



Thunderbolt™ to PCIe Expansion Chassis **mLink**®



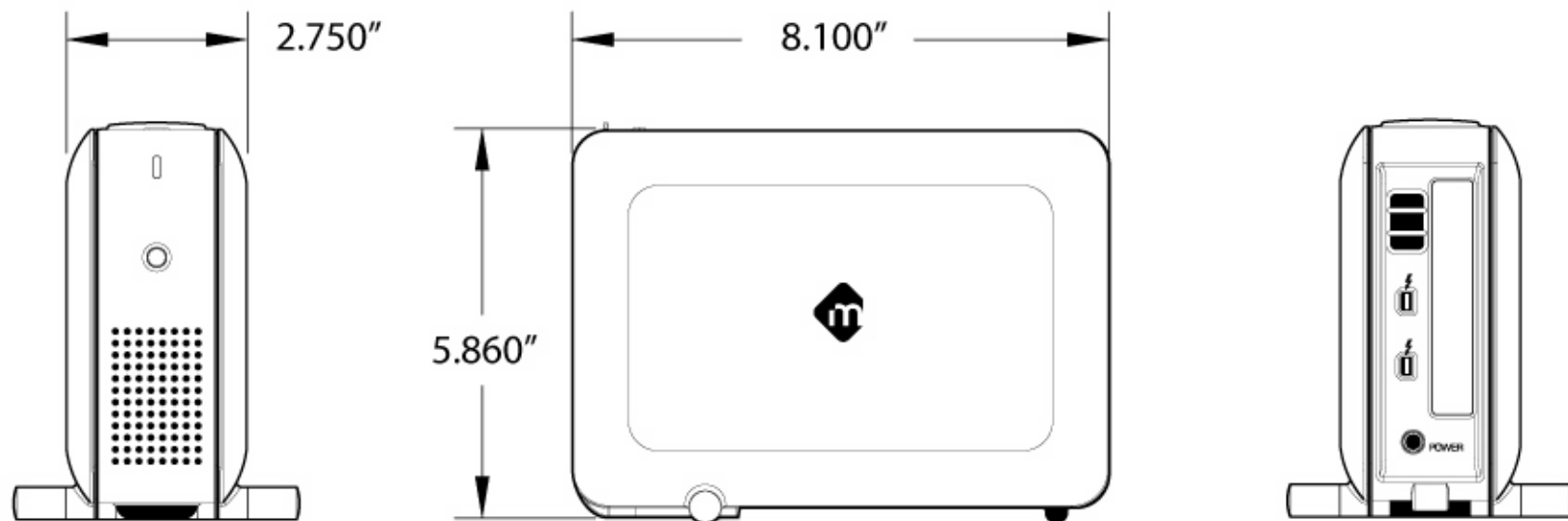
Thank you for purchasing mLink!

You are now the proud owner of the industry's smallest form-factor Thunderbolt Expansion Chassis! Now you can experience the functionality of add-in PCIe adapter boards with the latest iMac, Mac mini, MacBook Air and MacBook Pro computers with Thunderbolt ports. Enjoy professional workflows and high-speed connectivity like never before!

Welcome to mLink.

For more information contact us at support@mlogic.com or visit us at www.mlogic.com

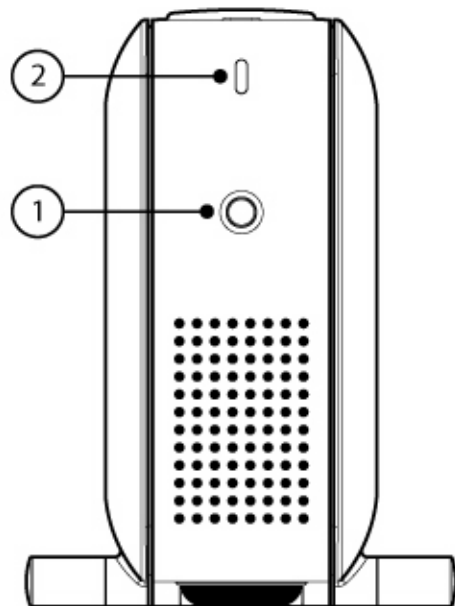
System Requirements



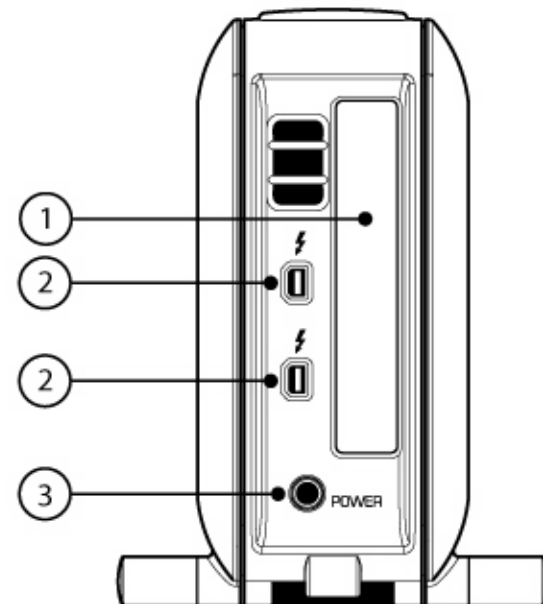
In order to experience the functionality and freedom provided by mLink, you must have...

- 1) A Mac with a Thunderbolt port
- 2) A compatible PCIe adapter with a Thunderbolt-aware driver
(A list of compatible PCIe adapters is available at mLogic.com)
- 3) A Thunderbolt cable (sold separately)

mLink Features.



