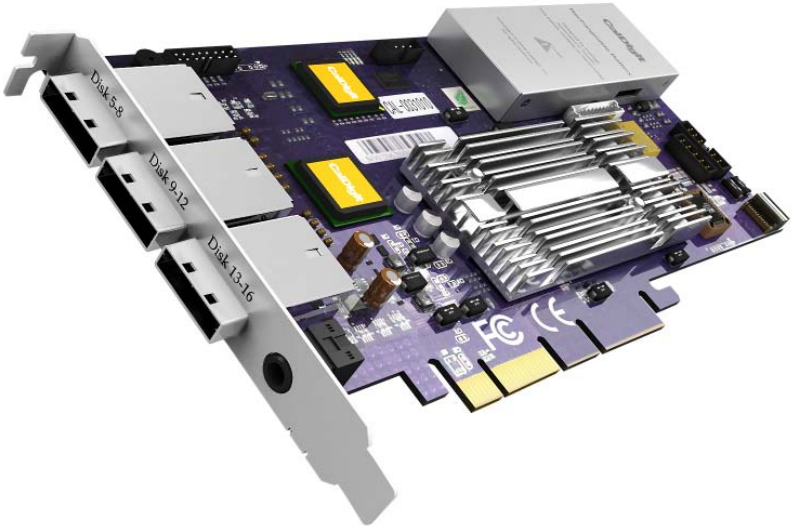
CalDigit

RAID Card

Getting Started



CalDigit

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*Specifications and package contents are subject to change without notice.

Installing the CalDigit RAID Card

Follow the instructions on the following pages to install the CalDigit RAID card in your Mac Pro, PCI-e PowerMac G5 or PC workstation.

Back Up

Please back up your data before proceeding with the following steps.

Identifying your workstation

Although the CalDigit RAID Card is compatible with Mac or PC, different installation procedures will apply with different workstations.

If you are using a Mac, please identify your Mac according to the information provided under Apple's System Profiler (Apple Menu/About this Mac/More Info).

A 4-core Mac Pro will display as 2 x 2.0, 2.66 GHZ Dual-Core Intel XEON;
A 8-core Mac Pro will display as 2 x 2.8, 3.0, 3.2 GHz Quad-Core Intel XEON;
A PCI-e Power Mac G5 will display as Dual-Core 2.0, 2.3, 2.5GHz PowerPC G5; If you are using a PC, please install the RAID Card on any available PCI-e slot.

Note: For PCI-Express Power Mac G5, Please use the external mini-SAS port of the RAID Card to connect the HDElement. Internal drive connection is not supported.

Optimize the CalDigit RAID Card's performance

To obtain optimum performance, please use four identical hard drives for internal drives, (we strongly suggest using CalDigit certified drives). To see a list of certified drives, please
go to http://www.caldigit.com/support.asp

Working Safely Inside the Mac Pro.

Make sure to discharge any potential static electricity before you touch any components inside. To do this, simply touch the outer chassis of the Mac Pro before handling any components internally or installing any internal components. We also recommend using an anti-static wrist band, which can be purchased at any computer components store.

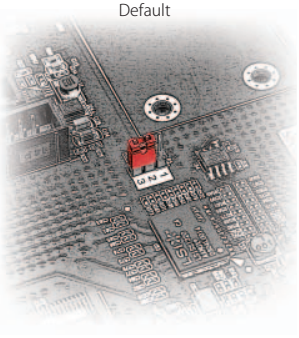
To avoid generating static electricity, do not walk around the room until you have finished working inside the workstation and have replaced the cover, (walking on carpeted surfaces enhances the effect of static electricity). To minimize the possibility of damage due to static discharge, again, we recommend wearing an antistatic wrist strap while you work inside the workstation.

Preparing to install CalDigit RAID Card

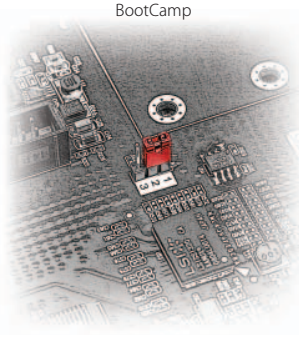
Please make sure the jumper of the card is installed on 2, 3.

If you want to use BootCamp in your Mac Pro, you will need to make sure the jumper is installed on 1, 2. You will also need to purchase an optional CalDigit Mini-SAS cable(*1).

Default



BootCamp



(a) If you are using a PC, please purchase a CalDigit Mini-SAS to SATA cable(*2) for your internal hard drives.

(b) If you purchased a CalDigit RAID card back-up battery pack(*3), Please install it to the RAID card and make sure the 3 screws are tightened at this time.

About the Installation of the CalDigit RAID Card

The installation instructions provide the following configurations:

1. If you are using a Mac Pro

(a) To install a hard drive into the second optical drive bay, to use as the system drive, and to connect four internal hard drives as the RAID volume, using the four hard drive bays. Please refer to P. of the installation instructions.

(b) To use the first internal hard drive as the system drive (including the use of Boot Camp), and the other three drives for the RAID volume. Please refer to P. of the installation instructions.

(c) To make four internal hard drives into a RAID volume, and install the operating system onto the RAID volume. Please refer to P. of the installation instructions.

2. If you are using a PCI-e G5

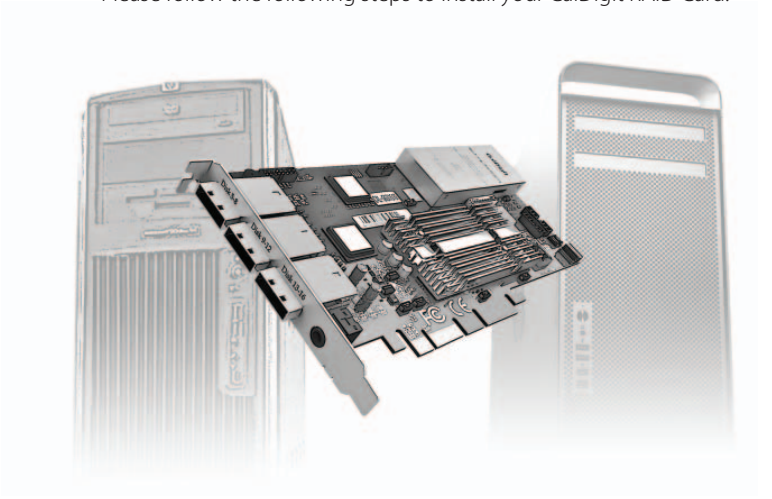
Please refer to P. of the installation instructions. (PCI-Express G5 does not support internal hard drives, and supports up to three external HDElements)

3. If you are using a PC

Please refer to P. of the installation instructions.

Installing your RAID

Please follow the following steps to install your CalDigit RAID Card.



1(a) If you are using a MacPro with one hard drive as the system drive and four internal hard drives as the RAID volume

1.1 Install the CalDigit Driver v1.8.0

(a) Go to http://www.CalDigit.com/Support/HDPro-HDOne-RAIDCard-1.8.0.zip

(b) Select CalDigit/Mac Installer/1.8.x/HDPro_IP_MAC_1.8.x.mpkg

(c) Welcome to CalDigit installation program, please click continue

(d) Select your desired destinatino and click continue

(e) Enter your Administrator password and click OK

(f) After finishing the installation click Restart

Note: If you are using Mac Pro and have 10.5.3 installed. Please refer to http://support.apple.com/kb/HT1237 and make sure your Mac Pro's EFI is 1.3 or above.

If your dont have the latest EFI version, please download it at http://www.apple.com/downloads/macosx/apple/firmware_hardware/macproefifirmwareupdate13.html. You may not be able to boot up your Mac Pro if you fail to upgrade your EFI.

1.2 Turn Off / Shut Down your computer

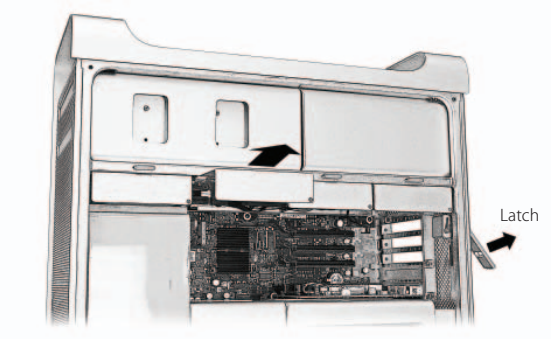
Turn off your computer. Touch the metal on the outside of your Mac Pro (chassis) while it's still plugged in to discharge any static electricity from your body.

1.3 Open your computer case

Remove the side panel. Let the computer cool down. Its internal components can still be very hot even when the computer is off.

