OWC

OWC Data Doubler
for Apple® Mac mini 2010

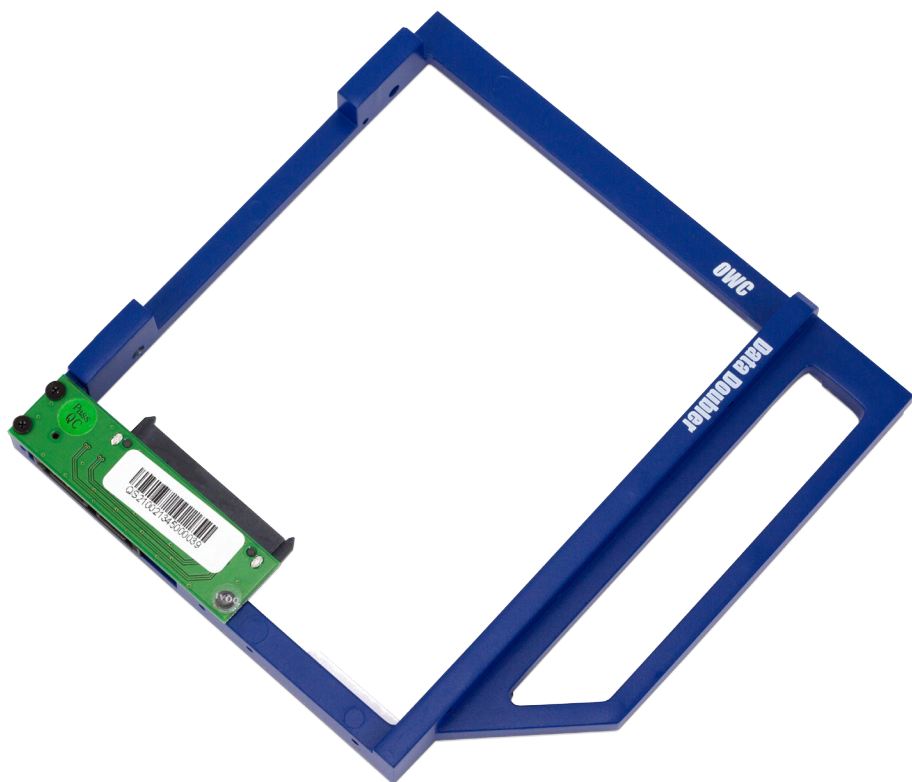### ASSEMBLY MANUAL

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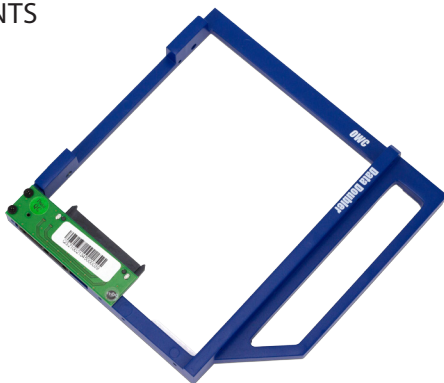
INTRODUCTION

1.1 HARDWARE COMPATIBILITY

1.1.1 Host Computer Compatibility

• Mac mini 2010, model identifier Macmini4,1
• Mac mini must have an optical drive (not for 'server' model)

1.1.2 Drive Compatibility

• Any 2.5" SATA hard drive or solid state drive (SSD) up to 12.5mm tall

1.2 PACKAGE CONTENTS

Data Doubler for Mac mini 2010,
with screws

Five-piece toolkit

Mac mini logic board
removal tool

1.3 ABOUT THIS MANUAL

Images and descriptions may vary slightly between this manual and the unit shipped. Functions and features may be different from those stated in this manual. Please visit the product webpage for the most recent product specifications.

ASSEMBLY

These are static-sensitive devices. They are susceptible to invisible damage if not protected during installation.

We recommend proper grounding by using a grounding strap. Make sure to work in a clean and static-free area, and avoid wearing clothing that retains static charges.

For more information, please visit: **http://www.macsales.com/static**

2.1 DISASSEMBLING THE MAC MINI

Due to the number and variety of screws involved in this process, it is recommended to use a device to organize and keep track of the screws, such as an ice cube tray. This will help you to put the screws back in the correct locations.

1. Place the Mac mini upside down, as shown in the picture to the right. It is recommended to do this on a soft surface such as a towel or a mouse pad in order to protect the Mac mini from scratches.


2. Rotate the bottom cover counterclockwise to the unlocked position, as shown in the picture to the left. There is a white dot on the bottom cover. When the bottom cover is unlocked, this white dot will line up with the corresponding dot on the aluminum housing. When the bottom cover is unlocked, press on one side of the cover to cause the opposite side to pop up, then remove it.

