.93 A
+12 VDC	1.02 A	1.68 A
Total Power	14.28 W	23.23 A

Preparing the Environment

Ensure the environment you are using the PXIe-8238 in meets the following specifications.

Ambient temperature range	0 °C to 55 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Relative humidity range	10% to 90%, noncondensing (Tested in accordance with IEC-60068-2-56.)
Maximum altitude	2,000 m (800 mbar)
Pollution Degree	2

Indoor use only.

> ✎ **Note** Refer to the **PXIe-8238 User Manual** for full PXIe-8238 specifications.

Hardware Installation

The following are general instructions for installing the PXIe-8238.
Complete the following steps to install the PXIe-8238 in your PXI Express chassis.

1. Power off your PXI Express chassis, but leave it plugged in while installing the PXIe-8238. The power cord grounds the chassis and protects it from electrical damage while you install the module.

> ⚠ **Caution** To protect both yourself and the chassis from electrical hazards, leave the chassis off until you finish installing the PXIe-8238.

2. Remove or open any doors or covers blocking access to the slot in which you intend to install the PXIe-8238.

3. Touch a metal part of the chassis to discharge any static electricity that might be on your clothes or body.

4. Make sure the injector/ejector handle is in its downward position. Be sure to remove all connector packaging and protective caps from retaining screws on the module.

5. Identify the slot in which the PXIe-8238 will be installed in the chassis. Refer to the following table to determine which slot types the PXIe-8238 is compatible with.

NI PXI Express Product	PXI Express Chassis		
	Controller ▲	Peripheral ●	Hybrid ●ᴴ
PXIe-8238	—	✓	✓

Table 1. PXIe-8238 Slot Type Compatibility

6. Align the PXIe-8238 with the card guides on the top and bottom of the slot. Hold the handle as you slowly slide the module into the chassis until the handle catches on the injector/ejector rail.

> ⚠ **Caution** Do not raise the injector/ejector handle as you insert the PXIe-8238. It will not insert properly unless the handle is in its downward position so that it does not interfere with the injector/ejector rail on the chassis.

7. Raise the injector/ejector handle until the module firmly seats into the backplane receptacle connectors. The front panel of the PXIe-8238 should be even with the front panel of the chassis.

8. Tighten the bracket-retaining screws on the top and bottom of the front panel to secure the PXIe-8238 to the chassis.

9. Replace or close any doors or covers to the chassis.

Powering On the PXIe-8238

The PXIe-8238 powers on automatically when the chassis is powered on. To power on the PXIe-8238, turn on the chassis.

Powering Off the PXIe-8238

The PXIe-8238 powers off automatically when the chassis is powered off. You also can power off the PXIe-8238 by shutting down the system controller.
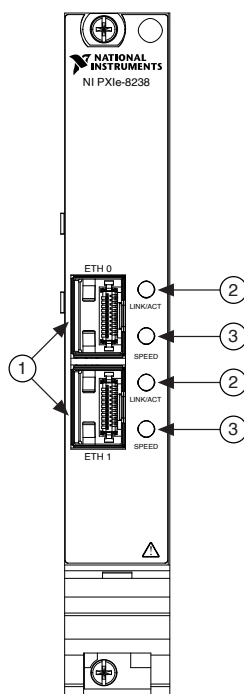
Software Installation and Configuration

The PXIe-8238 requires driver software to enable its features. For software installation instructions, go to ni.com/downloads, enter PXIe-8238 in the Downloads text box, and click the search button.

PXIe-8238 Front Panel

The following figure shows the front panel layout of the PXIe-8238.

Figure 1. PXIe-8238 Front Panel

1. Ethernet Connector
2. LINK/ACT LED
3. SPEED LED

Front Panel Connectors

The following table lists various peripherals and their corresponding PXIe-8238 external connectors, bus interfaces, and functions.

Peripheral	External Connector	Description
Ethernet Port	SFP+	1 Gb/10 Gb Ethernet based on Intel 82599 10 GbE controller

Note For optimum performance, the chassis must have at minimum a Gen2 x8 peripheral slot (for example, the PXIe-1085).

Front Panel Features

The PXIe-8238 has the following front-panel features:

- Two front panel LEDs per port that show status:

  - **LINK/ACT**— The Link/Activity LED indicates one of the following states:

    - No link: off
    - Linked - no activity: green
    - Linked - activity: blinking green

  - **SPEED**— The Speed LED indicates one of the following states:

    - No link: off
    -
    Linked - no activity: yellow = 1 GbE, green = 10 GbE
    - Linked - activity: yellow = 1 GbE, green = 10 GbE

Removing the PXIe-8238 from a PXI Express Chassis

To remove the PXIe-8238 from a PXI Express chassis, complete the following steps.

1. Power off the chassis.
2. Remove any cables that may be attached to the module front panel.
3. Unscrew the two bracket-retaining screws in the front panel.
4. Press the injector/ejector handle down.
5. Slide the module out of the chassis.

Cleaning

Use a dry, low-velocity stream of air to clean the PXIe-8238 module. If needed, use a soft, nonmetallic brush for cleaning around components.

Make sure the module is completely dry and free from contaminants before returning it to service.

Common Configuration Questions

This section answers common configuration questions you may have when using a PXIe-8238 module.

What do the LEDs on the front panel mean?

Refer to the LED status descriptions in the **Front Panel Features** section.

My system boots fine as long as a particular module is not in my chassis.

The most common cause of this is a damaged module. Try the module in a different chassis or with a different controller. Also, remove any external cables or terminal blocks connected to the system. If the module does not work in these cases, it is likely damaged. Contact the module manufacturer for further troubleshooting. Refer to the KnowledgeBase at ni.com/kb or product manuals section at ni.com/manuals for more information specific to the module with which you are having difficulties.

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.

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