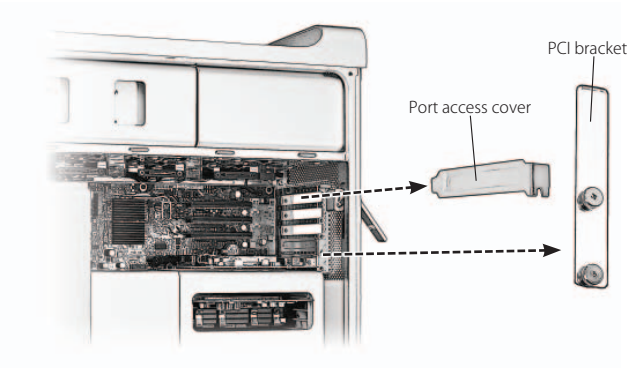
1.4 Remove the drive modules

Make sure the latch on the back panel is open, and pull out all four drive modules as well as their empty carriers.



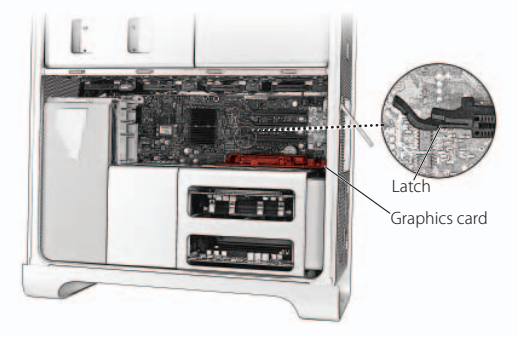
1.5 Remove the PCI bracket

(Loosen the two thumbscrews on the bracket that holds the PCI Express cards in place, and remove the bracket and the port access cover.



1.6 Remove PCI-Express card(s)

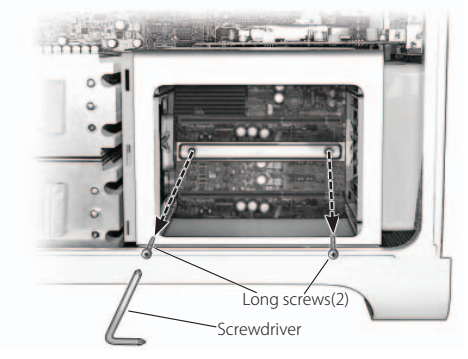
Disconnect and remove all PCI-Express card(s) except for your graphics card, lift the latch on the card conector, and pull the card out of the slot. Note each cards slot position in order to put them back in the same order when you finish the installation.



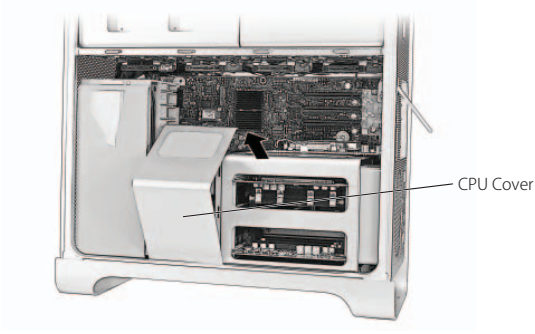
1.7 Remove the CPU cover

Depending on the model of your Mac Pro, please refer to the appropriate instructions:

(a) (4 Core Mac Pro) Remove the memory cards and the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage. Move the DIMM cage toward the back panel of the computer and widen the gap between the DIMM cage and the CPU cover. Remove the CPU cover.



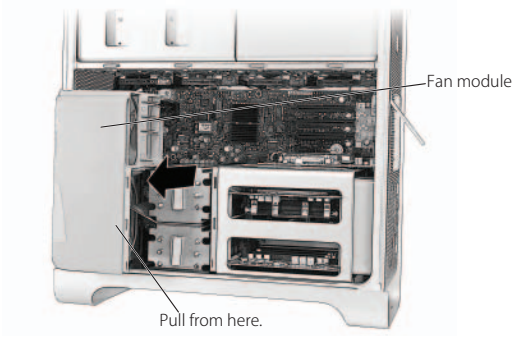
(b) (8 Core Mac Pro) Remove the CPU cover by pulling the bottom edge of the CPU cover slightly toward you.



1.8 Remove the fan module

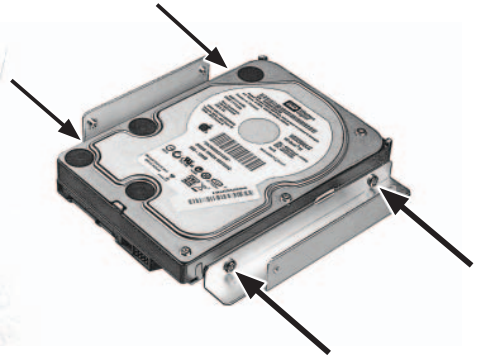
(a) (4 Core Mac Pro) Remove the fan module screw and take out the fan module.

(b) (8 Core Mac Pro) Remove the fan module screws (one at the upper-right rear corner and a second at the lower- right front corner and take out the fan module.)

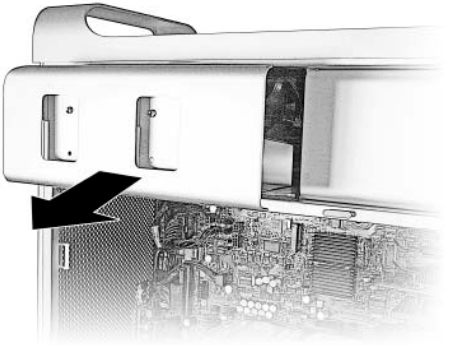


1.9 Remove the system drive

Remove the system drive from MacPro hard disk drive carrier. FixedCalDigit optical bay tray (as shown below) to the sides of the system drive.

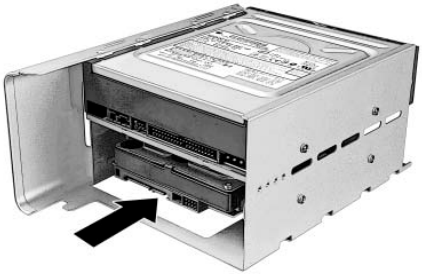


1.10 Remove MacPro optical drive carrier



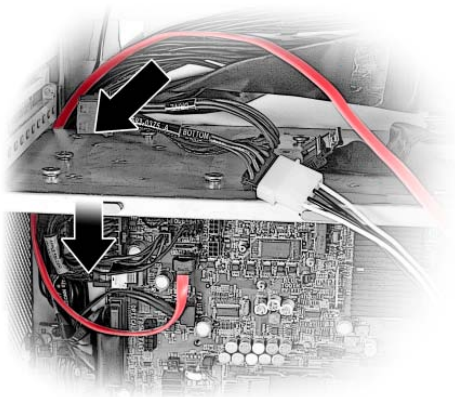
1.11 Install CalDigit optical bay tray

Install CalDigit optical bay tray with the system drive into the 2nd optical drive and fixed .



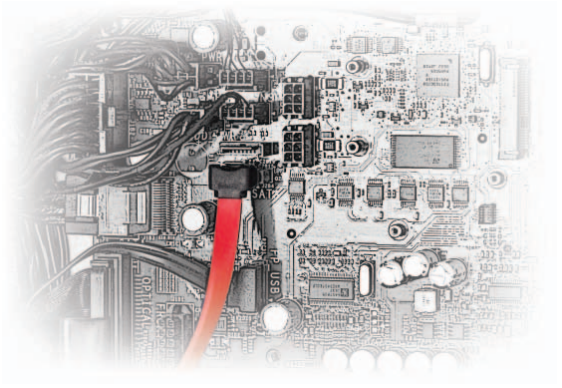
1.12 Install CalDigit optical SATA cable

1.13 Plug SATA connector into the gap (as shown below)



1.14 Connect SATA connector to the SATA port

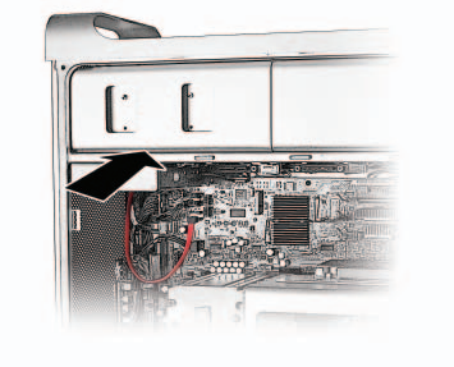
Connect SATA connector to the SATA port on the mother board, and make sure It's fully seated in the connector.



