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PXI-1033

INSTALLATION GUIDE

PXI and PXI Express Chassis Fan Replacement

This guide describes how to replace the fan on a PXI and PXI Express chassis.



Cautions Make sure to unplug the power cord before replacing the fan.

Only trained service personnel should replace the fan.

4–6 and 9 Slot Chassis Fan Replacement



Note Fan replacement is supported only on chassis with specific assembly numbers. The supported model numbers are listed below, followed by their supported assembly numbers in parentheses. The *x* denotes the assembly letter revision.

Before replacing the fan, be sure to check the model and assembly numbers on the back of your PXI chassis. Replace the fan only if the model and assembly numbers are on the following list. Refer to the [NI PXI-103x and NI PXIe-1073 Chassis Fan Replacement](#) section for information about previous revisions.

- NI PXI-1031 (190871x-01, Revision L and newer)
- NI PXI-1031DC (191746x-01, Revision H and newer)
- NI PXI-1033 (194918x-01, Revision E and newer)
- NI PXI-1036 (192592x-01, Revision H and newer)
- NI PXI-1036DC (192593x-01, Revision F and newer)
- NI PXIe-1071 (195659x-01L)
- NI PXIe-1073 (196695x-01, Revision D and newer)
- NI PXIe-1078 (199485x-01L)

Refer to Figure 1 and the following steps for installation and removal instructions.

NI PXI-103x and NI PXIe-1073 Chassis Fan Replacement

This section describes how to install the NI PXI-103x chassis fan replacement kit for the PXI-1031, PXI-1031DC, PXI-1033, PXI-1036, PXI-1036DC, and PXIe-1073 chassis.



Note Fan replacement is supported only on chassis with specific assembly numbers. The supported model numbers are listed below, followed by their supported assembly numbers in parentheses. The *x* denotes the assembly letter revision.

Before replacing the fan, be sure to check the model and assembly numbers on the back of your PXI chassis. Replace the fan only if the model and assembly numbers are on the following list.

- NI PXI-1031 (190871x-01, Revision H through K)
- NI PXI-1031DC (191746x-01, Revision E through G)
- NI PXI-1033 (194918x-01, Revision A through D)
- NI PXI-1036 (192592x-01, Revision D through G)
- NI PXI-1036DC (192593x-01, Revision C through E)
- NI PXIe-1073 (196695x-01, Revision A through C)

Refer to Figure 5 and the following steps for installation and removal instructions.

Figure 1 shows the parts you must remove to access the fan. Refer to the following steps for installation and removal instructions.

