



# PCI Express Cards (Early 2008)

Remove and replace PCI Express Cards for Mac Pro (Early 2008)

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## INTRODUCTION

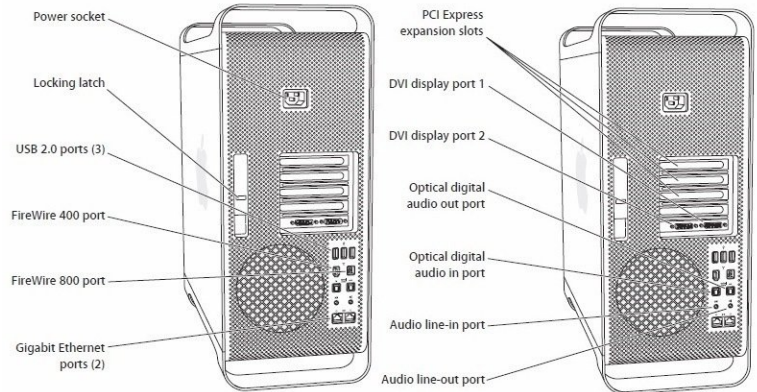
The Mac Pro (Early 2008) logic board includes one double-wide PCI Express graphics slot and three PCI Express expansion slots, for a total of four slots. The computer comes with a graphics card installed in slot 1. You can install additional PCI Express graphics and expansion cards in the remaining three PCI Express expansion slots.

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### TOOLS:

- [Anti-Static Wrist Strap](#) (1)
  - [Phillips #1 Screwdriver](#) (1)
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## Step 1 — Opening the Computer (Early 2008)



- Shut down the computer.

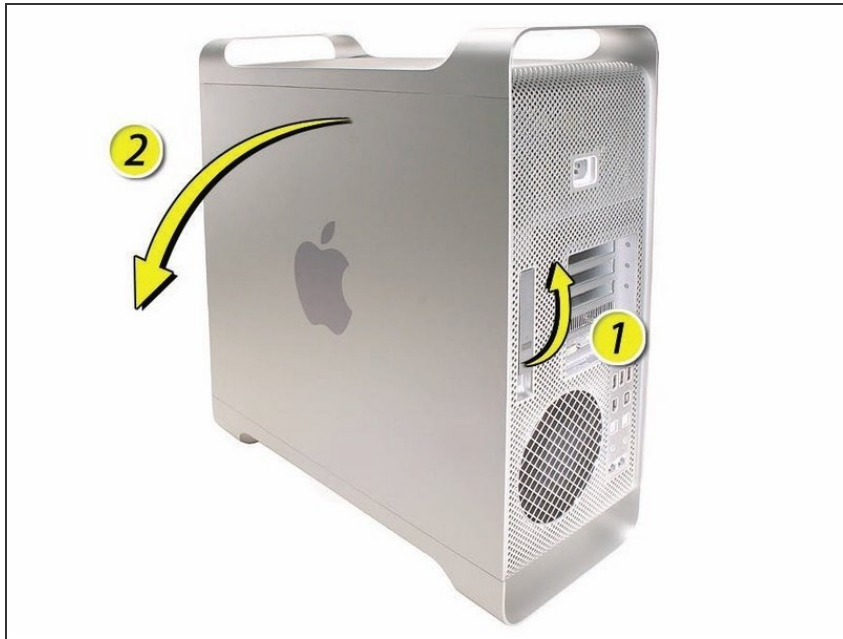
**⚠ Warning:** Always shut down the computer before opening it to avoid damaging its internal components or the components you are installing. Do not open the computer or attempt to install items inside it while it is on.

- Wait 5 to 10 minutes to allow the computer's internal components to cool.

**⚠ Warning:** After you shut down the system, the internal components can be very hot. You must let the computer cool down before continuing.