FRONT VIEW



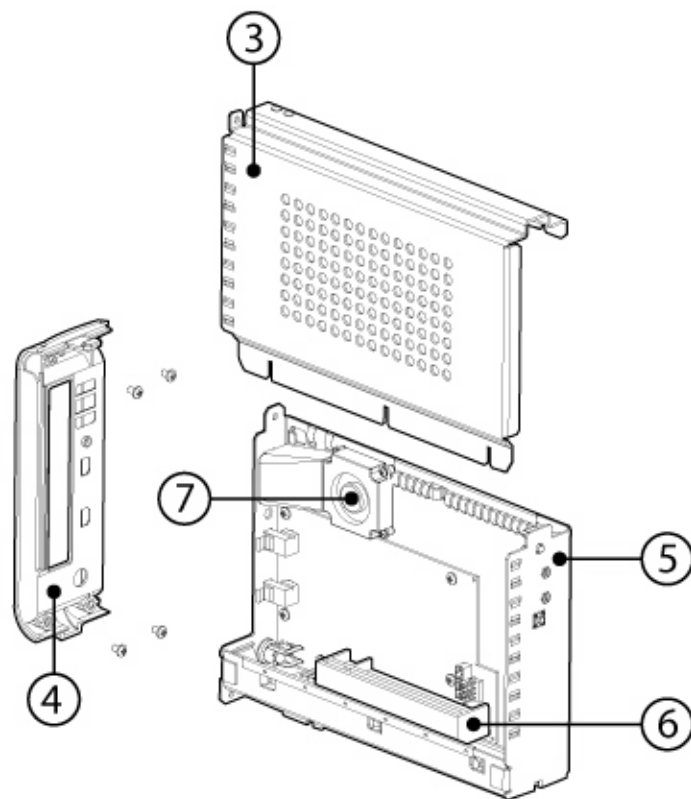
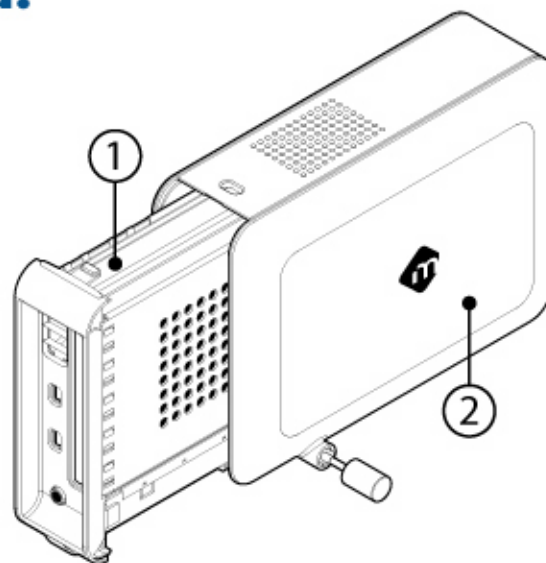
REAR VIEW

- ① Power Configuration Switch
- ② LED power

- ① PCIe Card Slot
- ② Thunderbolt port
- ③ Power Jack

mLink Features continued.