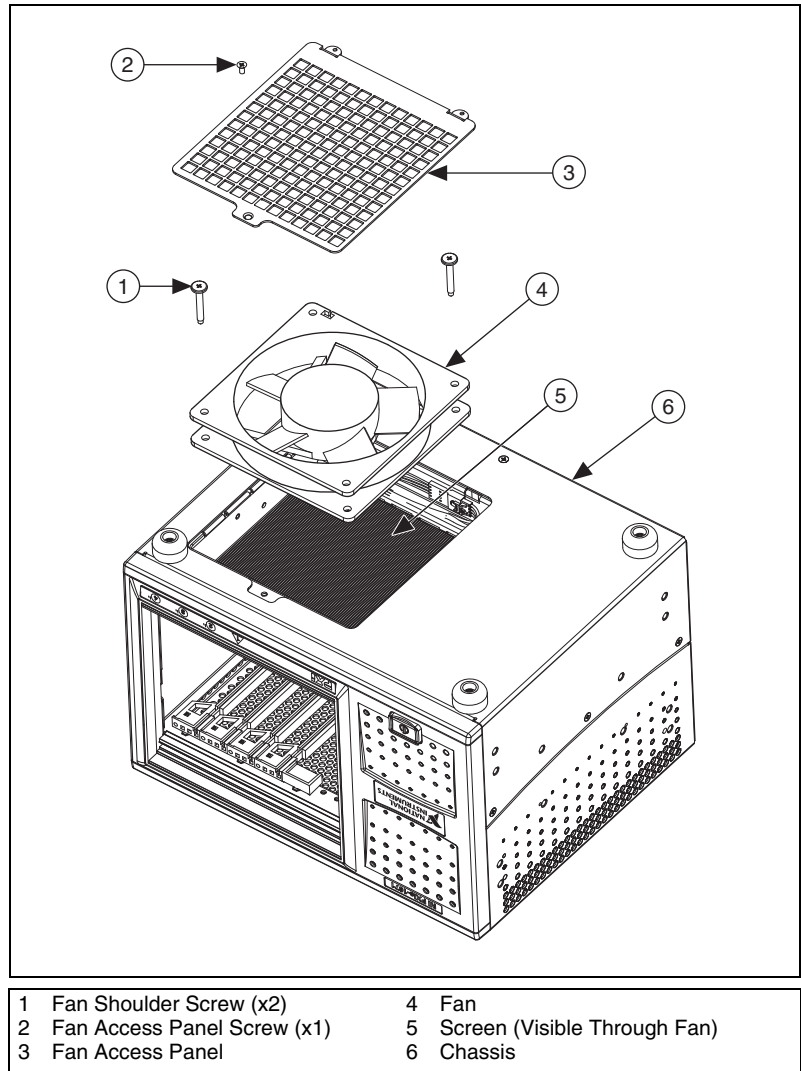


Figure 1. PXI Express Chassis Part Locations (Chassis Shown Upside Down)

Complete the following steps to replace the fan (refer to the previous figure for parts locations):

1. Locate the fan access panel on the bottom of the chassis. Remove the access panel screw and the access panel.
2. Remove the two fan shoulder screws, shown in Figure 1, that fasten the fan. Be careful not to lose the screws.
3. Remove the fan.

4. Disconnect the fan cable from the inline connector. The connector is shown in Figure 2.

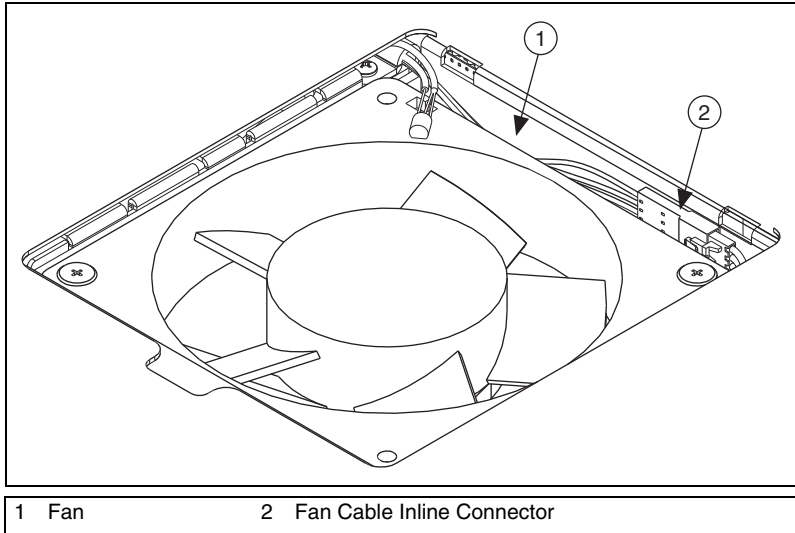


Figure 2. Fan Cable Inline Connector

5. Connect the new fan to the inline connector. Place the fan inside the fan bracket with the square slot oriented as shown in Figure 3. The air flow direction is into the chassis, so the plastic grill and label on the fan should face toward the PXI card cage.

Place the screen below the fan (see Figure 1 for screen location). Ensure that the loose screen doesn't fall out. If the screen does fall out, return it to its position under the fan.