1.15 Conntect CalDigit optical SATA power cable middle connector to MacPro optical bay ribbon cable end connector

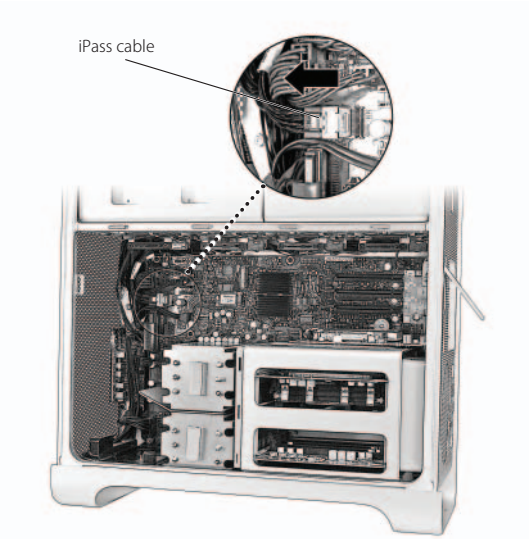
1.16 Connect CalDigit optical SATA cable to the system drive and connect the ribbon cable end connector back to optical bay

1.17 Replace the optical bay



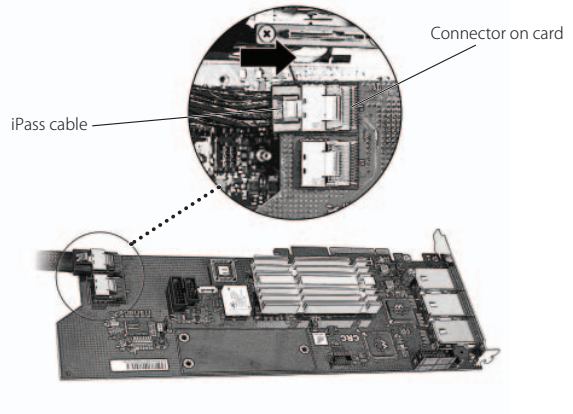
1.18 Disconnect the iPass cable

Disconnect the iPass cable from the upper left corner of the main logic board and extend toward the PCI connectors as far as possible. You might need to re –arrange some cable wiring for easy access of the iPass cable.



1.19 Connect the iPass connector to CalDigit RAID Card

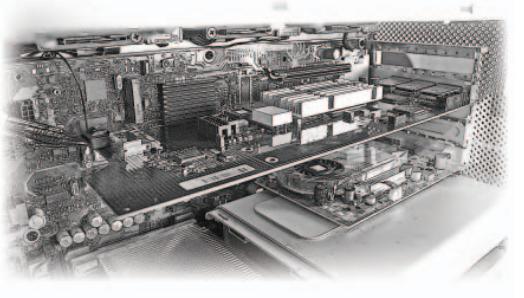
(Make sure the iPass connector is securely connected to CalDigit RAiD Card's J18 Mini-SAS connector.



Note: If the length of iPass cable is not long enough to reach the CalDgiti RAID Card, you might need to re-arrange cable wiring for easy access of the connection.

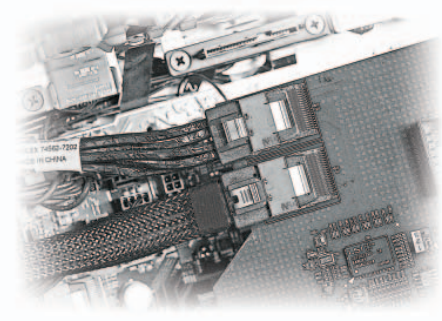
1.20 Slide the CalDigit RAID Card into the PCI-Express slot

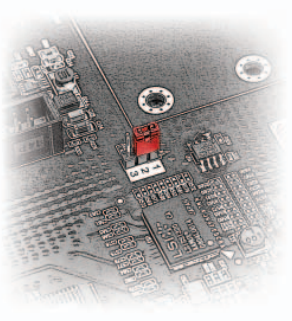
(Slide the CalDigit RAID Card into PCI-Express slot (slot 3). Make sure the card is fully seated into the PCI-Express slot.



Note: It maybe necessary for you to disentangle the iPass cable from other cables running through the same area so that the loose end of the iPass cable extends toward the PCI connectors as far as possible.

If you want to use BootCamp in your Mac Pro, you will need to purchase an optional CalDigit Mini-SAS Cable, Part# CBMiniSAS-BC, SKU# 702101. You will need to connect it to the CalDigit RAID Card's J19 Mini-SAS port at one end. And connect the other end to the iPass connector on MacPro's motherboard. Please make sure the jumper is installed on 1, 2 as shown below.

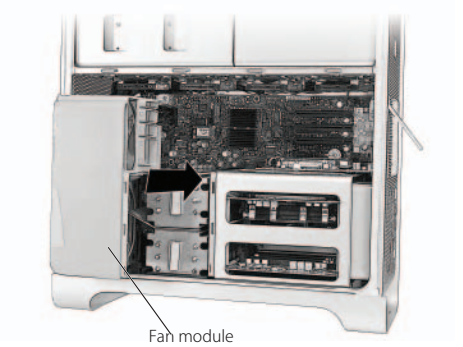




1.21 Installing the fan module

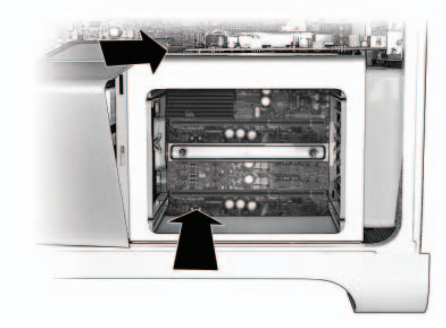
If you are using a Power Mac G5, please skip to step 1.24. Install the fan module back insdie the chassis. Make sure the cabling is clear of the fan modules mounting arm and then tighten the screws.

(One screw for the 4 Core MacPro at the upper-right rear corner. Two screws for the 8 Core MacPro, one at the upper-right rear corner and a second at the lower-right front corner and take out the fan module).

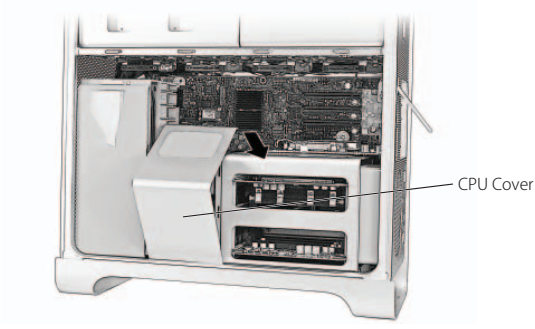


1.22 Install the CPU cover

(a) (4 Core MacPro) Install the CPU cover by inserting the top-left edge of the cover under the retainer on the fan module just below PCI card support (slot 1) and then rotate the cover into place. Slide in the memory cards and tighten the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage.

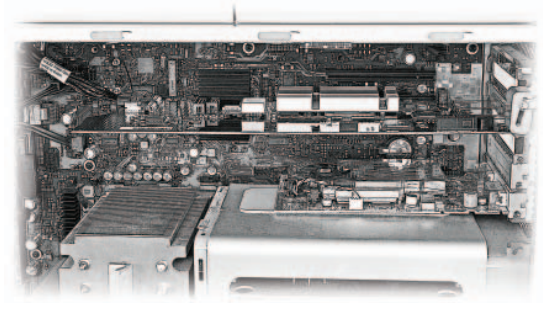


(b) (8 Core MacPro) Position the bottom front edge of the cover and then rotate the top back until the magnets snap it into place.

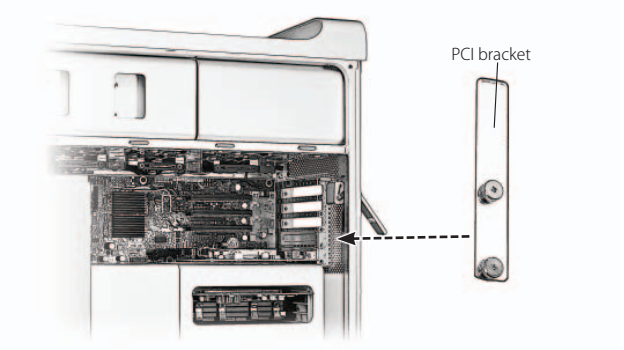


1.23 Install any card(s) that you removed initially into their PCI- Express slots.

Make sure that each card is properly seated.

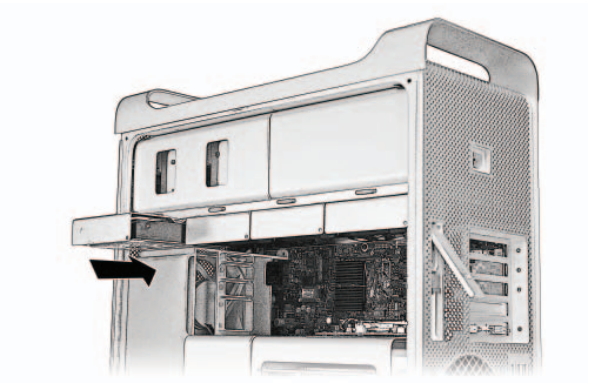


1.24 Install the PCI bracket and tighten the thumb screws



1.25 Slide the memory cards back into the DIMM cage (4 Core Mac Pro)

1.26 Make sure the rear latch is up. Install the drive modules and slide in the drive modules



Note: In order to boot up the system correctly, please install the system drive to the first left drive slot in your Mac Pro.