- ① Inner Assembly
- ② mLink Enclosure



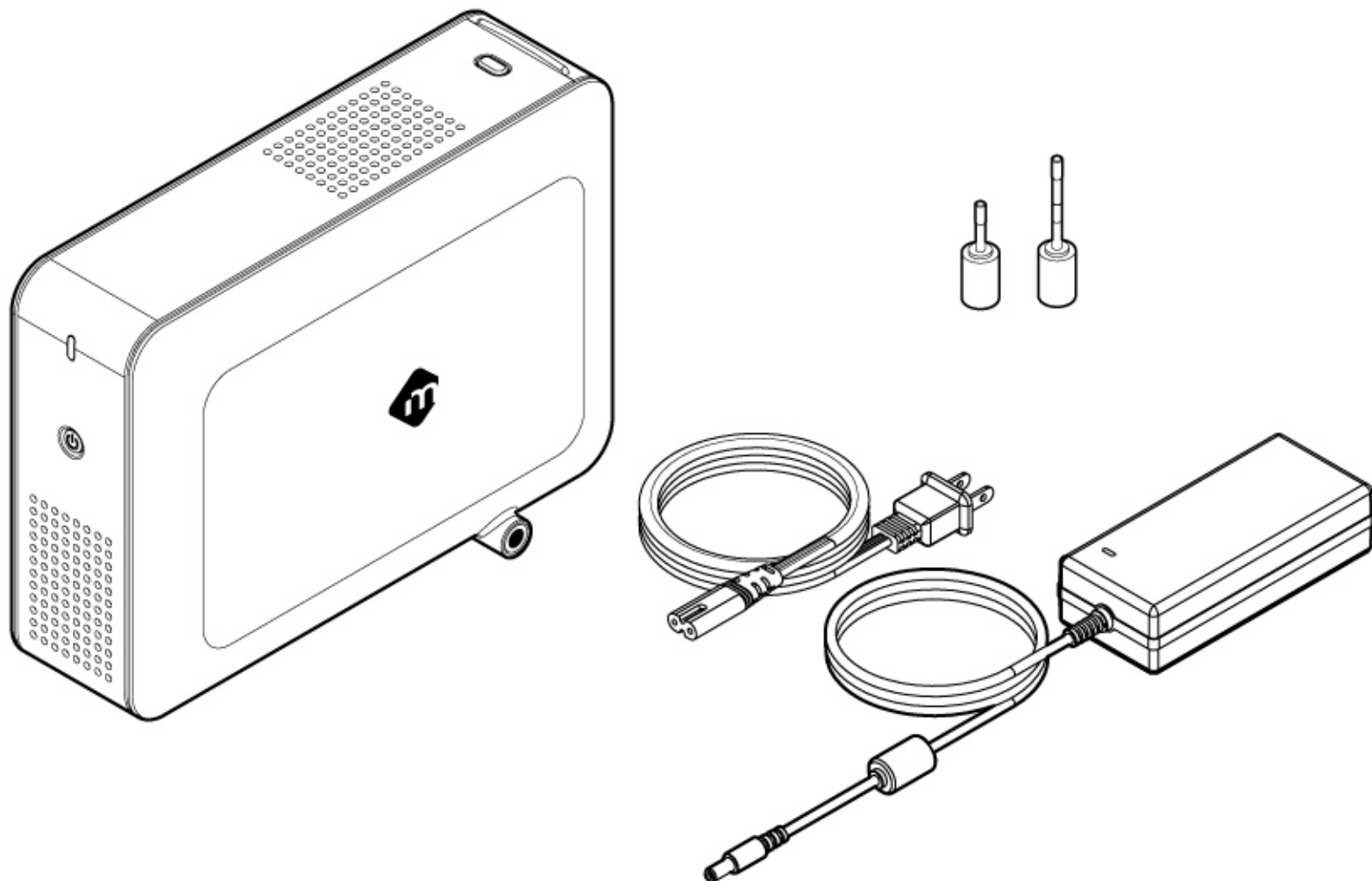
Inner Assembly - Components

- ③ Inner Assembly - LID
- ④ Back panel
- ⑤ Inner Assembly - BOTTOM
- ⑥ PCIe slot (x16 physical, x4 electrical)
- ⑦ Smart blower

Unpack you mLink

Remove the mLink enclosure, metal “feet” and power adapter

5



Installing your PCIe Adapter is simple

6

Important note: DO NOT INSTALL FEET

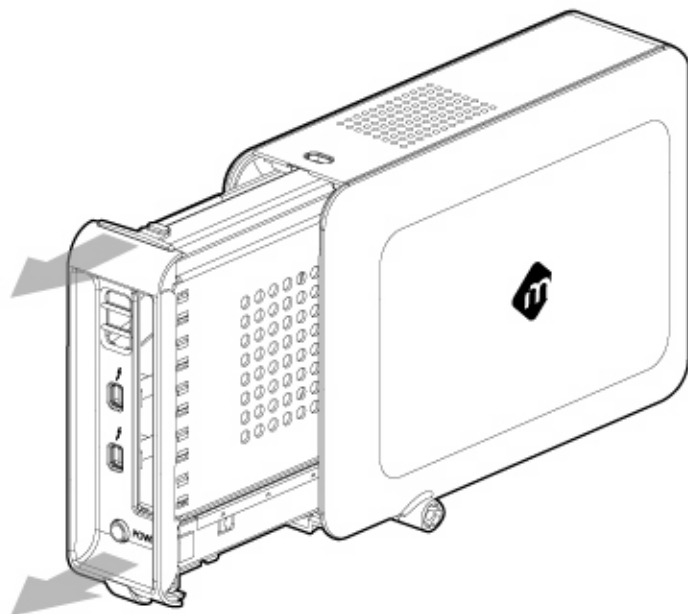
Step I

While gently pushing on the tab (IA) located on the top of mLink, grasp the back panel (IB) and carefully slide the inner assembly out of the mLink enclosure.

Step IA



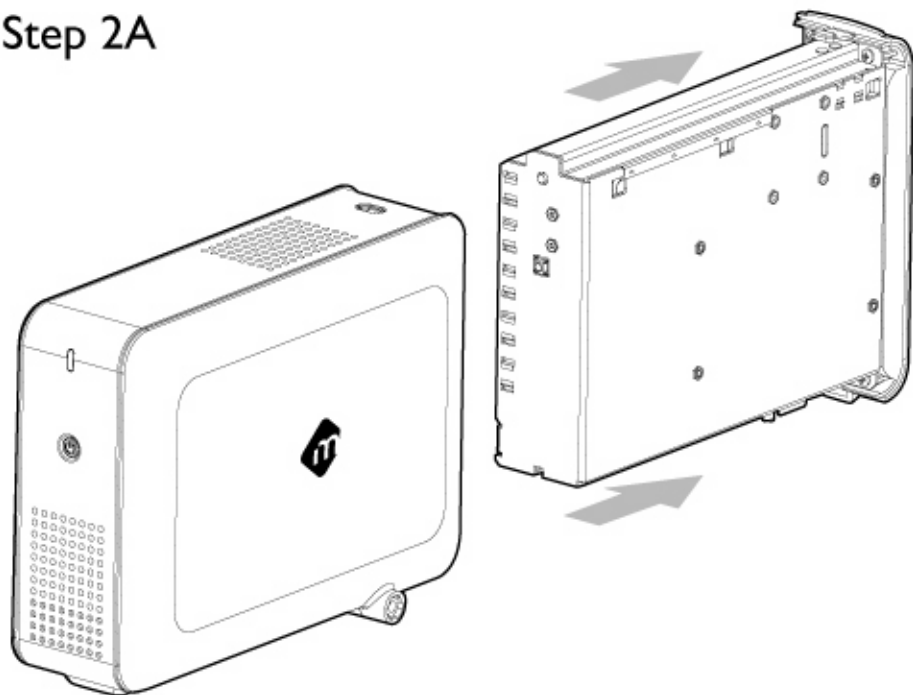
Step IB



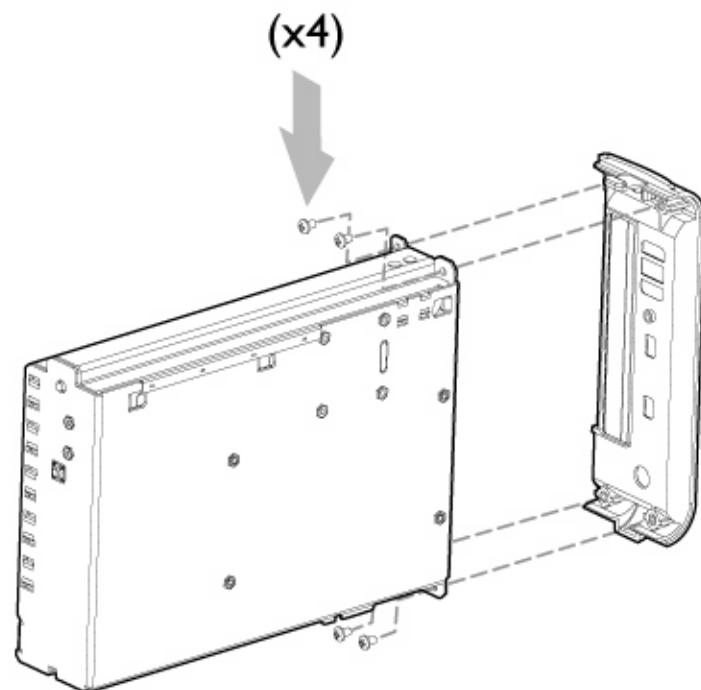
Step 2

After removing the inner assembly from the mLink enclosure (2A), proceed to remove the back panel by unscrewing the four screws. You will need a Phillips screw driver (2B).