3. Remove the two memory modules. The instructions for removing the memory modules are printed directly to the right of the memory inside the Mac mini, as circled in the picture to the right.
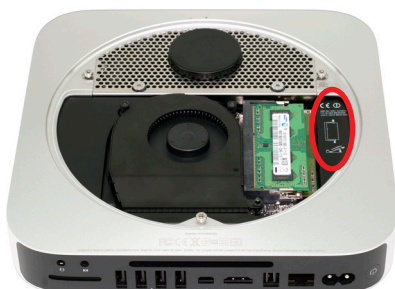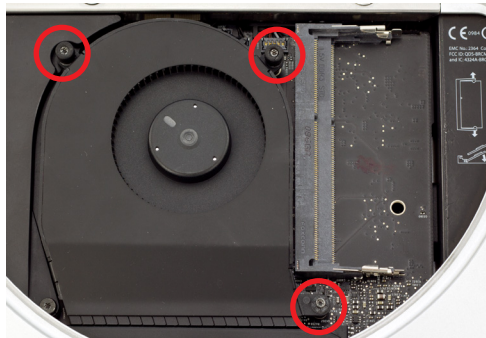
4. Remove the three Torx T6 screws that secure the fan, as circled in the picture to the left. The two top screws are shorter; the screw on the lower right is a longer standoff screw.

5. Disconnect the fan cable from the logic board, as circled in the picture to the right. The connector lifts straight up; you can use the plastic pry tool to assist.
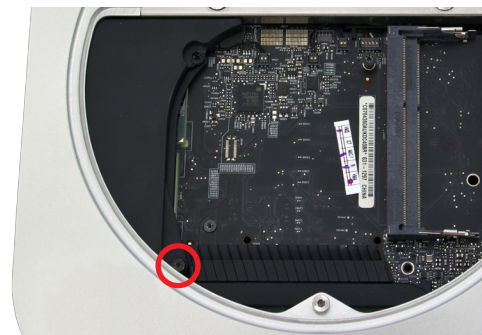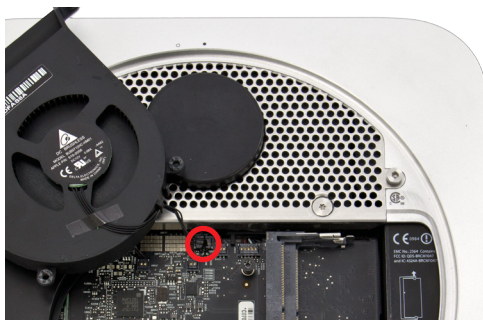
6. Remove the short T6 screw at the bottom of the black plastic cowling, as circled in the picture to the left.

7. To remove the cowling, lift it up slightly to allow it to move clear of other hardware, then pull it out to the right, rotating the cowling slightly clockwise, as shown in the picture to the right. When removing the cowling, be careful not to catch it on any other hardware.
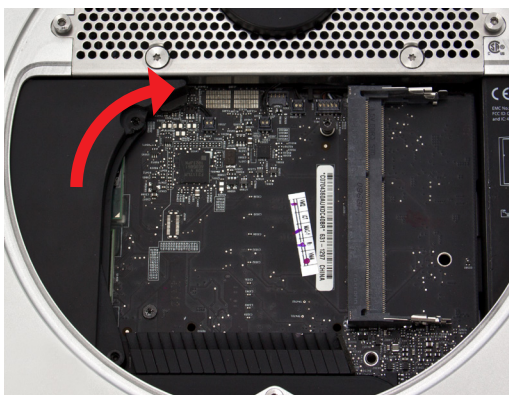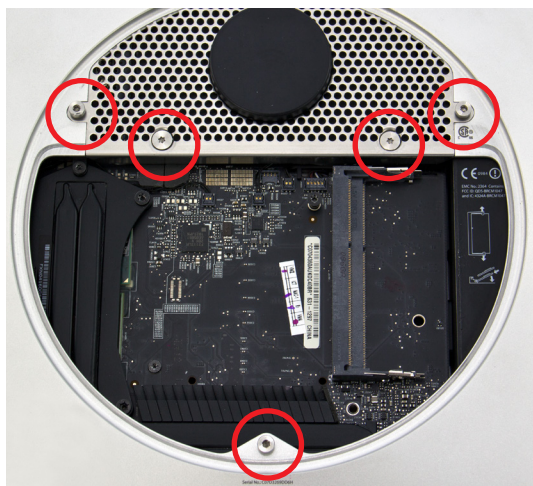
8. Use a Torx T8 screwdriver to remove the five screws circled in the picture to the left. The screw at the bottom and the two outside screws at the top are 2mm hex screws, but the Torx T8 screwdriver will fit. Be careful not to exert too much force on the hex screws. The two inside screws at the top are standard T8.

9. Lift up carefully on the antenna plate and move it slightly up and to the right in order to reveal the antenna cable attached to the wireless card, as shown in the picture to the right.
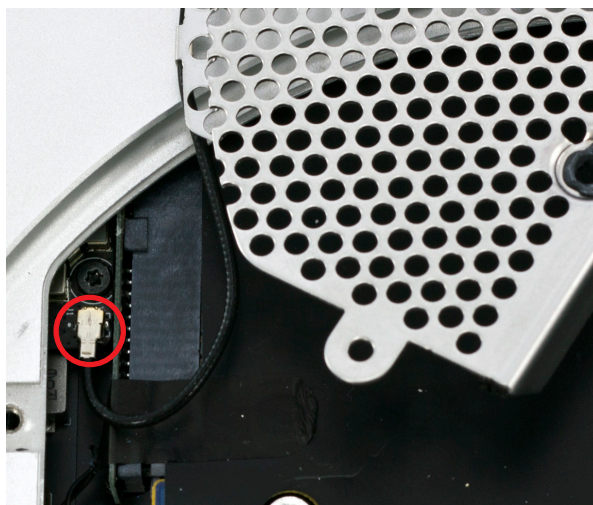

10. Disconnect the antenna cable, circled in the picture to the left. Be careful, as the connection is fragile and can break. Gently lift the cable connector directly up. The nylon pry tool or a pair of tweezers may help.