1.27 Insert the side panel and close the latch

Reconnect the external cables and the power cord. Turn on the power of your Mac.

Note: To insure proper airflow (and avoid over heating), make sure that the fan module is running correctly and the side panel is completely closed. Place your hand near front of the Mac Pro and make sure that you can feel air moving.

1(b) If you are using the first internal hard drive as the system drive (including the use of Boot Camp), and the other three drives for the RAID volume

1.1 Install the CalDigit Driver v1.8.0

(a) Go to http://www.CalDigit.com/Support/HDPro-HDOne-RAIDCard-1.8.0.zip

(b) Select CalDigit/Mac Installer/1.8.x/HDPro_IP_MAC_1.8.x.mpkg

(c) Welcome to CalDigit installation program, please click continue

(d) Select your desired destinatino and click continue

(e) Enter your Administrator password and click OK

(f) After finishing the installation click Restart

Note: If you are using Mac Pro and have 10.5.3 installed. Please refer to http://support.apple.com/kb/HT1237 and make sure your Mac Pro's EFI is 1.3 or above.

If your dont have the latest EFI version, please download it at http://www.apple.com/downloads/macosx/apple/firmware_hardware/macproefifirmwareupdate13.html. You may not be able to boot up your Mac Pro if you fail to upgrade your EFI.

1.2 Turn Off/ Shut Down your computer

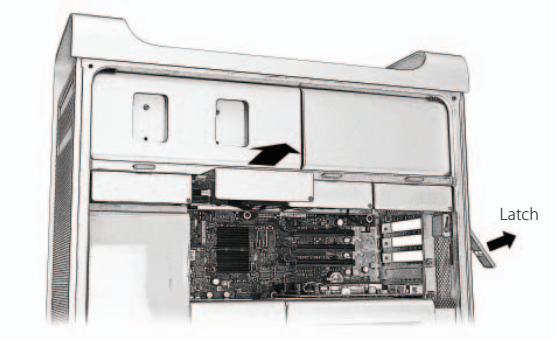
Turn off your computer. Touch the metal on the outside of your MacPro (chassis) while it's still plugged in to discharge any static electricity from your body.

1.3 Open your computer case

Remove the side panel. Let the computer cool down. Its internal components can still be very hot even when the computer is off.

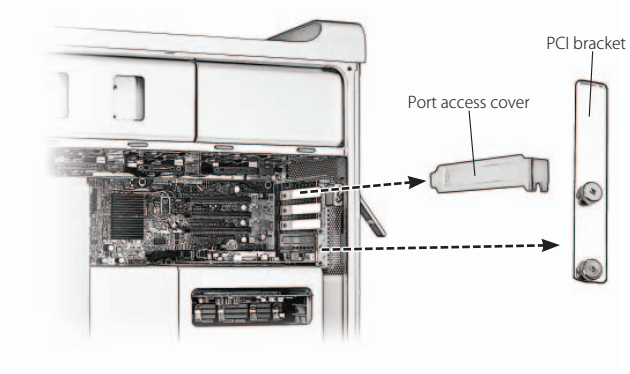
1.4 Remove the drive modules

Make sure the latch on the back panel is open, and pull out all four drive modules as well as their empty carriers.



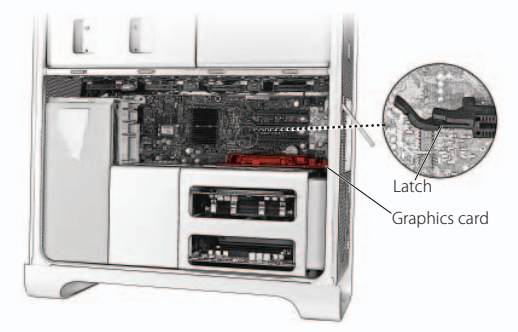
1.5 Remove the PCI bracket

Loosen the two thumbscrews on the bracket that holds the PCI Express cards in place, and remove the bracket and the port access cover.



1.6 Remove PCI-Express card(s)

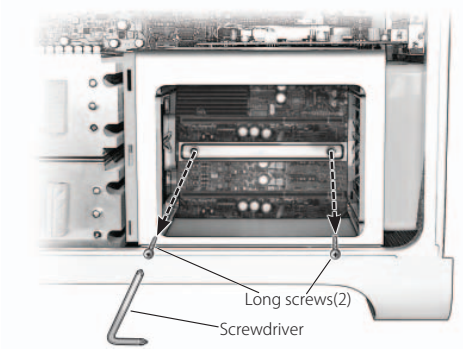
Disconnect and remove all PCI-Express card(s) except for your graphics card, lift the latch on the card conector, and pull the card out of the slot. Note each cards slot position in order to put them back in the same order when you finish the installation.



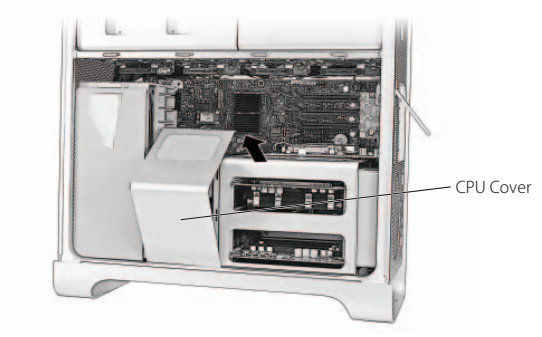
1.7 Remove the CPU cover

Depending on the model of your MacPro, please refer to the appropriate instructions:

(a) (4 Core MacPro) Remove the memory cards and the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage. Move the DIMM cae towards the back panel of the computer and widen the gap between the DIMM cage and the CPU cover. Remove the CPU cover.



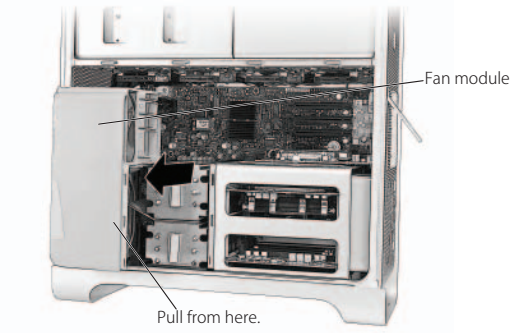
(b) (8 Core MacPro) Remove the CPI cover by pulling the bottom edge of the CPI cover slightly toward you.



1.8 Remove the fan module

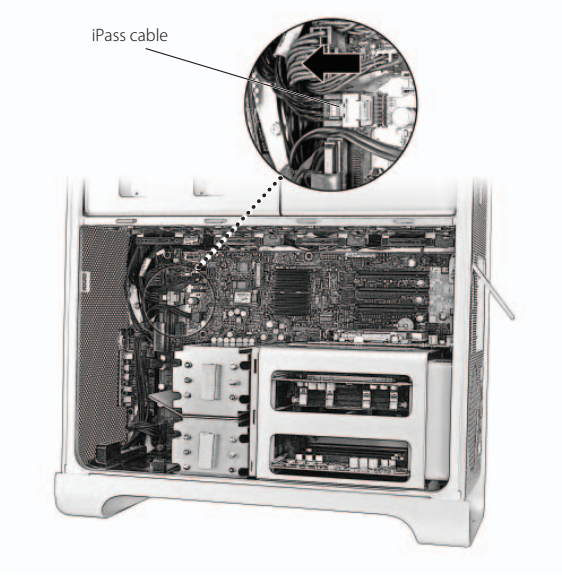
(a) (4 Core MacPro) Remove the fan module screw and take out the fan module.

(b) (8 Core MacPro) Remove the fan module screws (one at the upper-right rear corner and a second at the lower-right front corner and take out the fan module).



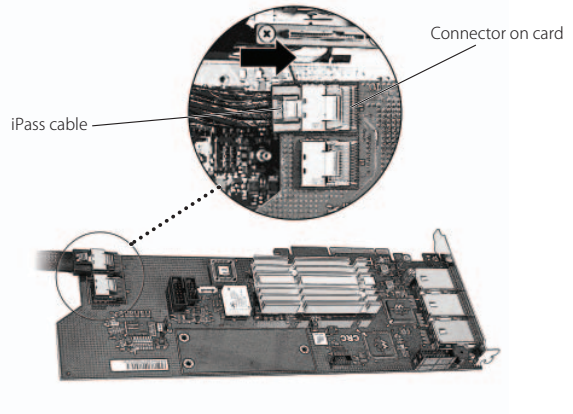
1.9 Disconnect the iPass cable

Disconnect the iPass cable from the upper left corner of the main logic board and extend toward the PCI connectors as far as possible. You might need to re-arrange some cable wiring for easy access of the iPass cable.