Step 2A

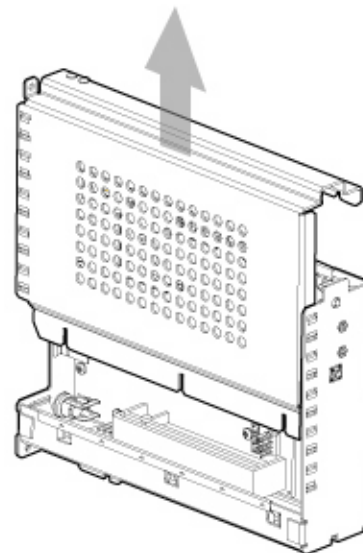


Step 2B



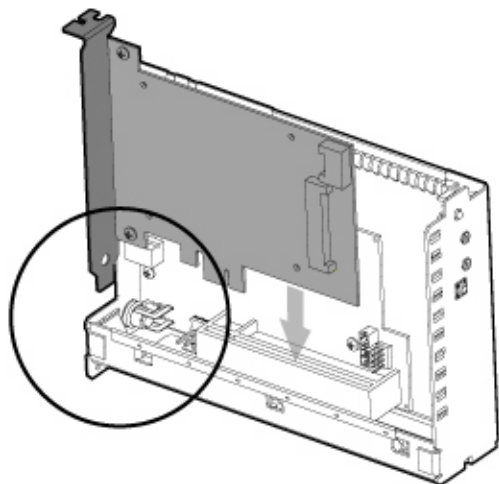
Step 3
Remove the metal cover - LID of the inner assembly.

Note regarding static electricity...avoid touching the mLink electronics

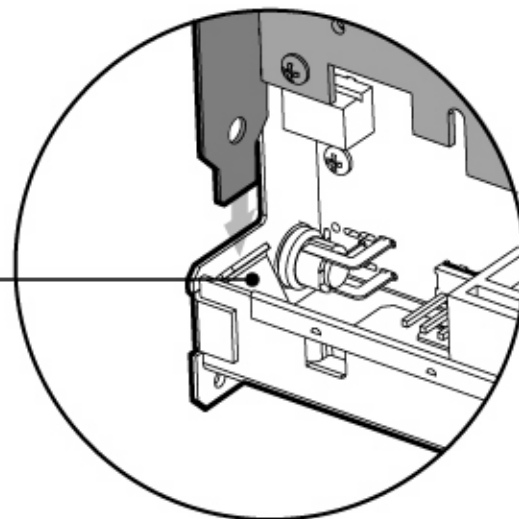


Step 4
Carefully insert your PCIe adapter in to the slot in the inner assembly (4A). Make sure that the adapter bracket is properly inserted in to the locking tab (4B).

Step 4A



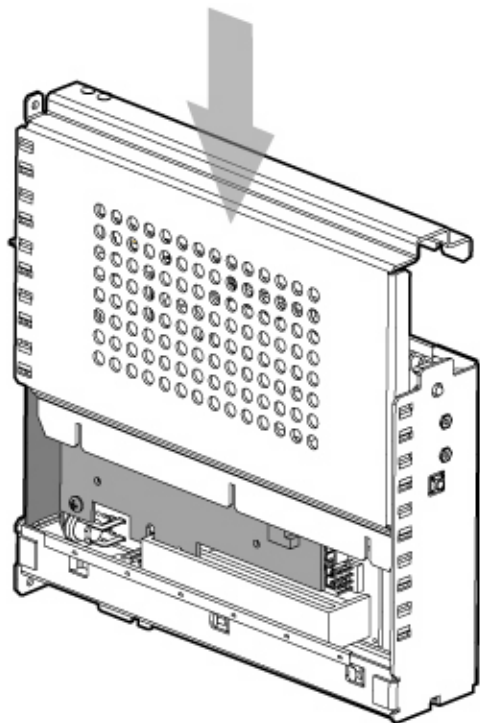
locking tab



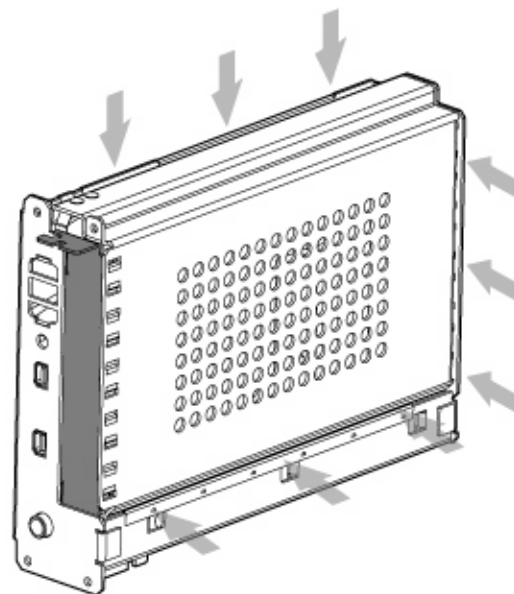
Step 4B

Step 5
Reattach the LID of the inner assembly (5A).
Make sure LID is properly seated on all sides of inner assembly (5B)