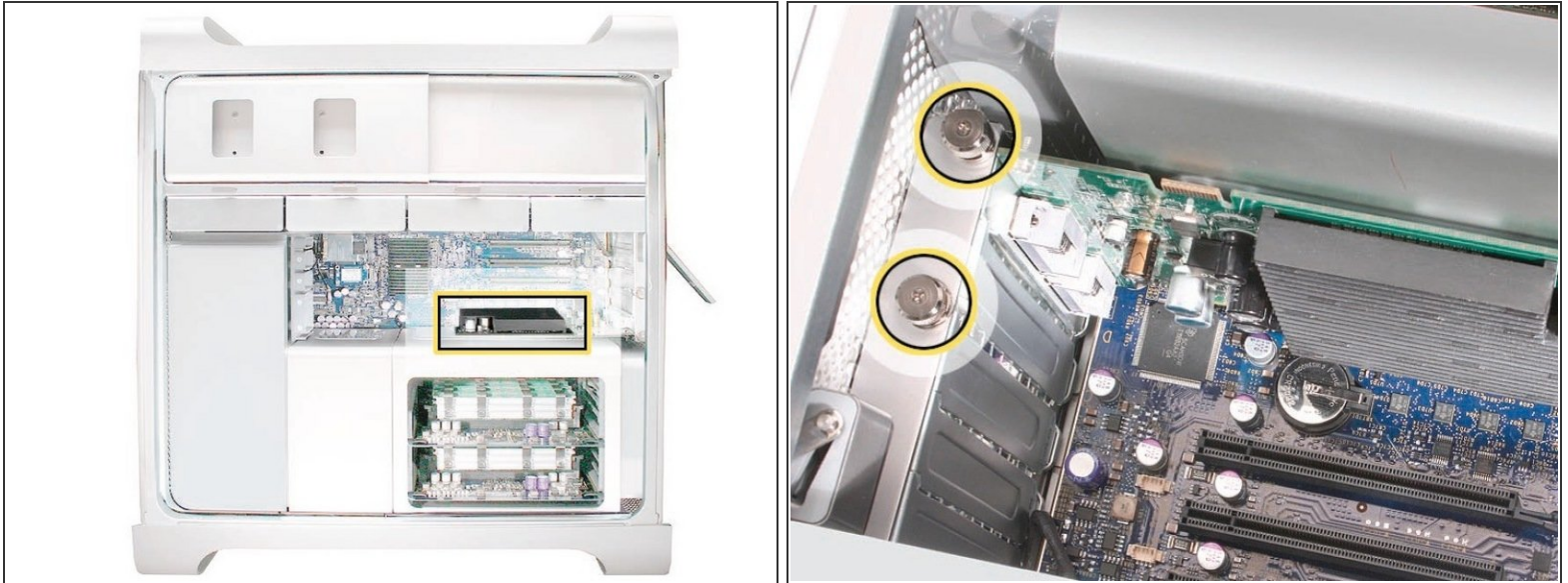
- Unplug all external cables from the computer except the power cord.
- Touch the metal PCI access covers on the back of the computer to discharge any static electricity from your body.
- Unplug the power cord.
- Put on an ESD wrist strap.

## Step 2



- 1) Hold the side access panel and lift the latch on the back of the computer.
- ⚠ Warning: The edges of the access panel and the enclosure can be sharp. Be very careful when handling them.
- 2) Remove the access panel and place it on a flat surface covered by a soft, clean cloth.
- ⓘ Replacement Note: Make sure the latch is in the up position before replacing the access panel. If the latch is down, the access panel will not seat correctly in the enclosure.

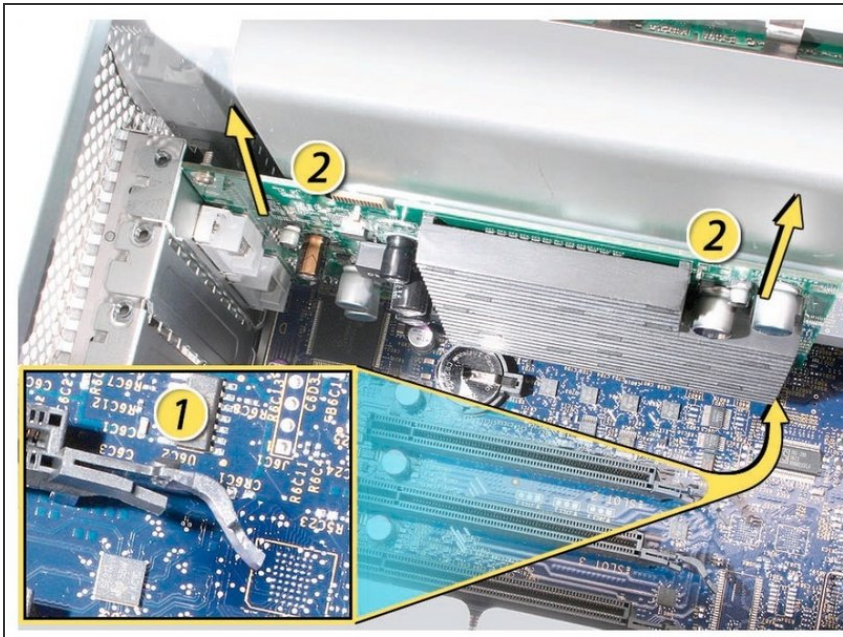
### Step 3 — Graphic Card for Mac Pro (Early 2008)



- This procedure explains how to remove a standard card and a card that includes a booster cable. Before you can remove either type of card, however, you must first loosen the two captive screws that secure the PCI bracket to the enclosure and remove the bracket.



