

INSTALLATION GUIDE

PXle-1090 Rack Mount Kit

This guide explains how to install the PXle-1090 chassis Rack Mount Kit.

The kit allows easy installation of the PXle-1090 in EIA 310-compliant racks of 480 mm (19 in.) standard width.



Caution You must maintain adequate clearance between the chassis and surrounding equipment or blockages to ensure proper cooling for the chassis power supply and modules plugged into the chassis. Refer to the chassis user manual for cooling clearance requirements. Failure to provide these clearances may result in thermal-related failures in the chassis or modules.

Specifications

Max loading	15 kg
Supported rack screws	10-32, 12-24, and M6
Form factor	EIA 310, 480 mm (19 in.) width, 2U height

Installation Instructions

To mount the chassis in an instrument rack, complete the following steps.

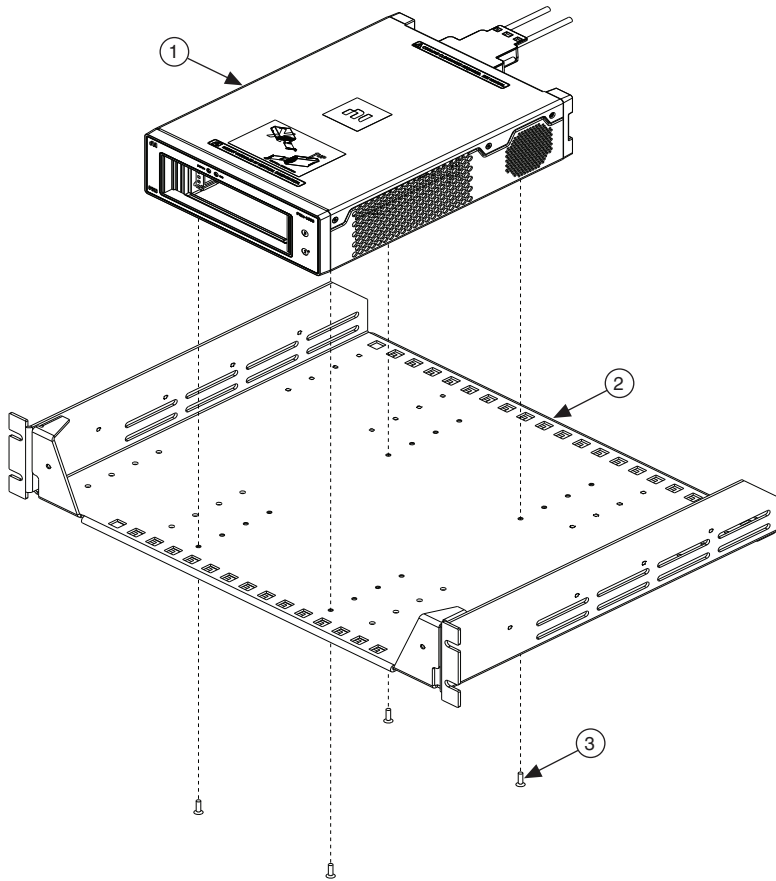
1. Remove the bottom feet from the PXle-1090 chassis by unscrewing them with a #2 Phillips driver. Retain the feet and screws for future use, if needed. Reinstallation torque is 0.76 N · m (6.7 lb · in.).
2. Install the PXle-1090 chassis on the shelf as shown in Figure 1, using four #6-32 x 0.500 in. flathead screws provided. Tighten the screws to 0.76 N · m (6.7 lb · in.) of torque with a #2 Phillips driver.



Caution Do not use longer screws or install the provided screws into the PXle-1090 without the shelf present. Damage to the chassis may occur.