11. Disconnect the hard drive flex cable and the optical drive flex cable, as shown in the pictures below. Use the nylon pry tool to lift the cable connectors free from the logic board.
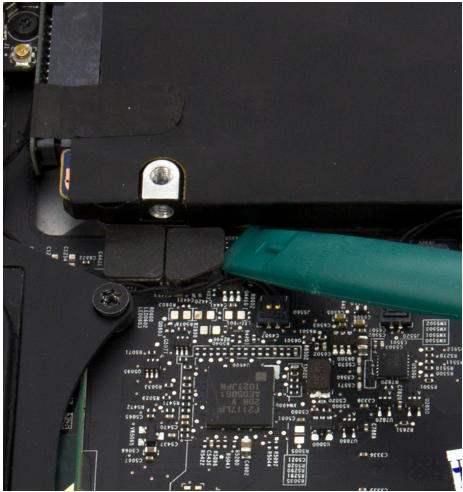
12. Remove the T6 screw at the bottom left of the logic board, circled in the picture to the right.
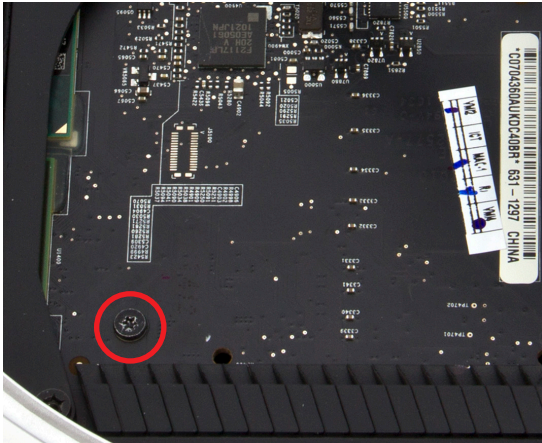
13. Insert the logic board removal tool into the two holes at the bottom of the logic board, as shown in the pictures below. Make sure the tool is securely seated in the holes.
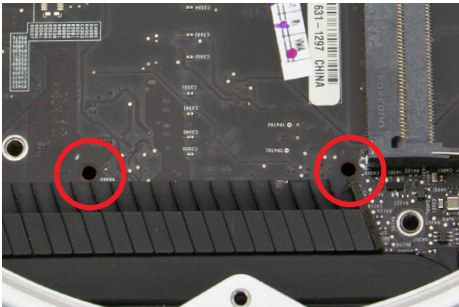
14. Gently push down on the logic board removal tool and pull it back until the black plastic I/O wall pulls away from the aluminum housing slightly, as shown in the pictures below.
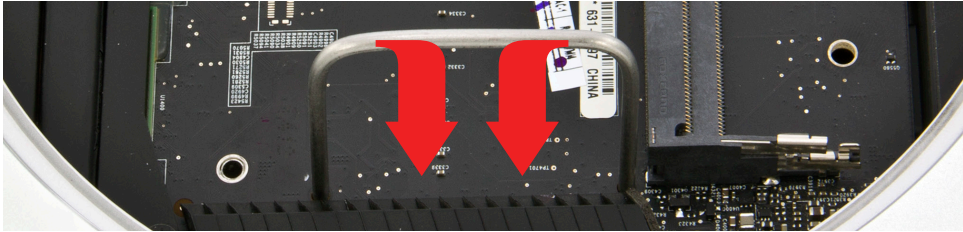

15. Use the nylon pry tool to disconnect the four cables circled in the picture below. Lift the cable connectors straight up; do not pull on the wires.
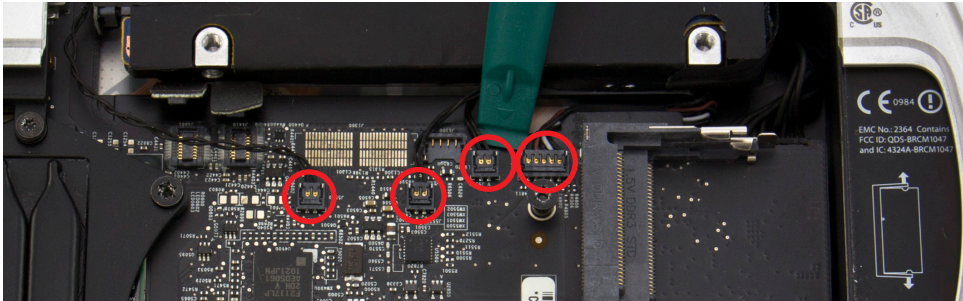
16. Disconnect the power supply cable, circled in the picture below. Wiggle out the connector with either your fingers or the nylon pry tool. A pair of tweezers may also help.
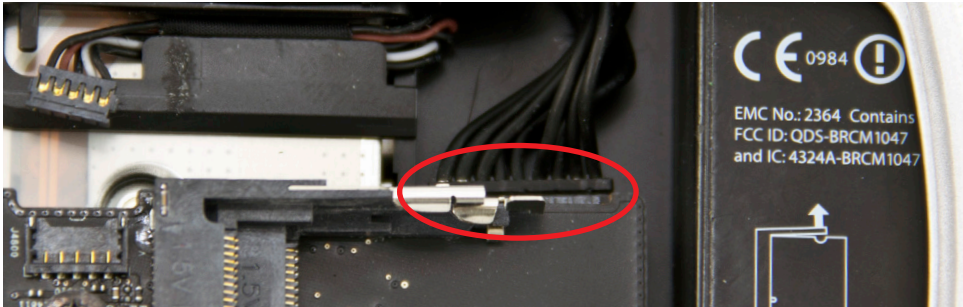
17. Now that all the cables are disconnected, slide the logic board assembly the rest of the way out of the housing, as shown in the picture to the left. Be careful to keep the logic board assembly level and avoid catching any of the components on the housing. Be particularly careful when the memory bracket comes out. If the bracket is not level, the bracket clip could catch on the EMI gasket at the top of the housing.