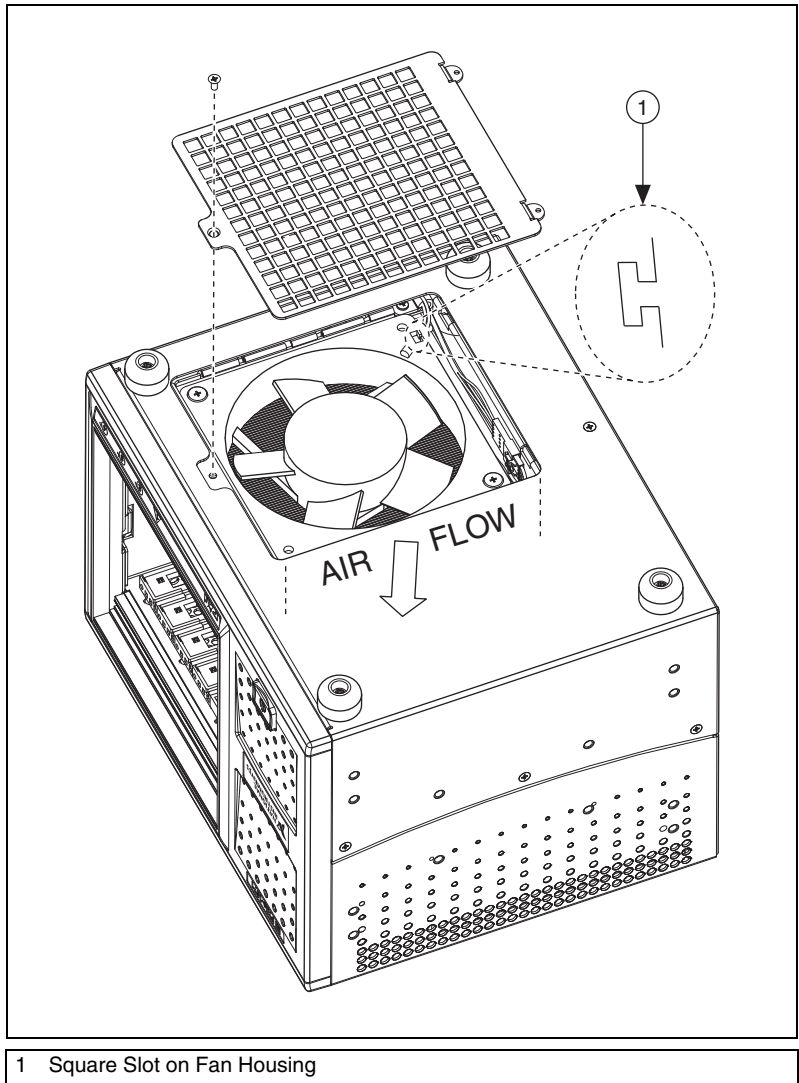


Figure 3. Square Slot on Fan Housing

6. Reinstall the two shoulder screws.

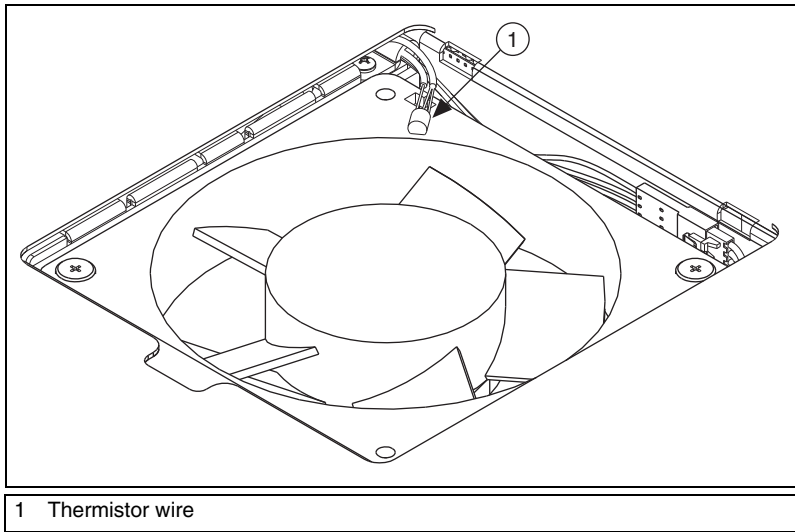


Figure 4. Thermistor Wire

7. Tighten the shoulder screws to between 3.0 lb · in. minimum torque and 3.6 lb · in. maximum torque.



Caution Orient the thermistor wire, as shown in Figure 4, before replacing the fan access panel.

