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PXIe-8240

GETTING STARTED GUIDE

PXIe-8240

This document includes instructions for installing and configuring your PXIe-8240 module.

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Products Covered

This document covers the following products:

- PXIe-8240 (142470x-040L)



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-8240 module. It also describes the module's front panel connectors.

Unpacking

The PXIe-8240 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 National Instruments 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	0.64 A	0.96 A
+12 VDC	1.1 A	1.65 A
Total Power	15.31 W	22.97 W

Preparing the Environment

Ensure the environment you are using the PXIe-8240 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-8240 User Manual* for full PXIe-8240 specifications.

Hardware Installation

The following are general instructions for installing the PXIe-8240.

Complete the following steps to install the PXIe-8240 in your PXI Express chassis.

1. Power off your PXI Express chassis, but leave it plugged in while installing the PXIe-8240. 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-8240.

2. Remove or open any doors or covers blocking access to the slot in which you intend to install the PXIe-8240.

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-8240 will be installed in the chassis. Refer to the following table to determine which slot types the PXIe-8240 is compatible with.

Table 1. PXIe-8240 Slot Type Compatibility

NI PXI Express Product	PXI Express Chassis		
	Controller ▲	Peripheral ●	Hybrid ● ¹
PXIe-8240	—	✓	✓

6. Align the PXIe-8240 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-8240. 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-8240 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-8240 to the chassis.
9. Replace or close any doors or covers to the chassis.

Powering On the PXIe-8240

The PXIe-8240 powers on automatically when the chassis is powered on. To power on the PXIe-8240, turn on the chassis.

Powering Off the PXIe-8240

The PXIe-8240 powers off automatically when the chassis is powered off. You also can power off the PXIe-8240 by shutting down the system controller.

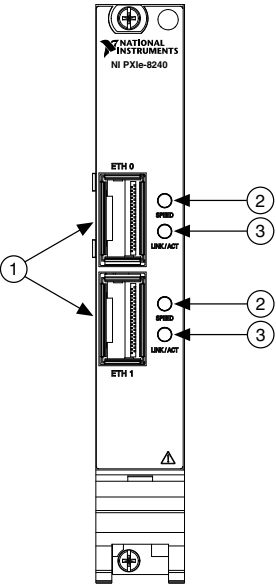
Software Installation and Configuration

The PXIe-8240 requires driver software to enable its features. For software installation instructions, go to ni.com/downloads, enter PXIe-8240 in the **Downloads** text box, and click the search button.

PXIe-8240 Front Panel

The following figure shows the front panel layout of the PXIe-8240.

Figure 1. PXIe-8240 Front Panel



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

Front Panel Connectors

The following table lists various peripherals and their corresponding PXIe-8240 external connectors, bus interfaces, and functions.

Peripheral	External Connector	Description
Ethernet Port	QSFP+	10 Gb/40 Gb Ethernet based on Intel XL710 40 GbE controller



Note For optimum performance, the chassis must have at minimum a Gen3 x8 peripheral slot (for example, the PXIe-1085).

Front Panel Features

The PXIe-8240 has the following front-panel features:

- Two front panel LEDs per port that show status:
 - *SPEED*— The Speed LED indicates one of the following states:
 - No link: off
 - Linked - no activity: yellow = 10 GbE, green = 40 GbE
 - Linked - activity: yellow = 10 GbE, green = 40 GbE
 - *LINK/ACT*— The Link/Activity LED indicates one of the following states:
 - No link: off
 - Linked - no activity: green
 - Linked - activity: blinking green

Removing the PXIe-8240 from a PXI Express Chassis

To remove the PXIe-8240 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-8240 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-8240 module.

General Questions

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.

Worldwide Support and Services

The NI website is your complete resource for technical support. At ni.com/support, you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

Visit ni.com/services for NI Factory Installation Services, repairs, extended warranty, and other services.

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

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