1.10 Connect the iPass connector to CalDigit RAID Card

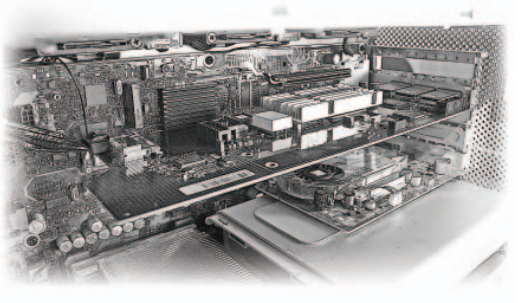
Make sure the iPass connector is securely connected to CalDigit RAiD Card's J18 Mini-SAS connector.



Note: If the length of iPass cable is not long enough to reach the CalDgiti RAID Card, you might need to re-arrange cable wiring for easy access of the connection.

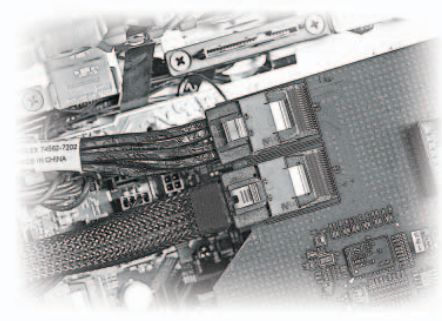
1.11 Slide the CAlDigit RAID Card into the PCI-Express slot

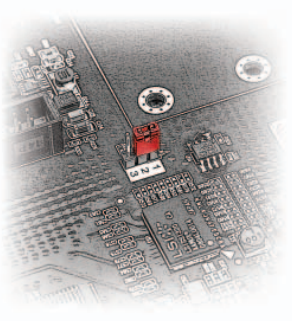
Slide the CalDigit RAID Card into PCI-Express slot (slot 3). Make sure the card is fully seated into the PCI-Express slot.



Note: It maybe necessary for you to disentangle the iPass cable from other cables running through the same area so that the loose end of the iPass cable extends toward the PCI connectors as far as possible.

If you want to use BootCamp in your Mac Pro, you will need to purchase an optional CalDigit Mini-SAS Cable, Part# CBMiniSAS-BC, SKU# 702101. You will need to connect it to the CalDigit RAID Card's J19 Mini-SAS port at one end. And connect the other end to the iPass connector on MacPro's motherboard. Please make sure the jumper is installed on 1, 2 as shown below.

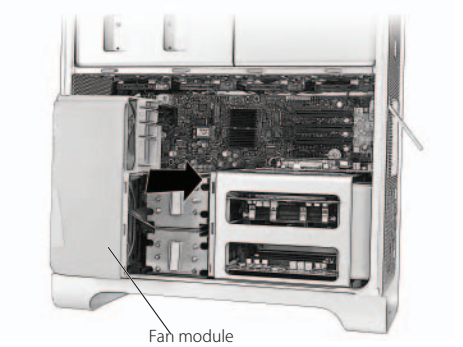




1.12 Installing the fan module

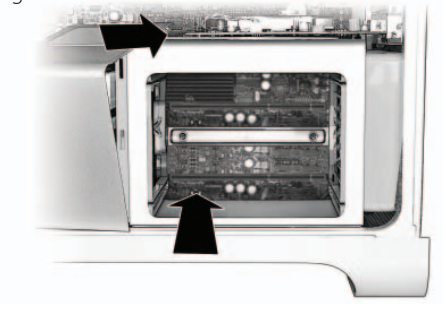
If you are using a Power Mac G5, please skip to step 2.15. Install the fan module back insdie the chassis. Make sure the cabling is clear of the fan modules mounting arm and then tighten the screws.

(One screw for the 4 Core MacPro at the upper-right rear corner. Two screws for the 8 Core MacPro, one at the upper-right rear corner and a second at the lower-right front corner and take out the fan module).

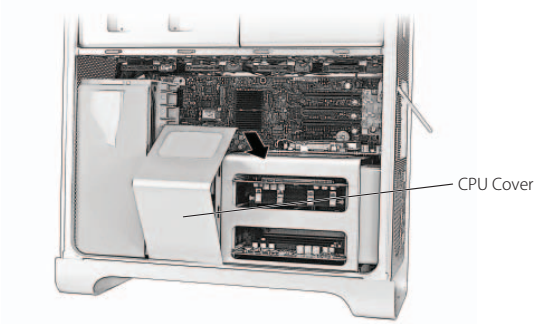


1.13 Install the CPU cover

(a) (4 Core MacPro) Install the CPU cover by inserting the top-left edge of the cover under the retainer on the fan module just below PCI card support (slot 1) and then rotate the cover into place. Slide in the memory cards and tighten the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage.

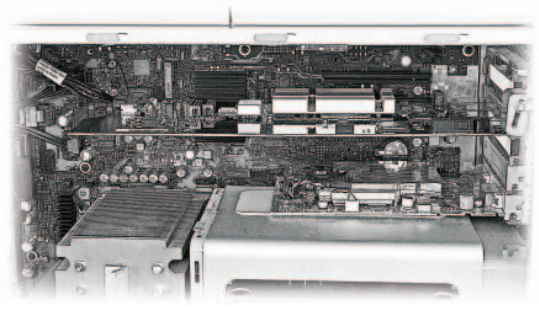


(b) (8 Core MacPro) Position the bottom front edge of the cover and then rotate the top back until the magnets snap it into place.

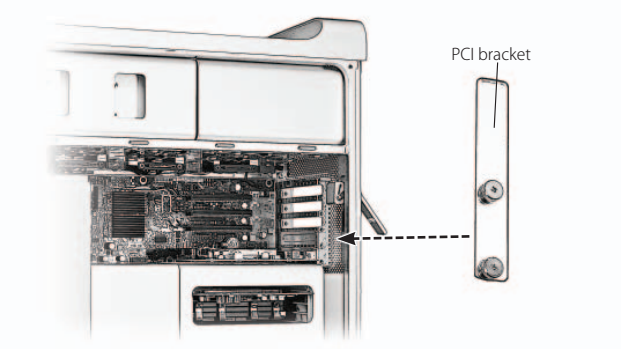


1.14 Install any card(s) that you removed initially into their PCI-Express slots

Make sure that each card is properly seated

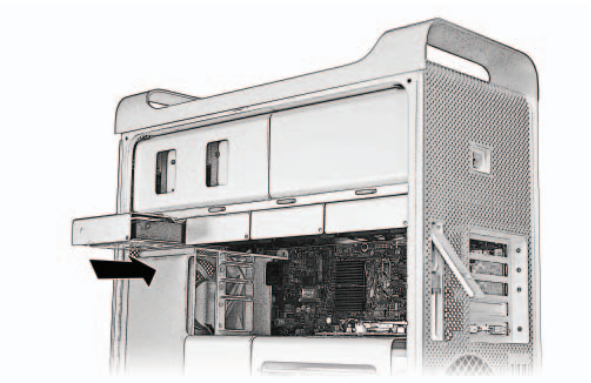


1.15 Install the PCI bracket and tighten the thumb screws



1.16 Slide the memory cards back into the DIMM cage (4 Core Mac Pro)

1.17 Make sure the rear latch is up. Install the drive modules and slide in the drive modules



Note: In order to boot up the system correctly, please install the system drive to the first left drive slot in your Mac Pro.

1.18 Insert the side panel and close the latch

Reconnect the external cables and the power cord. Turn on the power of your Mac.

Note: To insure proper airflow (and avoid over heating), make sure that the fan module is running correctly and the side panel is completely closed. Place your hand near front of the Mac Pro and make sure that you can feel air moving.

1(c) If you are using a MacPro to make four internal hard drives into a RAID volume, and install the operating system onto the RAID volume

1.1 Install the CalDigit Driver v1.8.0

(a) Go to http://www.CalDigit.com/Support/HDPro-HDOne-RAIDCard-1.8.0.zip

(b) Select CalDigit/Mac Installer/1.8.x/HDPro_IP_MAC_1.8.x.mpkg

(c) Welcome to CalDigit installation program, please click continue

(d) Select your desired destinatino and click continue

(e) Enter your Administrator password and click OK

(f) After finishing the installation click Restart

Note: If you are using Mac Pro and have 10.5.3 installed. Please refer to http://support.apple.com/kb/HT1237 and make sure your Mac Pro's EFI is 1.3 or above.

If your dont have the latest EFI version, please download it at http://www.apple.com/downloads/macosx/apple/firmware_hardware/macproefifirmwareupdate13.html. You may not be able to boot up your Mac Pro if you fail to upgrade your EFI.