Step 5A



Step 5B

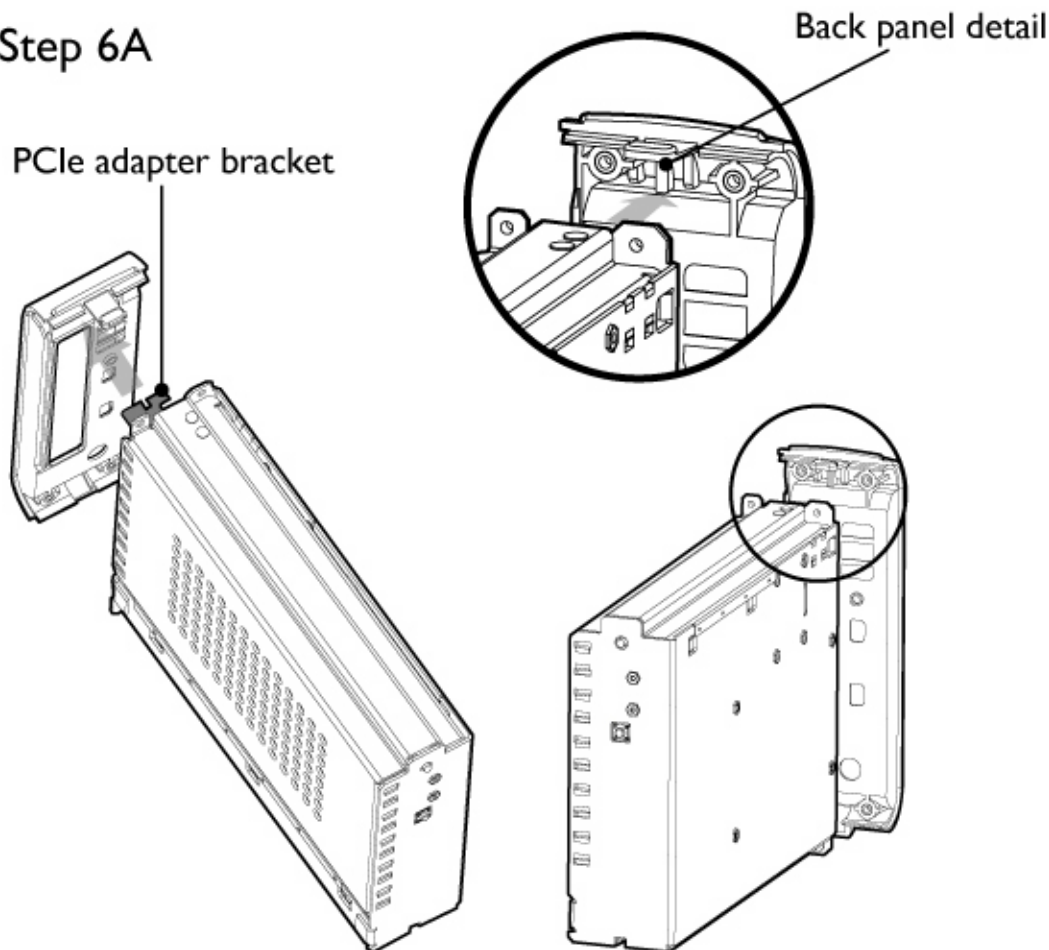


Installing your PCIe Adapter continued

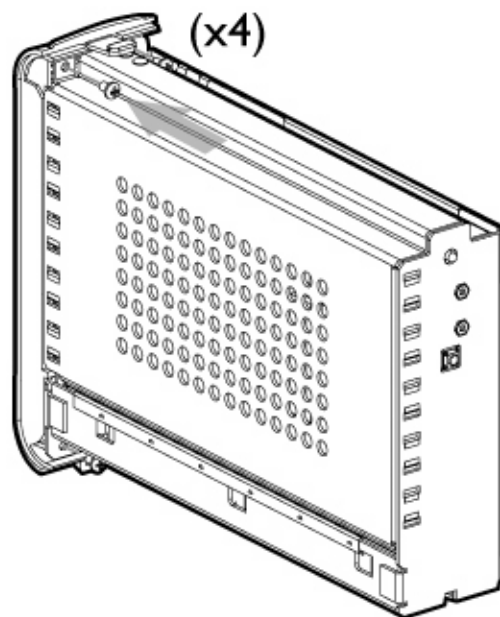
Step 6

Before reattaching the back panel, ensure that your PCIe adapter bracket is properly engaged with the back panel details (6A). Once this is accomplished, reattach the four screws (6B).

Step 6A

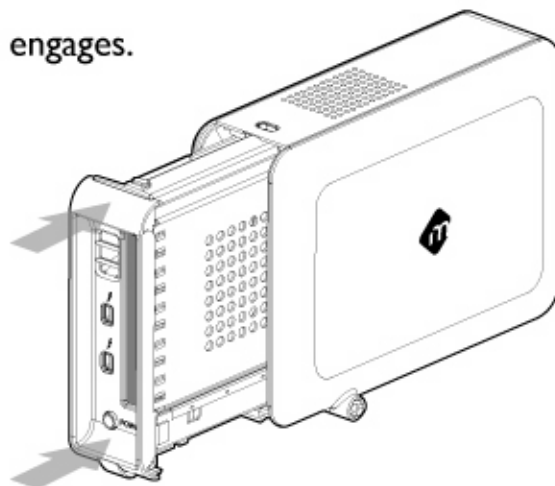


Step 6B



Step 7

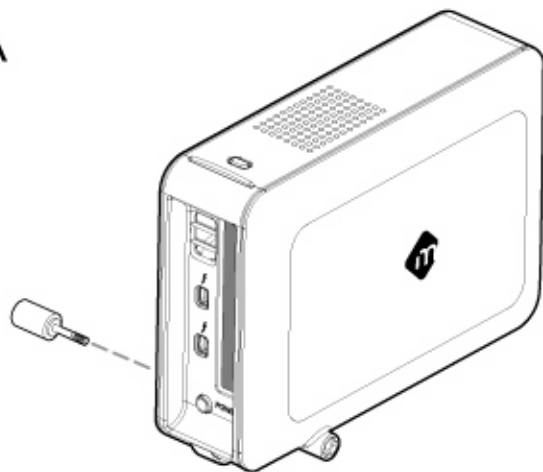
Insert the inner assembly in to the mLink enclosure until the tab engages.