Figure 1. Installing PXIe-1090 Chassis on Shelf



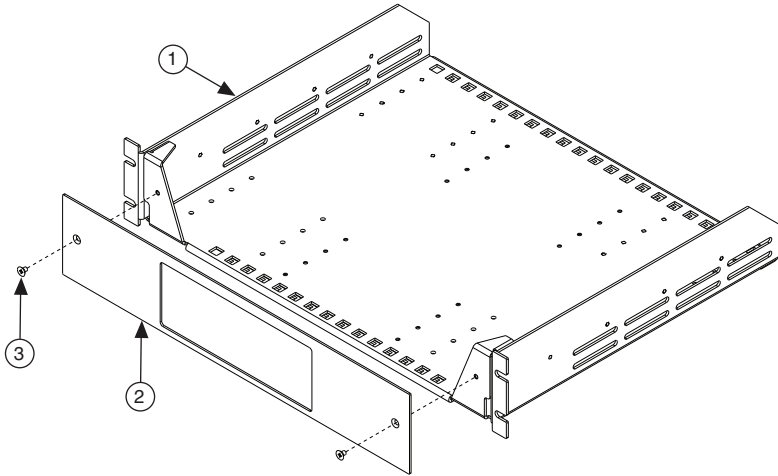
1 PXIe-1090 Chassis 2 Rack Mount Shelf 3 #6-32 x 0.500 in. Flathead Screws (x4)



Note You can choose between four sets of chassis mounting holes, depending on desired chassis recess. The default mounting holes place the chassis flush with the front panel, and each additional hole pattern adds a 25.4 mm (1 in.) chassis recess.

3. **(Optional)** Install the front panel on the shelf as shown in Figure 2, using two M4 x 6 mm flathead screws provided. Tighten the screws to 1.3 N · m (11.5 lb · in.) of torque with a #2 Phillips driver.

Figure 2. Installing Front Panel on Shelf



1 Rack Mount Shelf 2 Front Panel 3 M4 x 6 mm Flathead Screws (x2)



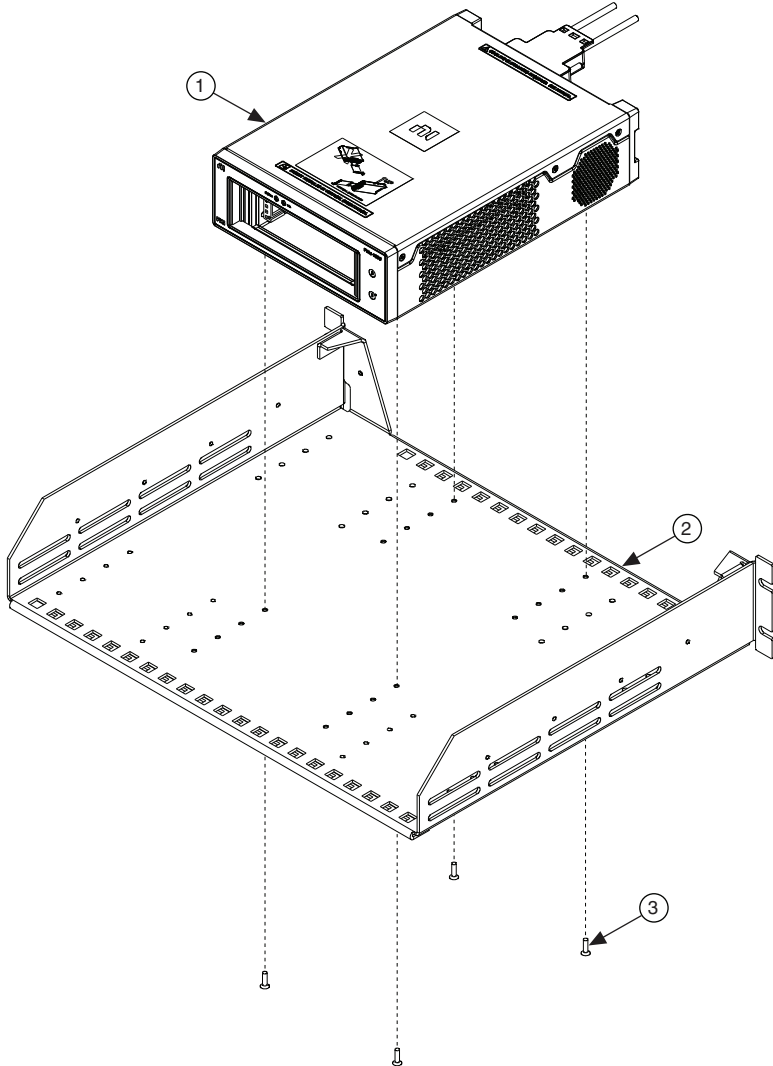
Note Populating the front panel when installing the rack mount kit on the external/front rails of a rack allows for a nearly flush fit of the PXIe-1090 to the front of the rack with minimal gaps. Depopulating the front panel when installing the rack mount kit on internal/middle rails of a rack may be beneficial for system level airflow and cable routing.