18. To remove the power supply, first remove the T6 screw circled in the picture to the right.
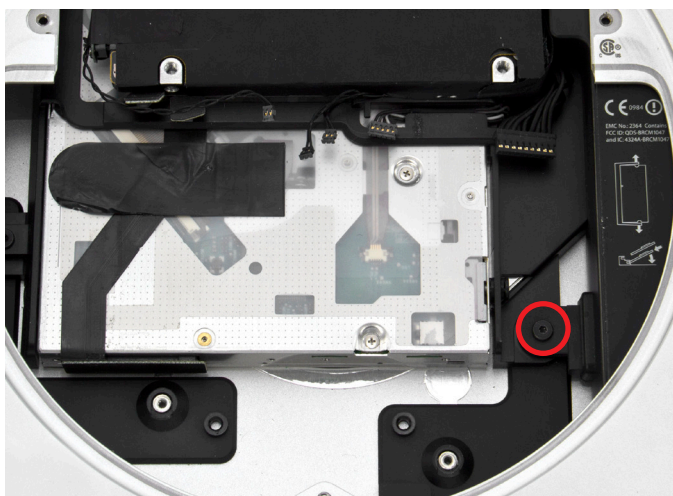
19. Find the metal retention clip holding the power cord socket in place, as circled in the picture to the left. Slide the retention clip to the left in order to release the power cord socket.

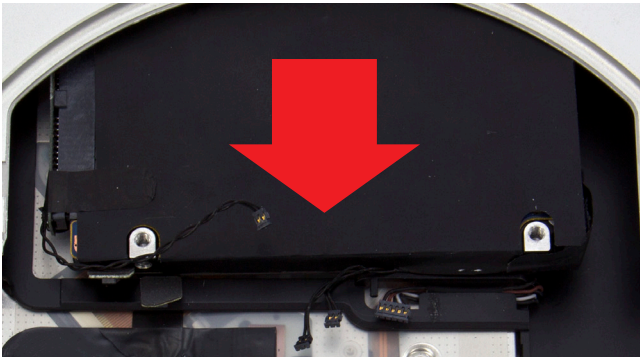20. Rotate the power cord socket counterclockwise 90° to disengage it from the housing, as shown in the picture to the right.

21. Remove the power supply by pulling it straight out of the housing, as shown in the picture to the left. You may need to rotate the power supply slightly to the left.

22. Slide the hard drive out of the housing, as shown in the picture to the right.

23. Remove the T6 screw securing the optical drive carrier to the housing, as circled in the picture to the right.

24. Remove the optical drive assembly, including the optical drive and the drive carrier, as shown in the picture to the left.

25. Peel back the tape securing the optical drive flex cable to the optical drive, as shown in the picture to the right. Be careful, as you will be using this tape again during the installation of the Data Doubler.

26. Disconnect the optical drive flex cable from the optical drive, as circled in the picture to the right. Do not attempt to remove the cable from the assembly. One end of the cable is trapped between the optical drive and the carrier. Simply slide the cable up and out of the way as you go about the process of removing the optical drive.

27. Remove the four T8 screws from the optical drive, as circled in the pictures below. These screws are held in place by rubber grommets, so they will remain seated in the carrier once they are removed from the optical drive.


28. Remove the optical drive from the optical drive carrier. At this point, the optical drive flex cable can also be removed.

Disassembly is now complete. Proceed to **Section 2.2** for instructions on installing a drive in the Data Doubler and installing the Data Doubler in the Mac mini.