1.2 Turn Off/ Shut Down your computer

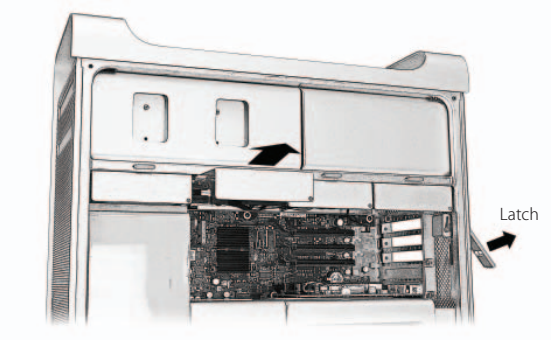
Turn off your computer. Touch the metal on the outside of your MacPro (chassis) while it's still plugged in to discharge any static electricity from your body.

1.3 Open your computer case

Remove the side panel. Let the computer cool down. Its internal components can still be very hot even when the computer is off.

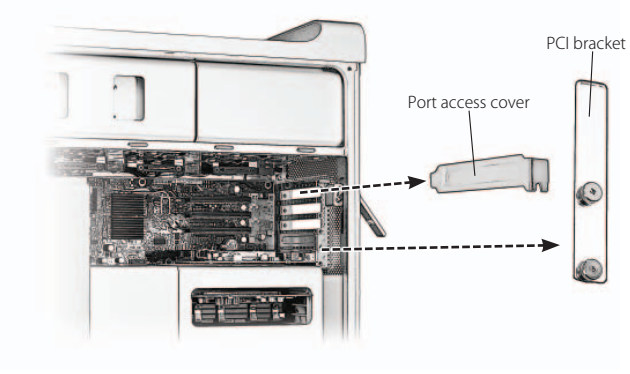
1.4 Remove the drive modules

Make sure the latch on the back panel is open, and pull out all four drive modules as well as their empty carriers.



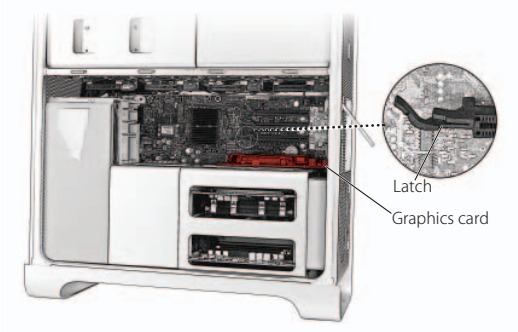
1.5 Remove the PCI bracket

Loosen the two thumbscrews on the bracket that holds the PCI Express cards in place, and remove the bracket and the port access cover.



1.6 Remove PCI-Express card(s)

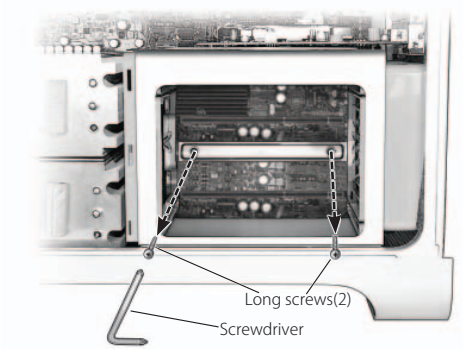
Disconnect and remove all PCI-Express card(s) except for your graphics card, lift the latch on the card connector, and pull the card out of the slot. Note each cards slot position in order to put them back in the same order when you finish the installation.



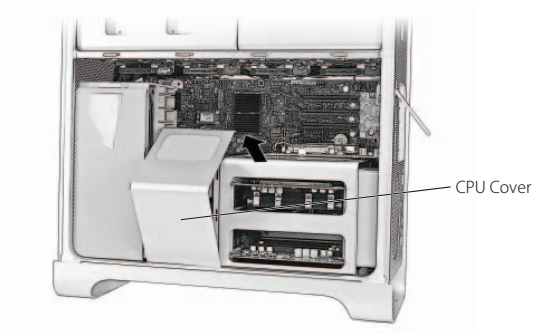
1.7 Remove the CPU cover

Depending on the model of your MacPro, please refer to the appropriate instructions:

(a) (4 Core MacPro) Remove the memory cards and the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage. Move the DIMM cae towards the back panel of the computer and widen the gap between the DIMM cage and the CPU cover. Remove the CPU cover.



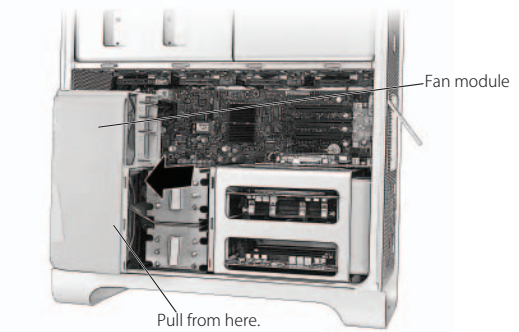
(b) (8 Core MacPro) Remove the CPI cover by pulling the bottom edge of the CPI cover slightly toward you.



1.8 Remove the fan module

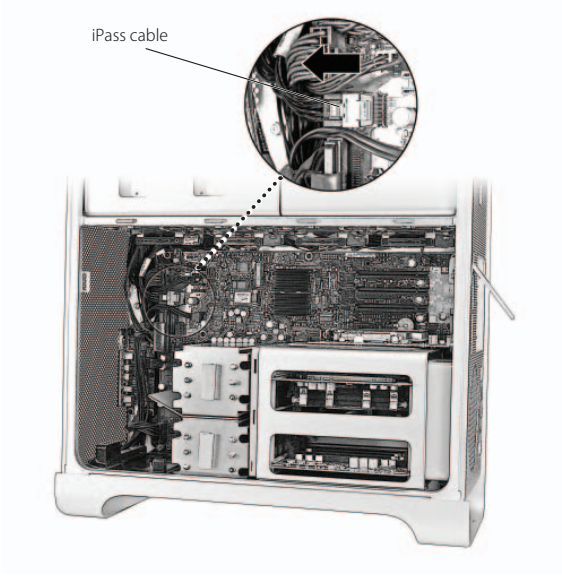
(a) (4 Core MacPro) Remove the fan module screw and take out the fan module.

(b) (8 Core MacPro) Remove the fan module screws (one at the upper-right rear corner and a second at the lower-right front corner and take out the fan module).



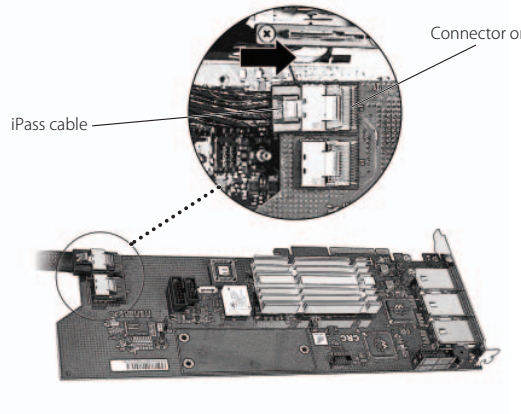
1.9 Disconnect the iPass cable

Disconnect the iPass cable from the upper left corner of the main logic board and extend toward the PCI connectors as far as possible. You might need to re-arrange some cable wiring for easy access of the iPass cable.



1.10 Connect the iPass connector to CalDigit RAID Card

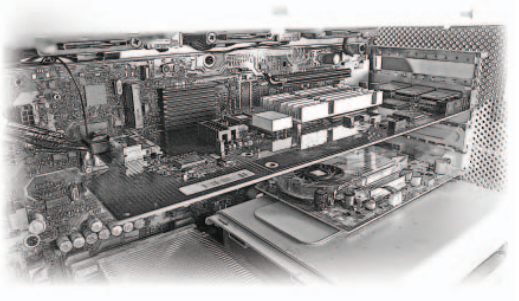
Make sure the iPass connector is securely connected to CalDigit RAiD Card's J18 Mini-SAS connector.



Note: If the length of iPass cable is not long enough to reach the CalDgiti RAID Card, you might need to re-arrange cable wiring for easy access of the connection.

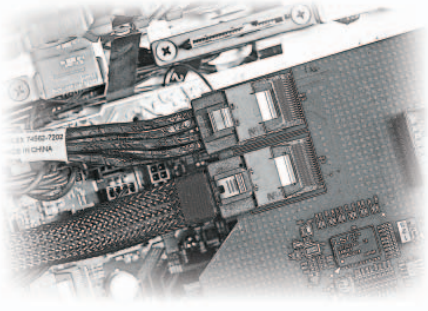
1.11 Slide the CAlDigit RAID Card into the PCI-Express slot

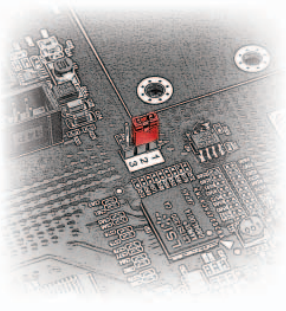
Slide the CalDigit RAID Card into PCI-Express slot (slot 3). Make sure the card is fully seated into the PCI-Express slot.