8. Place the fan access panel over the opening. Insert and tighten the access panel screw to between 3.0 lb · in. minimum torque and 3.6 lb · in. maximum torque.



Caution Reorient the chassis to an upright position and ensure there are no loose parts prior to plugging in the power cord.

Figure 5 shows the parts you must remove to access the fan. Refer to the following steps for installation and removal instructions.

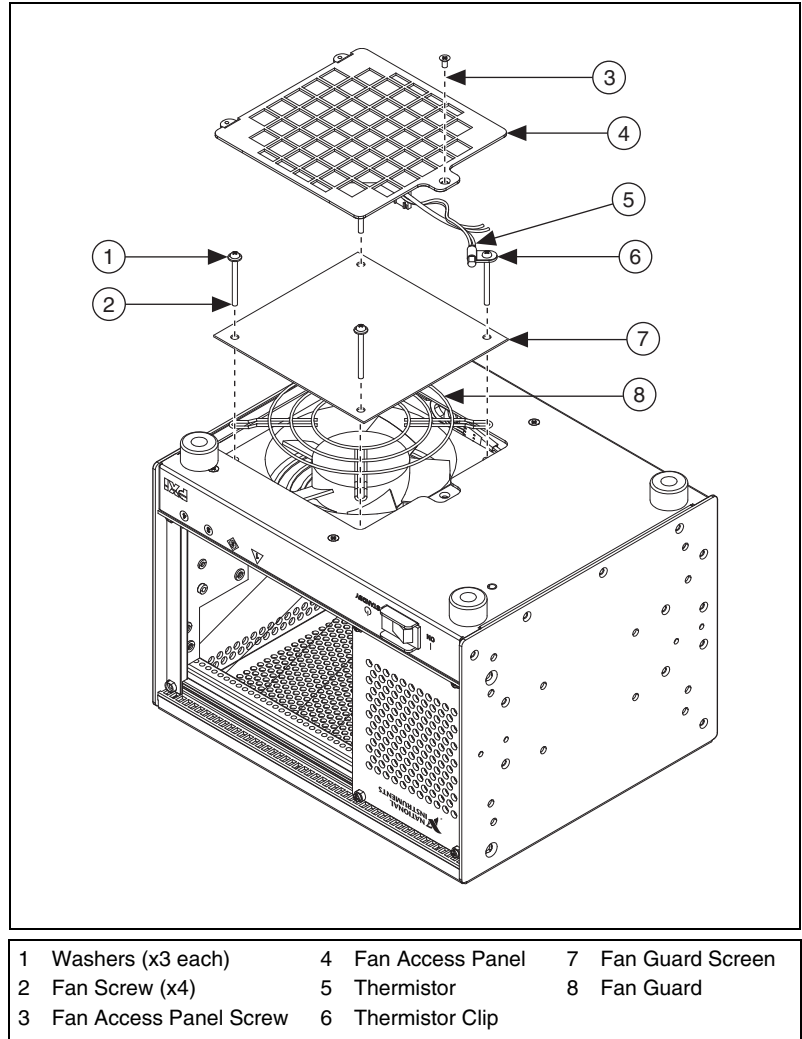


Figure 5. PXI and PXI Express Chassis Part Locations (Chassis Shown Upside Down)

Complete the following steps to replace the fan (refer to the previous figure for parts locations):

1. Locate the fan access panel on the bottom of the chassis. Remove the access panel screw and the access panel.
2. Remove the four fan screws, shown in Figure 5, that fasten the fan. Be careful not to lose the screws or washers. (If you lose a screw, replace it with an M3 × 0.5 × 35 mm pan head Phillips screw.)
3. Remove the thermistor and fan guards.
4. Remove the fan.
5. Disconnect the fan cable from the inline connector protruding through the grommet in the fan bracket. The connector is shown in Figure 6.