4. Install the shelf on the rack. Use rack screws and torque values that match the rack manufacturer's recommendations.

Chassis Orientation

You can rotate the PXIe-1090 chassis 180° when installing it on the rack mount kit to accommodate system airflow or cable routing needs.

Figure 3. PXIe-1090 Chassis Rotated on Rack Mount Shelf



1	PXIe-1090 Chassis	2	Rack Mount Shelf	3	#6-32 x 0.500 in. Flathead Screws (x4)
---	-------------------	---	------------------	---	--

Airflow, Baffle, and Thermal Considerations

Consider the location of the PXIe-1090 chassis inlets and exhausts inside the completed system when determining where to install the rack mount kit. Neighboring equipment and recirculation can affect the ambient temperature at the PXIe-1090 chassis inlets.

The rack mount shelf includes a pattern of M4 x 0.7 tapped holes, as shown in Figure 4. (Maximum screw protrusion below the bottom of the shelf is 4 mm (0.16 in.) to avoid encroachment into the rack U below the shelf.)

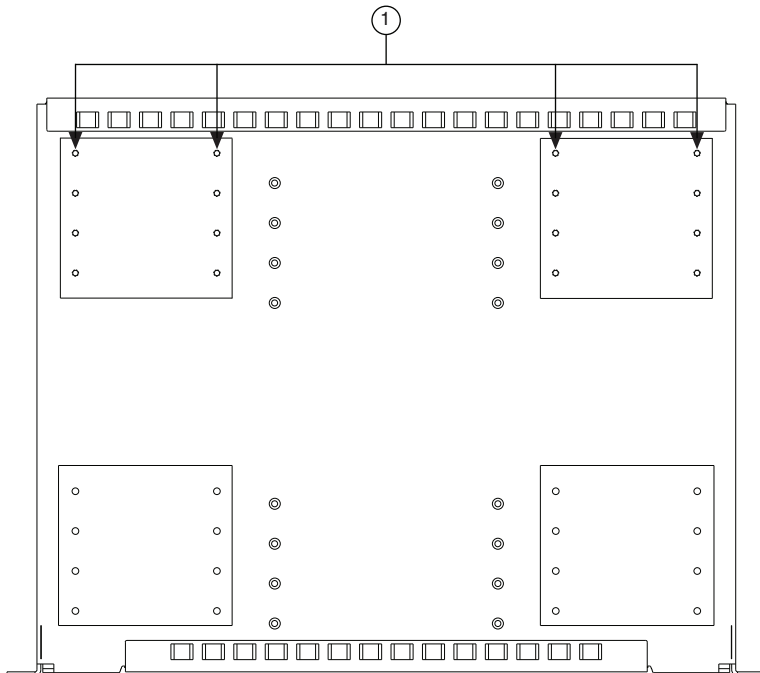
You can use these holes to install customer-designed airflow baffles, if needed, to accommodate system airflow needs. One possible application is ducting rack “cold aisle” airflow to the PXIe-1090 chassis inlets and ducting PXIe-1090 chassis exhaust to rack “hot aisle” airflow.

You also can use these holes to install arbitrary equipment or custom adapter brackets.