Note: It maybe necessary for you to disentangle the iPass cable from other cables running through the same area so that the loose end of the iPass cable extends toward the PCI connectors as far as possible.

If you want to use BootCamp in your Mac Pro, you will need to purchase an optional CalDigit Mini-SAS Cable, Part# CBMiniSAS-BC, SKU# 702101. You will need to connect it to the CalDigit RAID Card's J19 Mini-SAS port at one end. And connect the other end to the iPass connector on MacPro's motherboard. Please make sure the jumper is installed on 1, 2 as shown below.

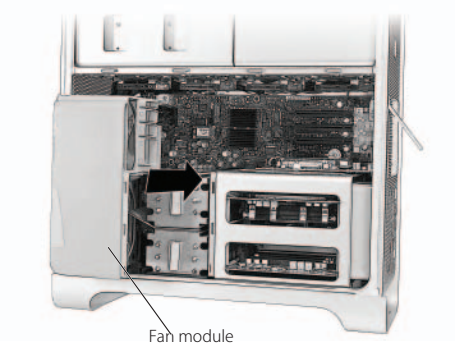




1.12 Installing the fan module

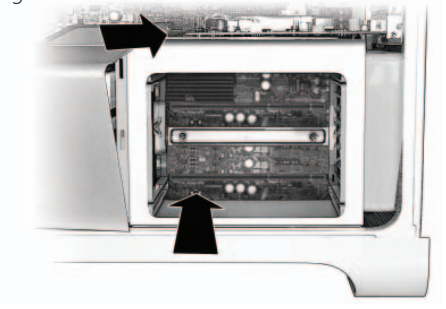
If you are using a Power Mac G5, please skip to step 3.15. Install the fan module back insdie the chassis. Make sure the cabling is clear of the fan modules mounting arm and then tighten the screws.

(One screw for the 4 Core MacPro at the upper-right rear corner. Two screws for the 8 Core MacPro, one at the upper-right rear corner and a second at the lower-right front corner and take out the fan module).

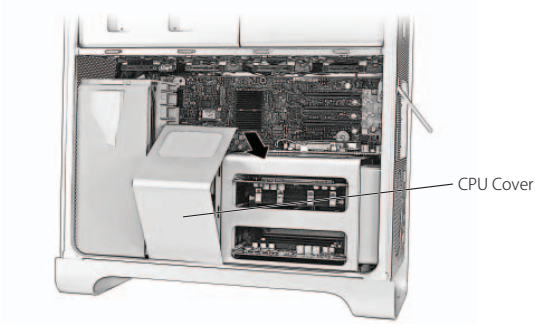


1.13 Install the CPU cover

(a) (4 Core MacPro) Install the CPU cover by inserting the top-left edge of the cover under the retainer on the fan module just below PCI card support (slot 1) and then rotate the cover into place. Slide in the memory cards and tighten the two long screws from the back of the DIMM cage and the two short screws on the bottom front edge of the DIMM cage.

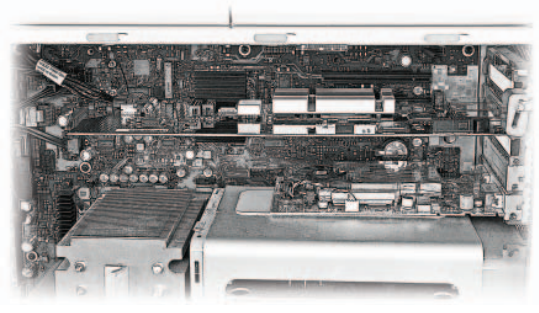


(b) (8 Core MacPro) Position the bottom front edge of the cover and then rotate the top back until the magnets snap it into place.

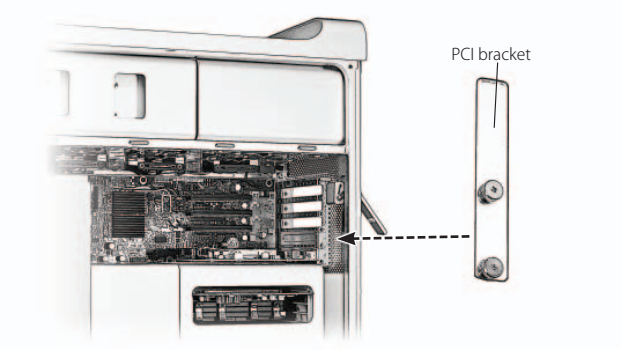


1.14 Install any card(s) that you removed initially into their PCI-Express slots

Make sure that each card is properly seated

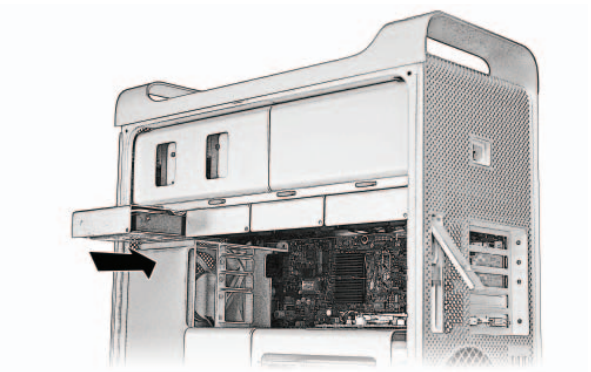


1.15 Install the PCI bracket and tighten the thumb screws



1.16 Slide the memory cards back into the DIMM cage (4 Core Mac Pro)

1.17 Make sure the rear latch is up. Take out the system drive in MacPro hard disk tray, install the drive modules, and slide in the drive modules.



Note: In order to boot up the system correctly, please install the system drive to the first left drive slot in your Mac Pro.

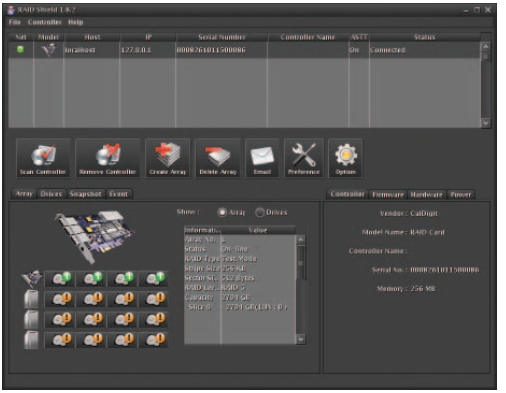
1.18 Install the system drive from MacPro into USB or Firewire 外接盒, and then connect to your computer.

1.19 Insert the side panel and close the latch

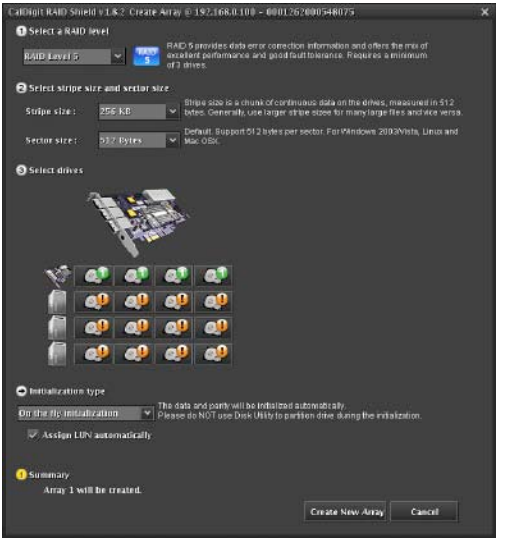
Reconnect the external cables and the power cord. Turn on the power of your Mac.

Note: To insure proper airflow (and avoid over heating), make sure that the fan module is running correctly and the side panel is completely closed. Place your hand near front of the Mac Pro and make sure that you can feel air moving.

1.20 Open RAID Shield, to add a new Controller.

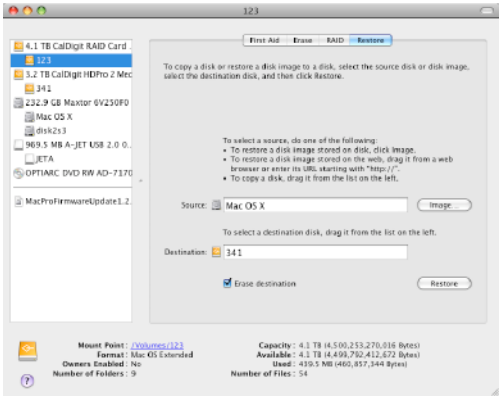


1.21 To set up a RAID volume based on the RAID Level you need



1.22 After configuring your RAID, please launch Apple's Disk Utility (application / utility / Disk utility) to restore your Mac OS to your new RAID Volume.