Caution Do *not* allow the wires to fall through the grommet.

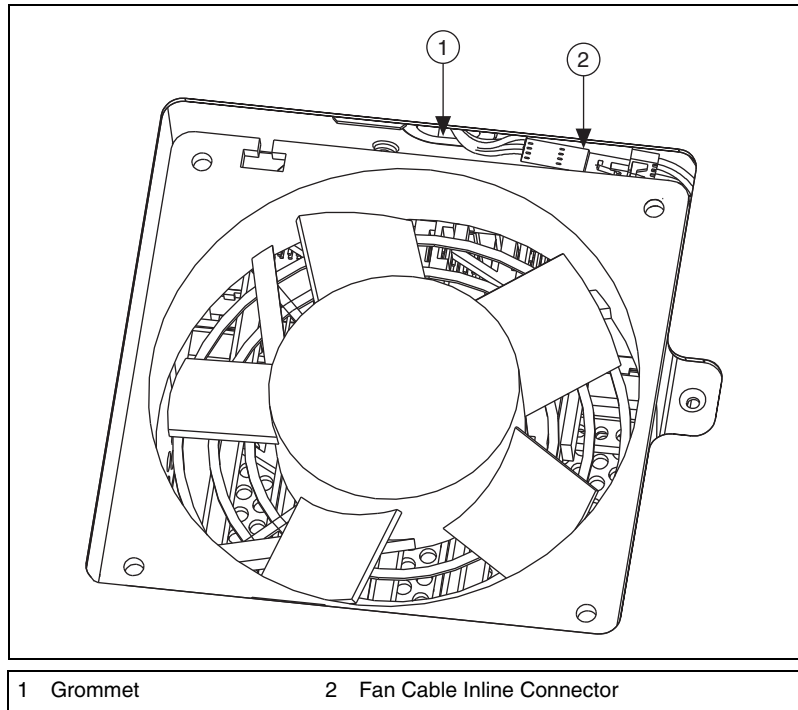


Figure 6. Fan Cable Inline Connector

6. Connect the new fan to the inline connector. Place the fan inside the fan bracket with the square slot oriented as shown in Figure 7. The fan flow direction is into the chassis, so the plastic grill on the fan should face toward the PXI card cage.