2.2 INSTALLING THE DATA DOUBLER

1. Remove the Data Doubler from the box and plastic bag. Note that there is a clear plastic shield on the bottom of the Data Doubler. **DO NOT** remove this plastic shield. It is a part of the Data Doubler.
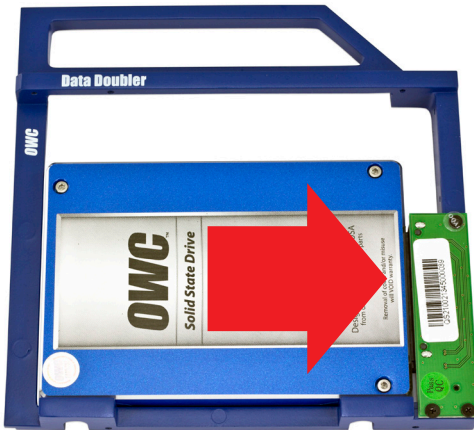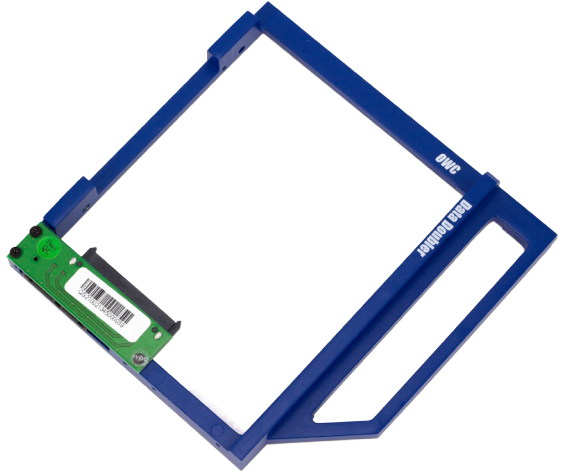
2. Install a hard drive or solid state drive (SSD) into the Data Doubler. Start by sliding the SATA connector on the drive into the black SATA connector attached to the green circuit board on the Data Doubler, as shown in the picture to the left.

3. Insert the two included Phillips screws into the drive through the screw holes in the Data Doubler, as circled in the picture below.

4. Insert the Data Doubler into the optical drive carrier, as shown in the picture to the right.

5. Connect the optical drive flex cable to the Data Doubler, as shown in the picture to the left. There should be enough space between the optical drive carrier and the drive in the data doubler to fit the optical drive flex cable between the two. If you need more space, simply lift up on the optical drive carrier to make room for the cable.

6. Install the four T8 screws, two on each side of the optical drive carrier, as shown in the pictures below.
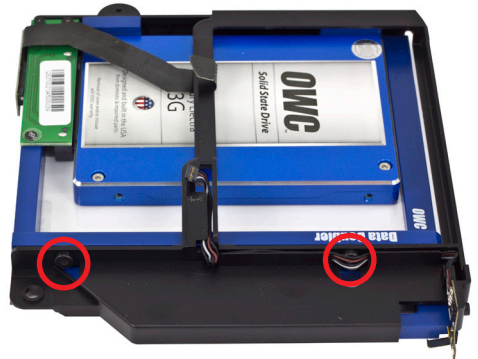
7. Remove the tape attaching the optical drive thermal sensor cable to the optical drive, as shown in the picture to the right. Be careful, as you will be using this tape again on the Data Doubler.
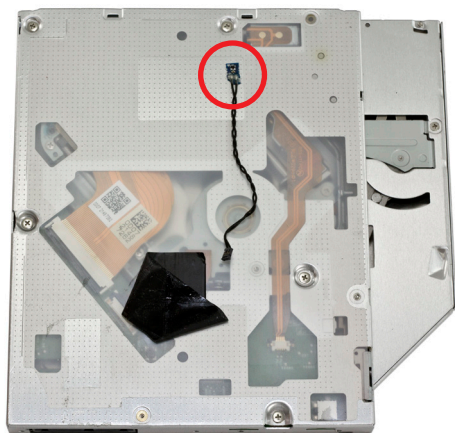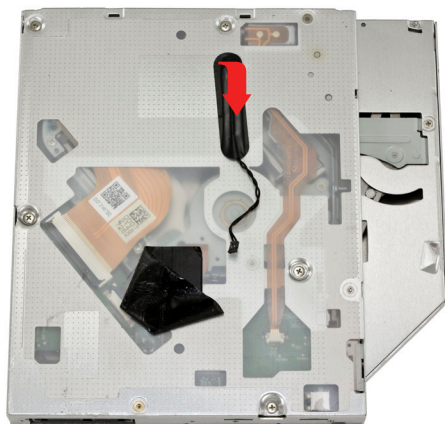
8. Use the nylon pry tool to remove the optical drive thermal sensor cable from the optical drive, as circled in the picture to the left. The cable has some adhesive where it attaches to the optical drive, and the cable can be damaged easily. Note the position of the cable on the optical drive. When you move the cable to the Data Doubler, you want to match the position as closely as possible in order to ensure that there is enough slack to connect the cable back to the logic board.

9. Place the optical drive thermal sensor cable on the drive in the Data Doubler, as shown in the picture to the right. Remember to align it as closely as possible with the position on the optical drive. Note that the screw just above the cable is in roughly the same position on the optical drive as it is on a hard drive or SSD. Also, the bend in the lower end of the cable should begin just as the cable crosses over the optical drive carrier.

10. Use the original tape to secure the optical drive thermal sensor cable to the drive in the Data Doubler, as shown in the picture to the right. Also, remove the other piece of tape from the optical drive and use it to secure the optical drive flex cable, as shown in the picture to the right. The tape will lose some of its adhesive when you remove it from the optical drive, but it will be effective at holding down the cables.

11. Slide the optical drive carrier and Data Doubler assembly into the aluminum housing, as shown in the picture to the left.