Make sure you choose the appropriate startup disk under system preference after the restoring process is done.



1.23 Restart your computer and disconnect external hard disks.

2 If you are using a PCI-e G5

2.1 Install the CalDigit Driver v1.8.0

(a) Go to http://www.CalDigit.com/Support/HDPro-HDOne-RAIDCard-1.8.0.zip

(b) Select CalDigit/Mac Installer/1.8.x/HDPro_IP_MAC_1.8.x.mpkg

(c) Welcome to CalDigit installation program, please click continue

(d) Select your desired destinatino and click continue

(e) Enter your Administrator password and click OK

(f) After finishing the installation click Restart

Note: If you are using Mac Pro and have 10.5.3 installed. Please refer to http://support.apple.com/kb/HT1237 and make sure your Mac Pro's EFI is 1.3 or above.

If your dont have the latest EFI version, please download it at http://www.apple.com/downloads/macosx/apple/firmware_hardware/macproefifirmwareupdate13.html. You may not be able to boot up your Mac Pro if you fail to upgrade your EFI.

2.2 Turn Off/ Shut Down your computer

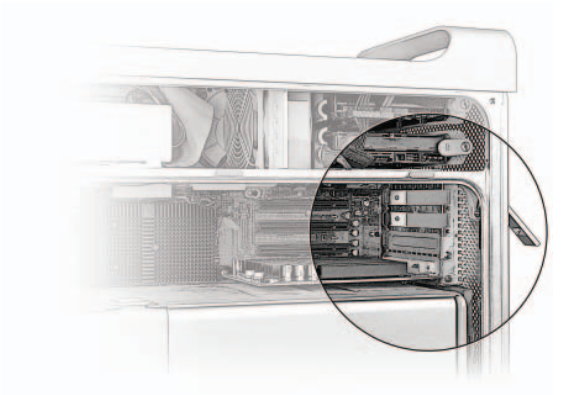
Turn off your computer. Touch the metal on the outside of your MacPro (chassis) while it's still plugged in to discharge any static electricity from your body.

2.3 Open your computer case

Remove the side panel. Let the computer cool down. Its internal components can still be very hot even when the computer is off.

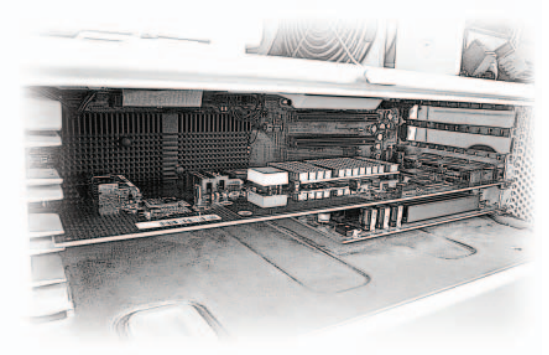
2.4 Loosen the screws and remove the bracket and the port access cover of PCI Express slot 4 by using the provided tool

Make sure the latch on the back panel is open, and pull out all four drive modules as well as their empty carriers.



2.5 Slide the CalDigit RAID Card into the PCI-Express slot

Slide the CalDigit RAID Card into the PCI-Express slot 4. Make sure the card is fully seated.



2.6 Insert the side panel and close the latch

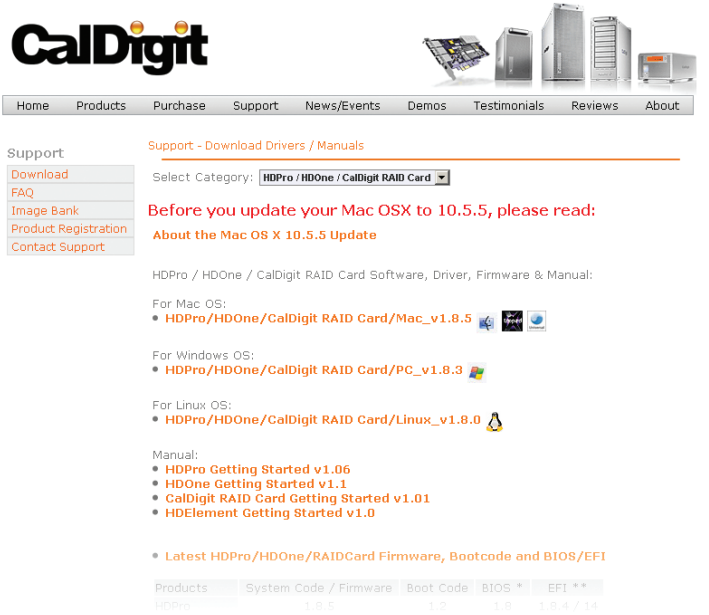
Reconnect the external cables and the power cord. Turn on the power of your PCI-e G5.

Note: To insure proper airflow (and avoid over heating), make sure that the fan module is running correctly and the side panel is completely closed. Place your hand near front of the Mac Pro and make sure that you can feel air moving.

3 If you are using a Wintel PC

3.1 Download CalDigit Windows or Linux Driver

Go to http://www.CalDigit.com/Support/



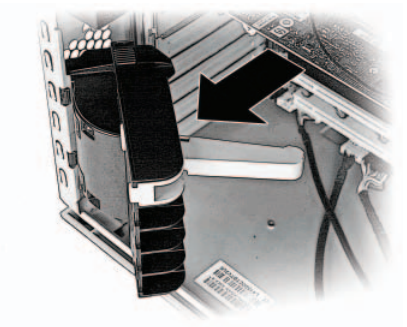
3.2 Turn Off/ Shut Down your computer

Turn off your computer. Touch the metal on the outside of your MacPro (chassis) while it's still plugged in to discharge any static electricity from your body.

3.3 Open your computer case

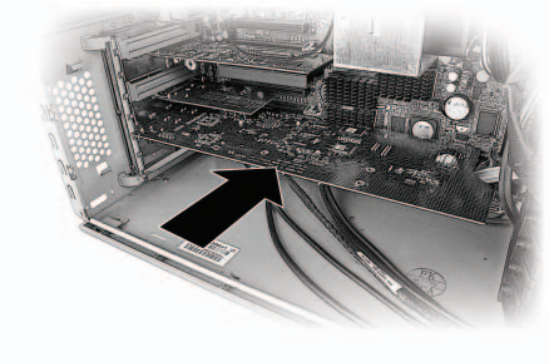
Remove the side panel. Let the computer cool down. Its internal components can still be very hot even when the computer is off.

3.4 Loosen the screws and remove the bracket and the port access cover of PCI Express x4 and above

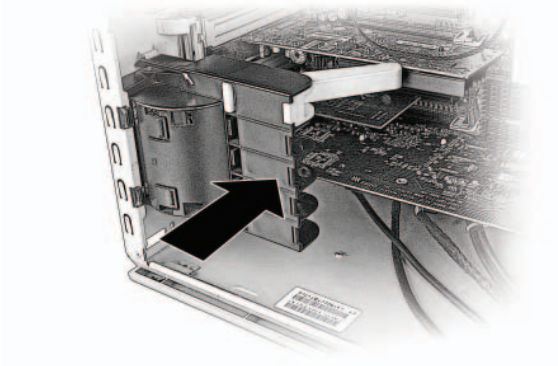


3.5 Slide the CalDigit RAID Card into the PCI-Express slot

Slide the CalDigit RAID Card into the PCI-Express slot. Make sure the card is fully seated.



3.6 Install PCI-Express screws back in place.



3.7 Insert the side panel and close the latch

Reconnect the external cables and the power cord. Turn on the power of your PC.

Note: To insure proper airflow (and avoid over heating), make sure that the fan module is running correctly and the side panel is completely closed. Place your hand near front of the Mac Pro and make sure that you can feel air moving.

3.8 Follow your Operating System to select CalDigit Windows or Linux driver

3.9 Install RAID Shield from our website.
www.CalDigit.com/Support.asp
Restart your PC.

After installing the CalDigit RAID Card drivers and RAID Shield, you will be able to use RAID Shield to set up your RAID and configure your RAID levels.

For adding external storage to the CalDigit RAID Card, please go to http://www.caldigit.com/HDElement/ for more information.
The HDElement is a compact 4-bay storage enclosure that fully utilizes the CalDigit RAID Card's hardware protection and performance for all your valuable data.

Thank you for choosing the CalDigit RAID Card. Please download the latest driver and manual from http://www.CalDigit.com/support.asp

*Optional accessories

(*1)Part # CBMiniSAS-BC SKU# 702101 (for Boot Camp)

(*2)Part # CBMiniSAS-4C SKU# 702102 (for PC)

(*3)Part # CRCCBBM SKU# 760400

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