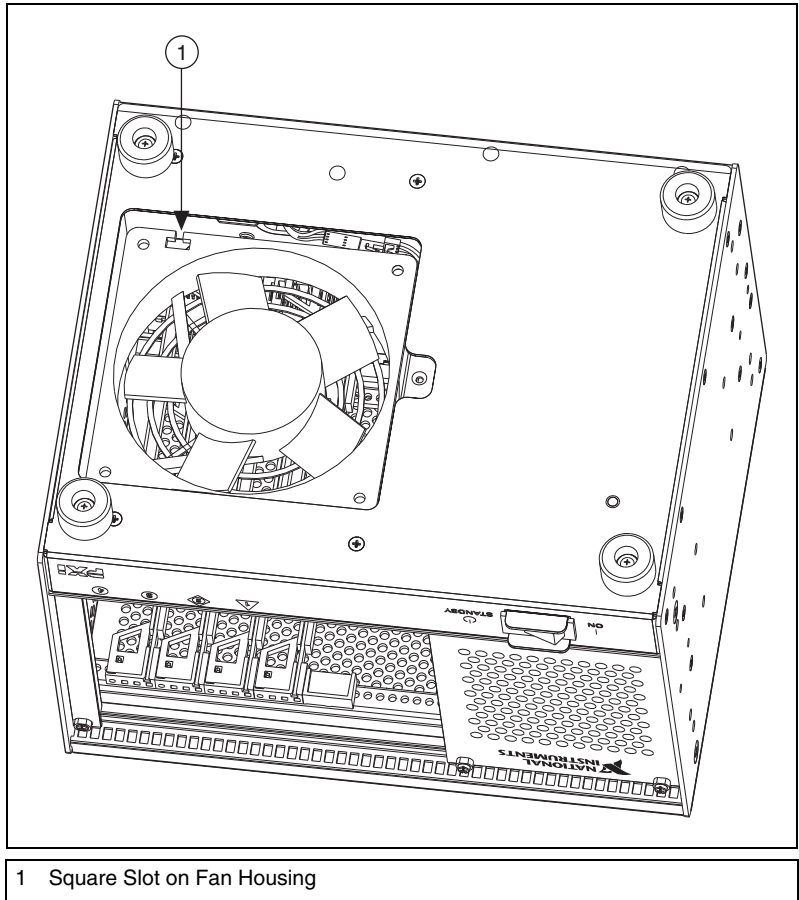


Figure 7. Square Slot on Fan Housing

7. Place the fan guards on top of the fan with the round wire guard closest to the fan and the screen guard on top of the round wire guard.

8. Insert three of the four screws with the flat washers closest to the fan and the split spring washers closest to the screw heads. The fourth screw does not use washers, but instead anchors the thermistor. Insert the fourth screw through the thermistor clip hole and orient the thermistor as shown in Figure 8.

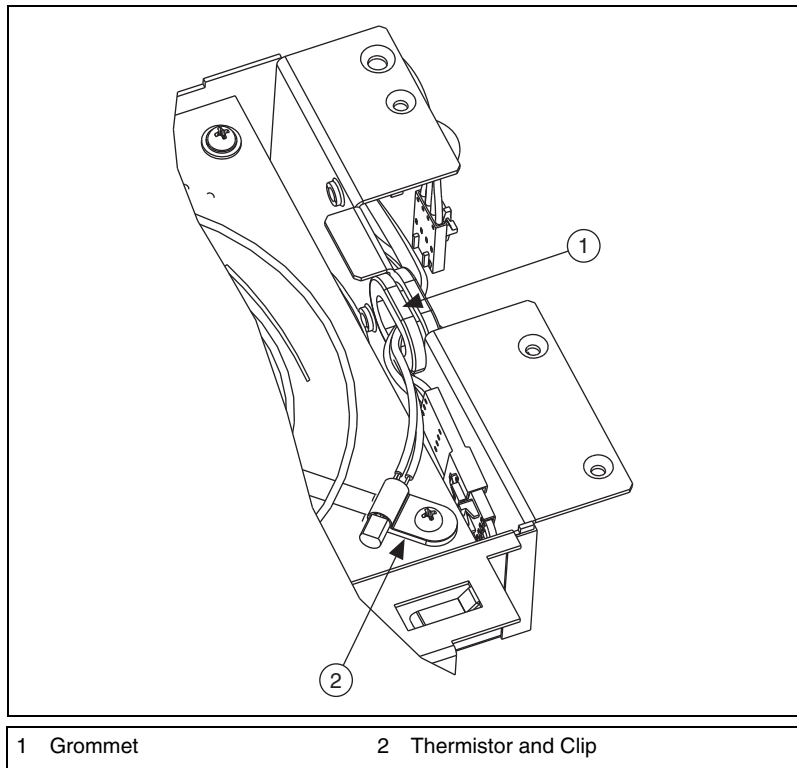


Figure 8. Thermistor Location and Orientation

9. Tighten the screws to between 5.7 lb · in. minimum torque and 6.7 lb · in. maximum torque.
10. Place the fan access panel over the opening. Insert and tighten the access panel screw to between 3.0 lb · in. minimum torque and 3.6 lb · in. maximum torque.



Caution Reorient the chassis to an upright position and ensure there are no loose parts prior to plugging in the power cord.

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