Caution Do not exceed the rack mount shelf maximum loading. Refer to the chassis user manual for cooling clearance requirements and thermal considerations.

Figure 4. PXIe-1090 Rack Mount Shelf Baffle Hole Locations



1 Baffle Holes

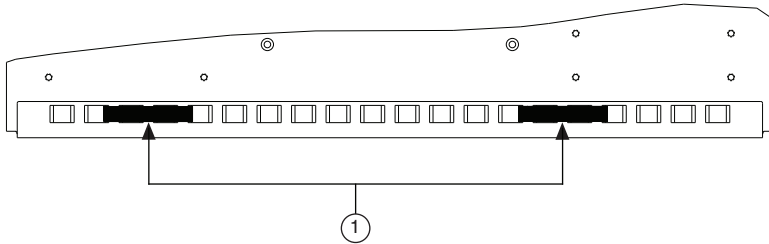
Grounding Considerations

The front panel and rack mount shelf have paint masking to enable an electrical connection between them. The rack mount shelf has paint masking to enable an electrical connection to the rack rails.

Ease of Use Features

The rack mount shelf includes slots at the front and rear for cable strain relief. You can use zip ties or other tiedown materials. You can use zip ties, as shown in Figure 5, without encroaching on the rack U below the shelf. Maximum zip tie width is 9 mm (0.35 in.).

Figure 5. PXIe-1090 Rack Mount Shelf with Zip Ties



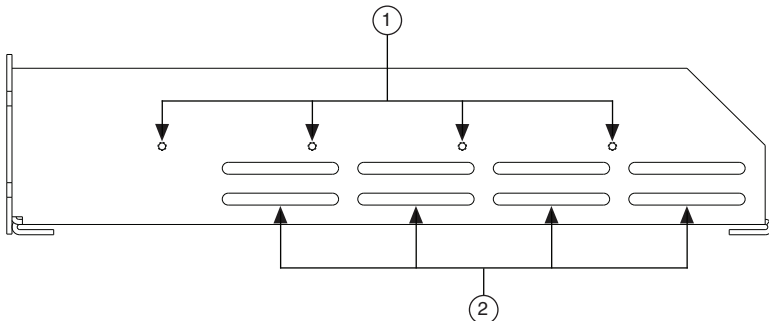
1 Zip Ties

The rack mount shelf includes eight slots and four M4 x 0.7 tapped holes on each side for additional accessories, as shown in Figure 6. These features may be used for cable strain relief or the installation of arbitrary equipment or custom adapter brackets.



Caution Do not exceed the rack mount shelf maximum loading.

Figure 6. PXIe-1090 Rack Mount Shelf Side Holes and Slots



1 M4 x 7 Tapped Holes for Customer-Provided Accessories

2 Slots for Cable Strain Relief

Information is subject to change without notice. Refer to the *NI Trademarks and Logo Guidelines* at ni.com/trademarks for information on NI trademarks. Other product and company names mentioned herein are trademarks or trade names of their respective companies. For patents covering NI products/technology, refer to the appropriate location: **Help»Patents** in your software, the `patents.txt` file on your media, or the *National Instruments Patent Notice* at ni.com/patents. You can find information about end-user license agreements (EULAs) and third-party legal notices in the readme file for your NI product. Refer to the *Export Compliance Information* at ni.com/legal/export-compliance for the NI global trade compliance policy and how to obtain relevant HTS codes, ECCNs, and other import/export data. NI MAKES NO EXPRESS OR IMPLIED WARRANTIES AS TO THE ACCURACY OF THE INFORMATION CONTAINED HEREIN AND SHALL NOT BE LIABLE FOR ANY ERRORS. U.S. Government Customers: The data contained in this manual was developed at private expense and is subject to the applicable limited rights and restricted data rights as set forth in FAR 52.227-14, DFAR 252.227-7014, and DFAR 252.227-7015.

© 2022 National Instruments Corporation. All rights reserved.