12. Install the T6 screw that secures the optical drive carrier to the housing, as circled in the picture to the right.
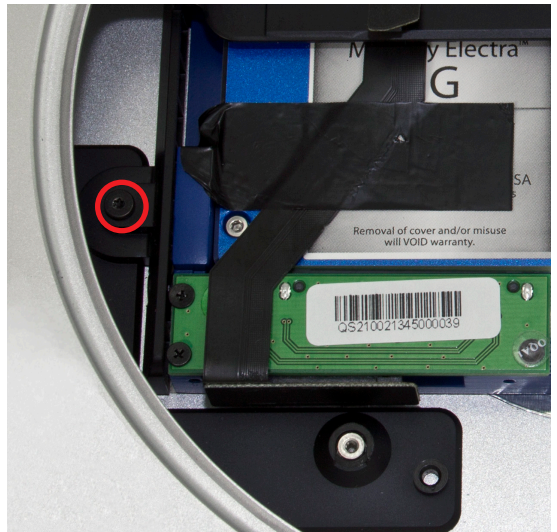
13. Slide the hard drive into the housing, as shown in the picture to the right. There are two pegs on the hard drive that need to fit into corresponding grommets in the housing.
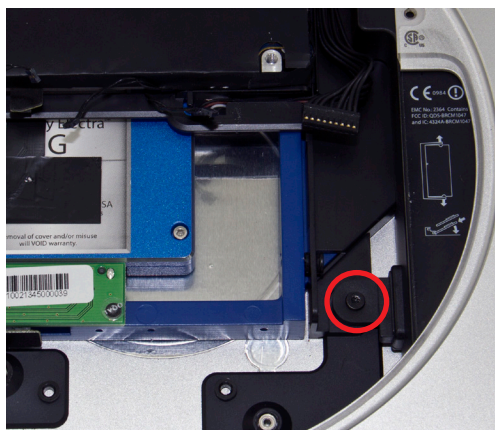

14. Slide the power supply into the housing, as shown in the picture to the left. Note that the power supply has two alignment pins, one at the top and one on the right. These pins will fit into their corresponding notches inside the housing.

15. Rotate the power cord socket back to its original position. If you are having difficulty getting the power cord socket to align, it may help to plug in the power cord (make sure the other end is not plugged into an outlet) and use it to straighten out the socket.
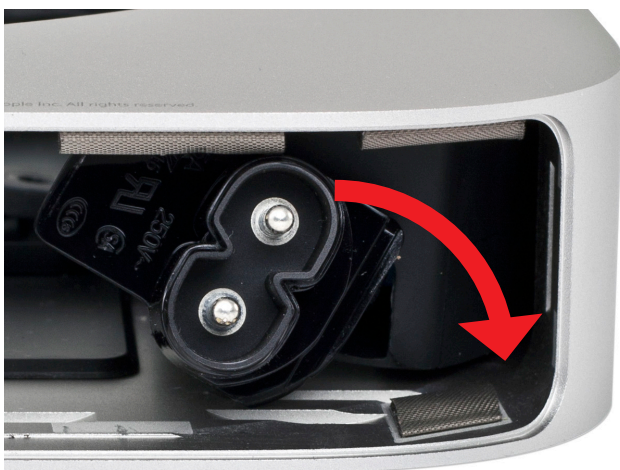
16. Slide the metal retention clip back into its groove to hold the power cord socket in place, as circled in the picture to the right.


17. Install the T6 screw that fastens the power supply to the housing, as circled in the picture to the left.


18. Slide the logic board most of the way into the housing, as shown in the picture to the right. Be careful and make sure that all clips and gaskets are entering correctly. The left side of the logic board may bump into the hard drive. If so, simply move the logic board so that it clears the hard drive. Do not slide the logic board all the way in. Leave some space, as shown to the right.