Step 8

Screw the metal “foot” with the shorter thread in to the left-hand side of the mLink enclosure when viewed from the back (8A). Screw the metal “foot” with the longer thread in to the right-hand side of the mLink enclosure when viewed from the back (8B).

Step 8A

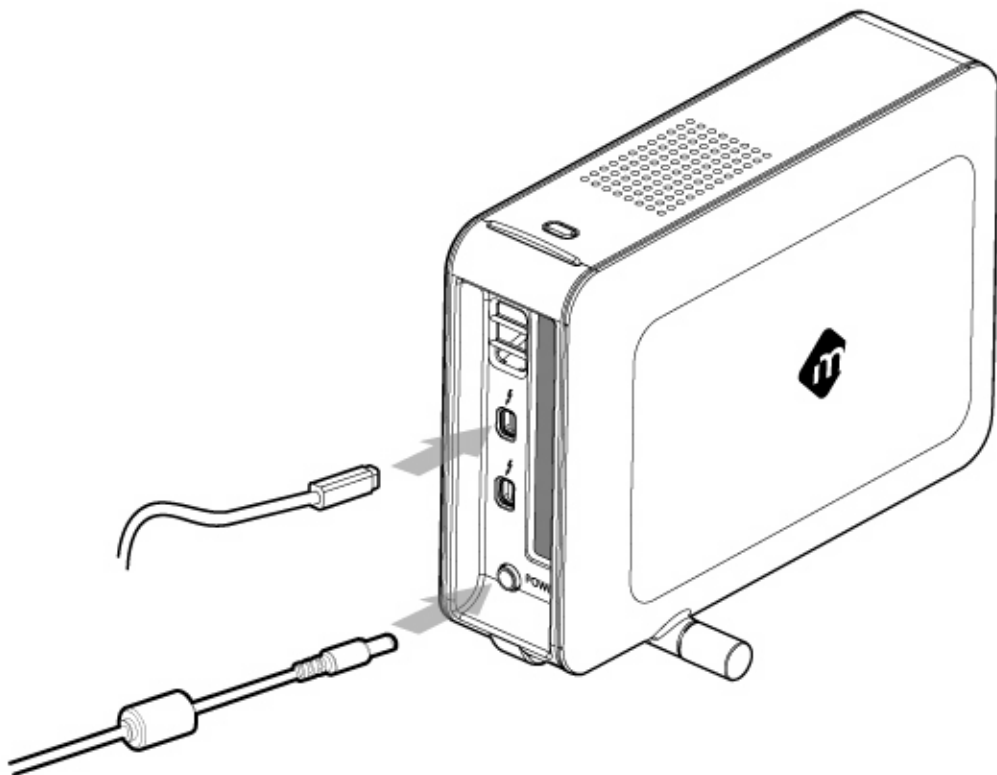


Step 4B



Step 9

Connect a Thunderbolt cable to one of the Thunderbolt ports on the back of the mLink and attach the other end to your Mac (9A). Insert the power jack in to the back of mLink and plug the other end in to power.

Step 9A**Step 9B****Powering mLink On/Off**

mLink automatically powers on and off with your Mac when both the Thunderbolt cable and power adapter are attached.

Verify that your mLink is recognized by your Mac.

Step 1

With mLink connected, power up your Mac.

Step 2

From the Apple Menu, select "About this Mac".

Step 3

Click "More Info..." on the "About this Mac" window.