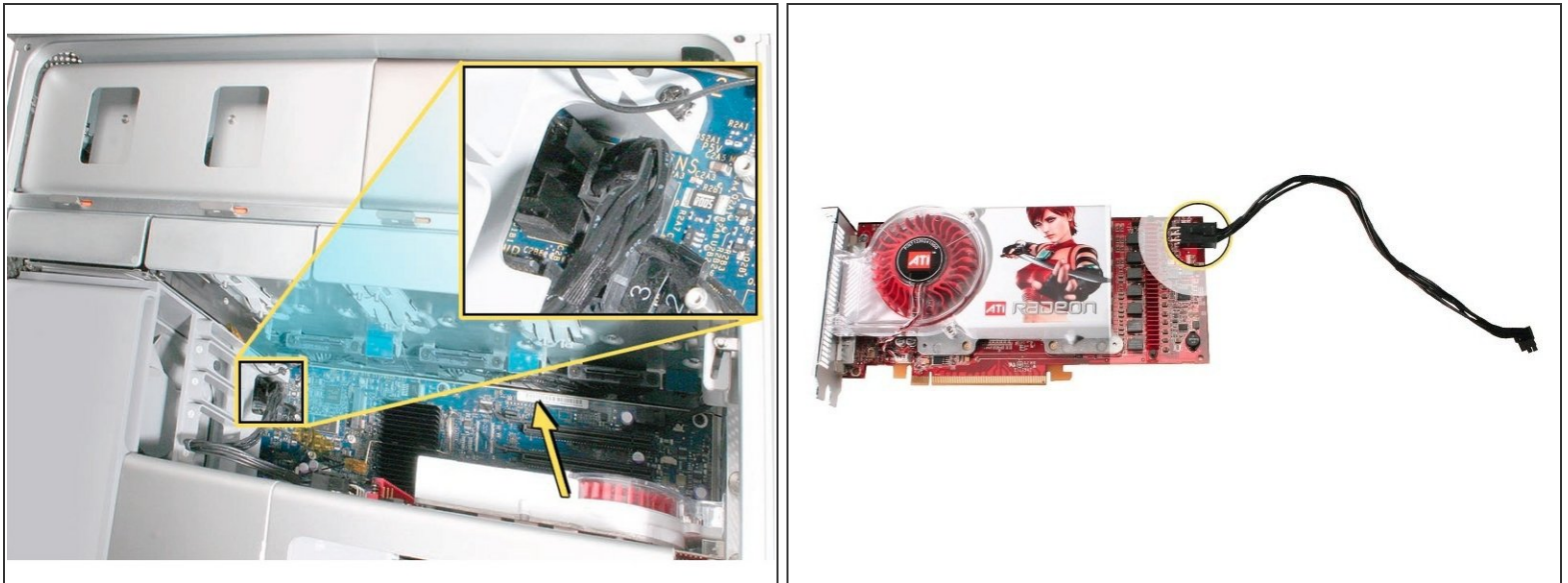
## Step 4



**⚠** Handle the card only by the edges. Do not touch its connectors or any of the components. Lift the card straight out from the connector to remove it, and insert it straight into the connector to install it. Do not rock the card from side to side and don't force the card into the slot. Once the replacement card is installed, pull on it gently to check.