19. Connect the power supply cable, as circled in the picture below. You can use your fingers, the nylon pry tool, or a pair of tweezers. Make sure none of the other cables are caught or covered by the logic board, then slide the logic board the rest of the way in.
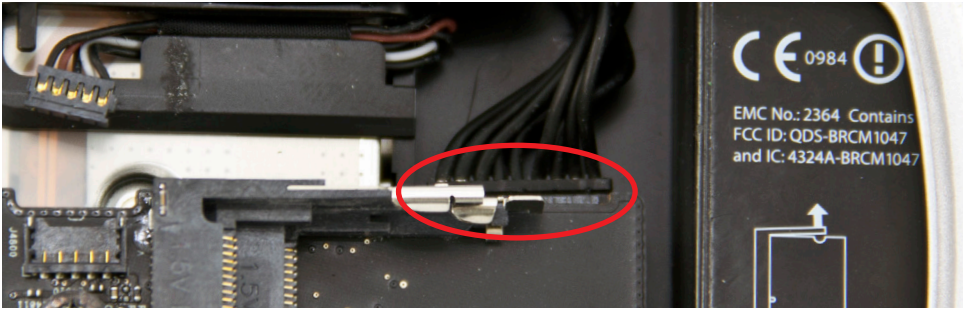
20. Connect the six cables circled in the picture below. Gently push directly down on the cables with your fingers and they will snap into place.
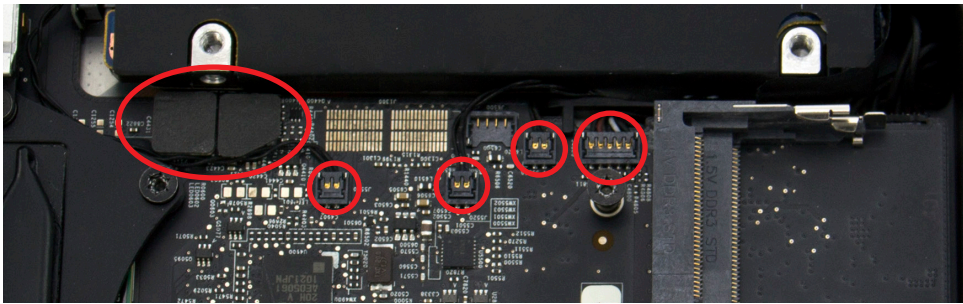
21. Install the T6 screw at the bottom left of the logic board, circled in the picture to the right.
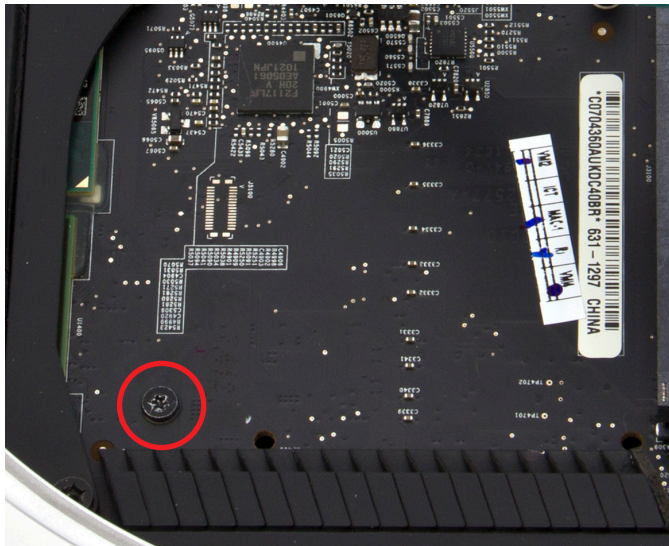
22. Connect the antenna cable, as circled in the picture to the right.
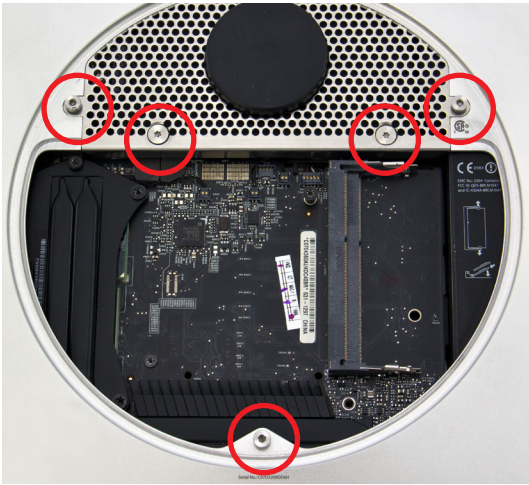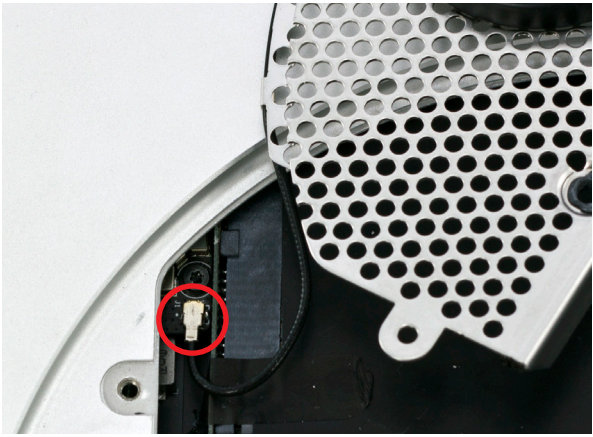

23. Move the antenna plate back into place. Note that there is a notch in the housing that the antenna plate needs to fit into in order for the screw holes to align properly. Once the antenna plate is aligned properly, use a Torx T8 screwdriver to install the five screws circled in the picture to the left. Remember, the screw at the bottom and the two outside screws at the top are 2mm hex screws, but the Torx T8 screwdriver will fit. Be careful not to exert too much force on the hex screws. The two inside screws at the top are standard T8.