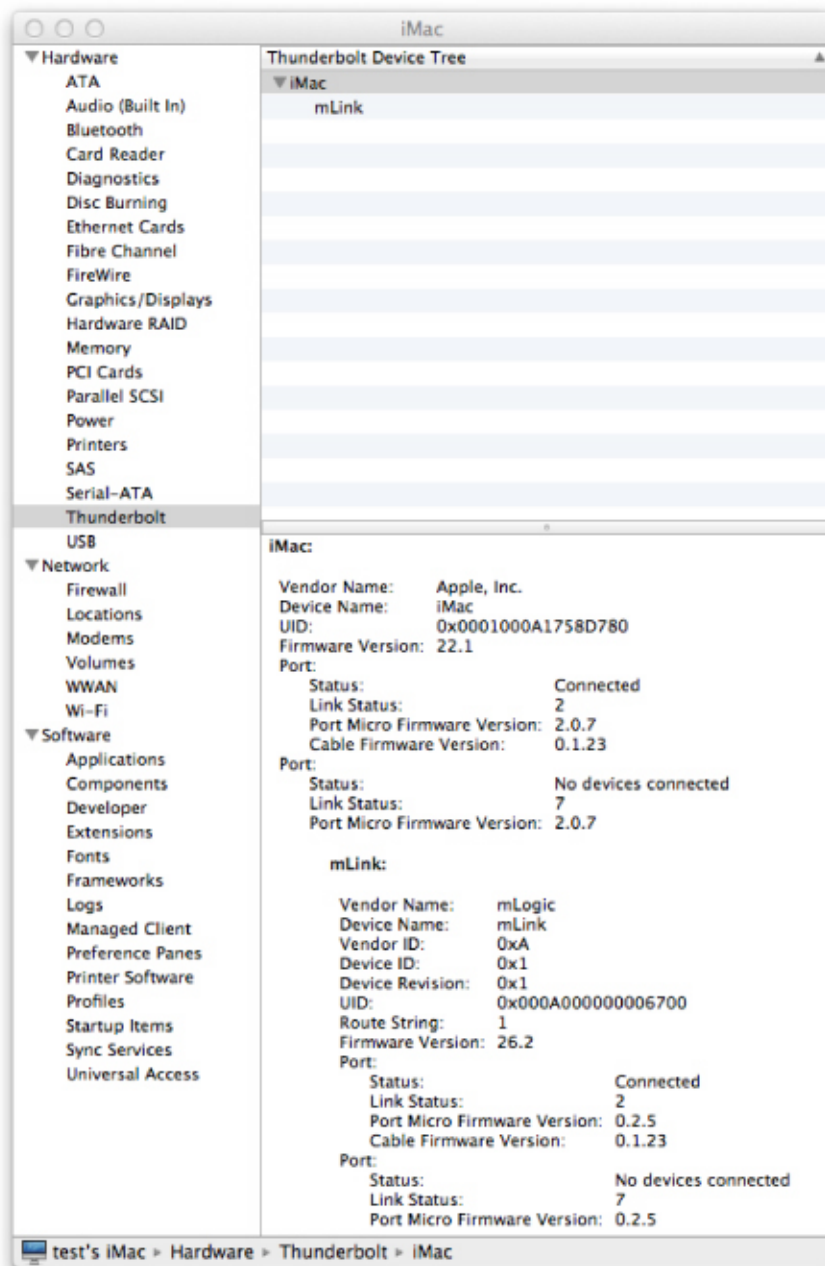
Step 4

Click "System Report...".

Step 5

Click on "Thunderbolt" in the left column. The following window will appear. The "mLink" entry and associated information will be displayed as shown.

Note: If you don't see "mLink" listed, try unplugging and then reattaching the Thunderbolt cable.



The screenshot shows the macOS System Report window for an iMac. The left sidebar is expanded to 'Thunderbolt', and the right pane displays the 'Thunderbolt Device Tree' and detailed information for the 'iMac' and 'mLink' devices.

Thunderbolt Device Tree

- ▼ iMac
 - mLink

iMac:

Vendor Name: Apple, Inc.
Device Name: iMac
UID: 0x0001000A1758D780
Firmware Version: 22.1

Port:

- Status: Connected
- Link Status: 2
- Port Micro Firmware Version: 2.0.7
- Cable Firmware Version: 0.1.23

Port:

- Status: No devices connected
- Link Status: 7
- Port Micro Firmware Version: 2.0.7

mLink:

Vendor Name: mLogic
Device Name: mLink
Vendor ID: 0xA
Device ID: 0x1
Device Revision: 0x1
UID: 0x000A000000006700
Route String: 1
Firmware Version: 26.2

Port:

- Status: Connected
- Link Status: 2
- Port Micro Firmware Version: 0.2.5
- Cable Firmware Version: 0.1.23

Port:

- Status: No devices connected
- Link Status: 7
- Port Micro Firmware Version: 0.2.5

test's iMac > Hardware > Thunderbolt > iMac

Verify that your PCIe adapter is recognized by your Mac.

Step 1

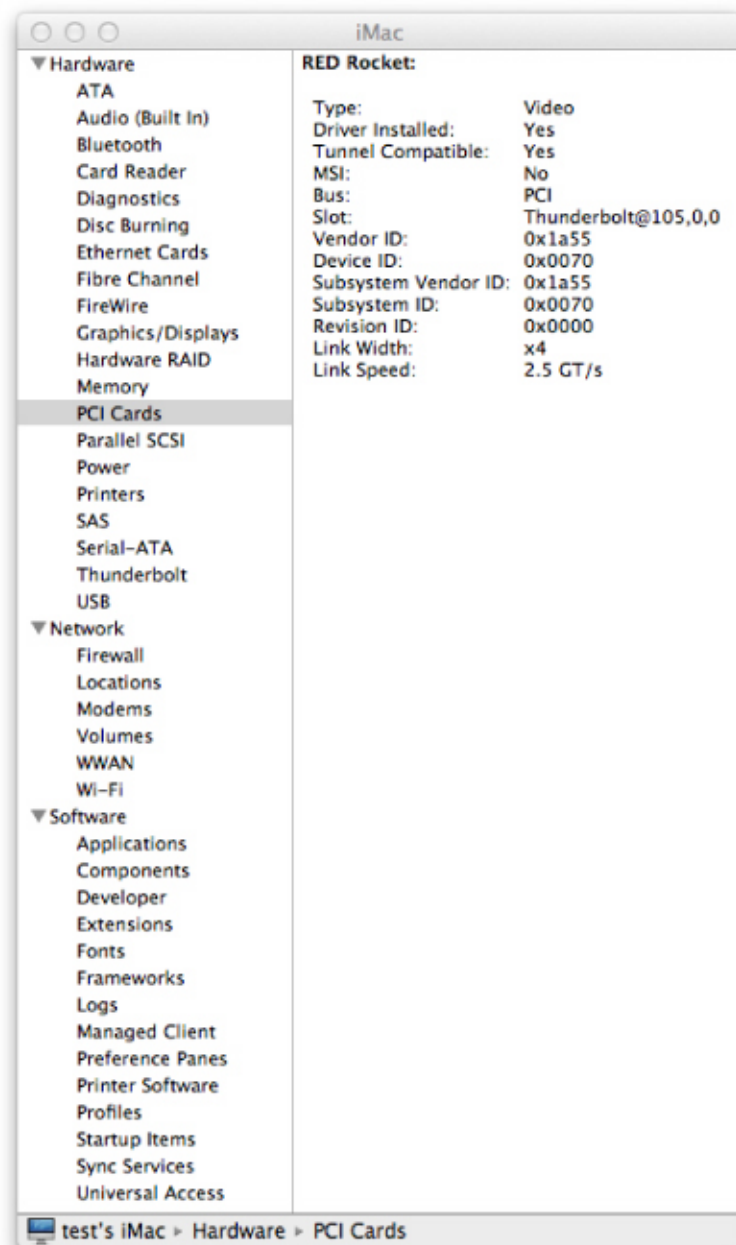
Click “PCIe Cards in the left column as shown.