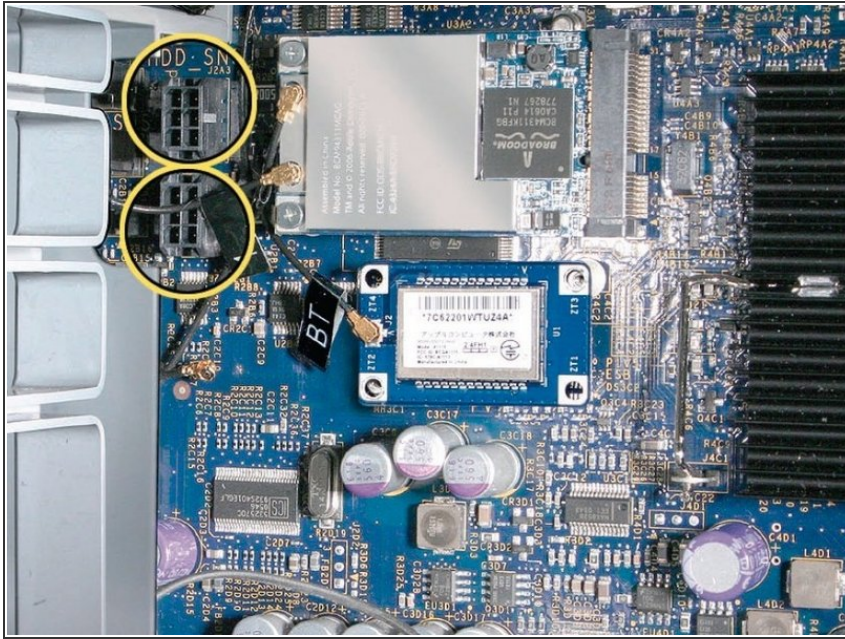
- 1) Release the small locking clip at the front of the card's logic board connector by pushing the clip up toward the media shelf.
- 2) Holding the card by the top corners, pull up the card and remove it from its expansion slot.

## Step 5 — Card with Booster Cable



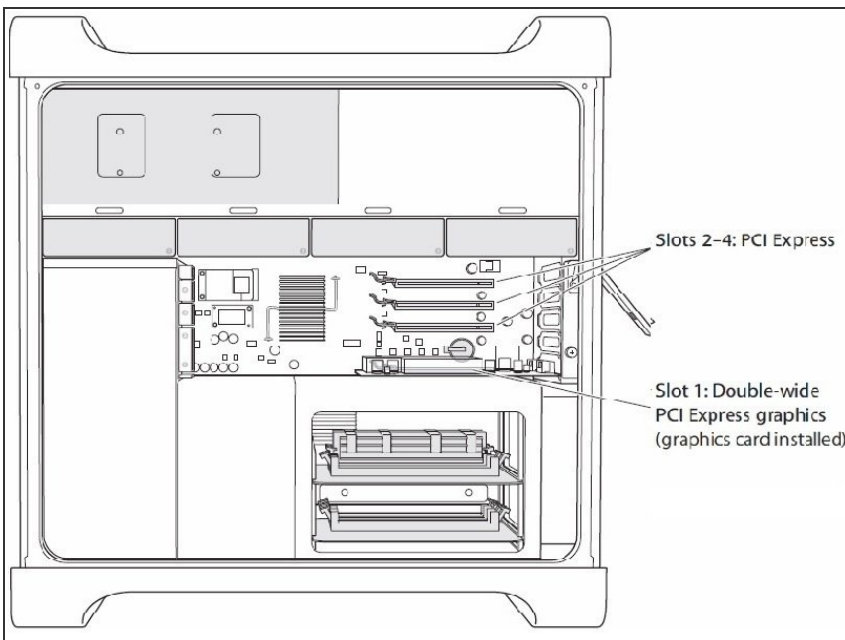
- ⓘ Some graphics cards require either one or two booster cables connecting the card to the auxiliary power connectors on the logic board.
- ⓘ The graphics card NVIDIA GeForce 8800 GT requires one booster cable; the graphics card NVIDIA Quadro FX 5600 requires two booster cables.
  - Disconnect the booster cable(s) from the logic board.
  - Release the small locking clip at the front of the card's logic board connector by pushing the clip up toward the media shelf.
  - Holding the card by the top corners, gently pull up the card and remove it from its expansion slot.
- ⓘ If you are replacing a booster cable with a new one, disconnect the cable from the card.

## Step 6



- ⓘ Replacement Note for Card Using One Booster Cable: Be sure to connect the card's booster cable to the correct auxiliary power connector on the logic board. Connect the booster cable for a card in PCI slot 1 to the lower connector. Connect the booster cable for a card in PCI slot 2 to the upper connector.
- ⓘ Replacement Note for Card Using Two Booster Cables: Connect both cables to the two auxiliary power connectors.

## Step 7 — PCI Express Cards (Early 2008)



- ⓘ The procedure to remove the graphic cards is the same for PCI Express Cards for exception of minor card differences.
- ⚠ Important: Combined maximum power consumption for all four PCI Express slots must not exceed 300 W.

To reassemble your device, follow these instructions in reverse order.