Step 2

At the top right, the installed card will be listed.

Make sure that you see “Tunnel Compatible: Yes”.

If not, the card or driver may not be Thunderbolt-aware.



You're done. Enjoy!

Daisy-Chaining Devices

mLink's second Thunderbolt port enables mLink to be part of a daisy-chain of up to six Thunderbolt devices. This includes mDP and Thunderbolt displays. DVI, HDMI and VGA monitors can also be part of the daisy-chain when used with available mDP converters.

Hot Plug/Unplug of mLink

With a PCIe adapter installed in mLink that has a Thunderbolt-certified driver, you can connect or disconnect mLink while your Mac is powered on. Be sure to properly shut down any downstream devices connected to mLink before hot unplugging the unit.

Front LED Operation

During normal operation, the front LED will glow white when mLink is powered on.

The LED will glow blue to indicate a fault condition...

- 1) LED flashes blue twice periodically - Smart Blower is not rotating. Make sure that the internal blower is not obstructed.
- 2) LED flashes blue three times periodically - mLink is overheating. Make sure that the vents on the back and bottom of mLink are not obstructed.

After the fault condition is rectified, the unit can be reset by removing and reapplying power. If fault continues, please contact support@mlogic.com.

Opening the mLink Enclosure.

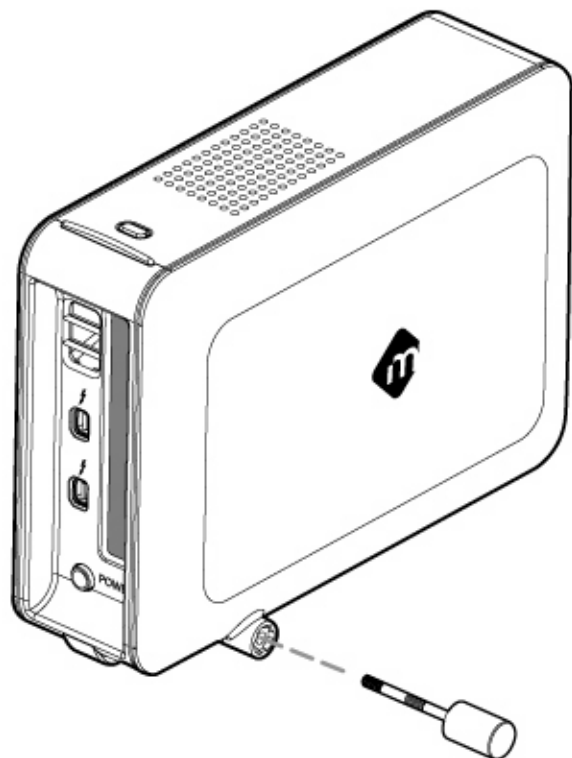
Step 1

Unscrew the righthand side metal “foot” of the mLink enclosure when viewed from the back.

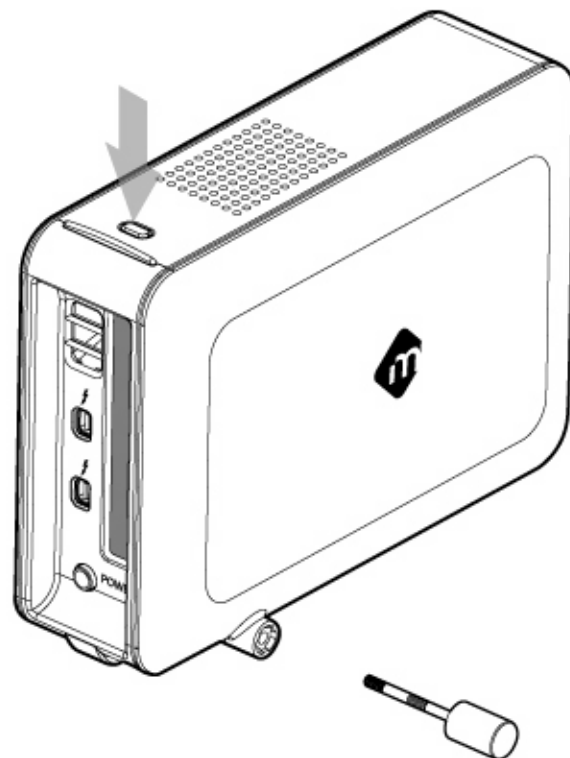
Step 2

Gently push on the tab located on the top of mLink, grasp the back panel and carefully slide the inner assembly out of the mLink enclosure.

Step 1



Step 2



Questions?

We're here to help. Contact us at support@mlogic.com or visit us at www.mlogic.com

Thanks!

mLOGIC, LLC (the “Company”) warrants its products will be free from defects in material and workmanship for one year from the date of purchase of the product.

This Limited Warranty only applies to the original purchaser of the product, and is not transferable to subsequent owners.

This Limited Warranty is void if the product is subjected to abuse, misuse, abnormal, excessive or improper conditions (including, without limitation, attempts to utilize the product under any condition that exceeds its design capabilities, or any other use beyond the use specified in any product instructions), or if the product is altered or modified in any manner. This Limited Warranty does not cover damage to the product due to external causes (including, without limitation, accident, liquids, chemicals, oxidation, corrosion, or exposure to the elements), or problems caused by use of parts and components not supplied by the Company.

The sole remedy under this Limited Warranty is product repair, replacement, or refund of the purchase price, at the sole discretion of the Company.

In order to make a claim, the purchaser must ship the product to the Company at the purchaser’s expense, together with proof of purchase, and a description of the nature of the defect. The Company will not be held responsible for any product that is damaged or lost in transit to the Company.

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This Limited Warranty shall be governed by the laws of the State of California. Any dispute under this Limited Warranty shall first be submitted to binding arbitration before the American Arbitration Association in Los Angeles, California.