24. Install the black plastic cowling, rotating it slightly counterclockwise, as shown in the picture to the right.
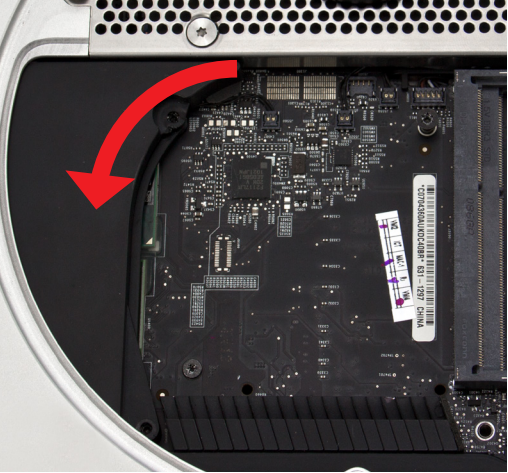
25. Install the short T6 screw at the bottom of the cowling, as circled in the picture to the right.
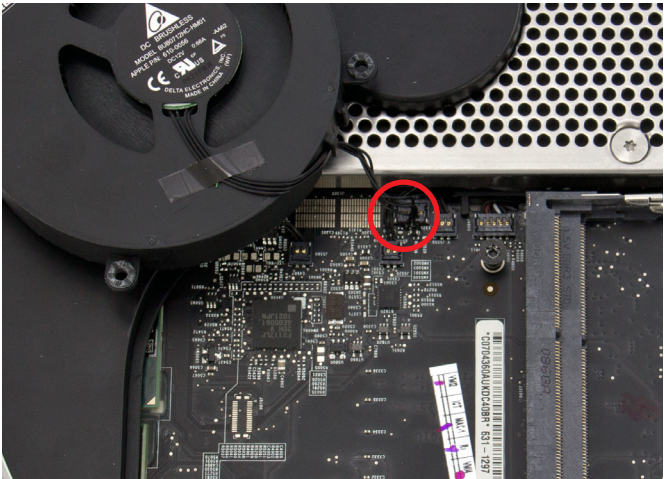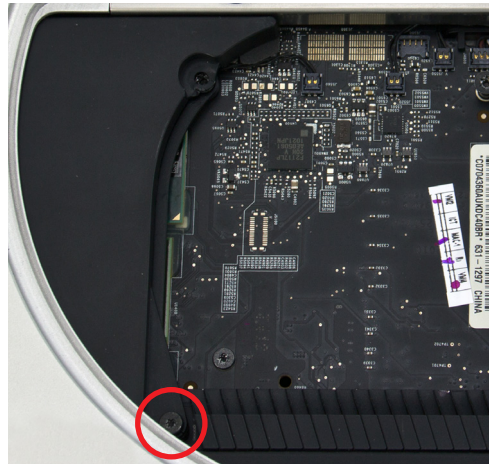
26. Connect the fan cable to the logic board, as circled in the picture to the left.

27. Line up the fan and install the three T6 screws circled in the picture to the right. The two screws at the top are shorter; the screw at the bottom right is a longer stand-off screw.
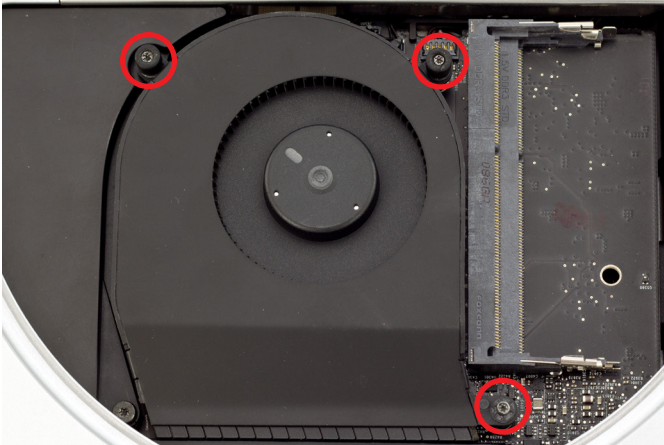
28. Install the two memory modules according to the instructions circled in the picture to the right.
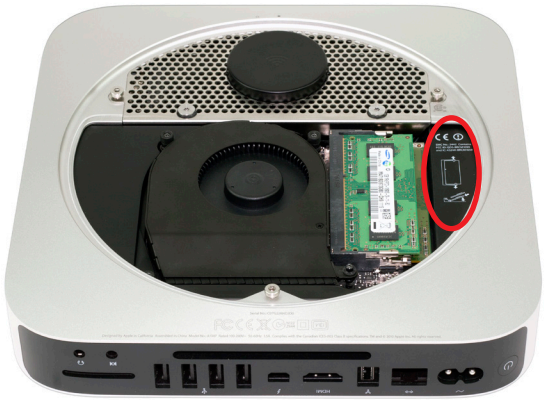
29. Install the bottom cover and rotate it clockwise with your thumbs until it locks into place, as shown in the picture to the left.

The assembly process is now complete. You can now enjoy the use of a second hard drive or solid state drive in your Mac mini.

APPENDIX

3.1 FORMATTING

For formatting information, including instructions on how to format your new drive for Mac or Windows®, go to: `http://www.macsales.com/format`

3.2 TROUBLESHOOTING

Begin your troubleshooting by verifying that the power cable is connected to the Mac mini and to a power source. If the power cable is connected to a power strip, make sure that the power switch on the strip is turned on.

If the drive in the Data Doubler is not seen on the desktop on a Mac, check in the sidebar in a Finder window. Some versions of Mac OS X do not show hard drives on the desktop by default. If the drive in the Data Doubler is not seen in Finder, check Disk Utility (Applications>Utilities>Disk Utility) to see if the drive is recognized by the computer. In Windows, check in Disk Management.

If problems persist, consult our online collection of frequently asked questions (`http://www.macsales.com/FAQ`) or see **Section 3.4** for information on contacting OWC technical support.

3.3 ABOUT DATA BACKUP

To ensure that your files are protected and to prevent data loss, we strongly suggest that you keep two copies of your data: one copy on your primary internal drive and a second copy on either your secondary internal drive or preferably another storage medium, such as an optical backup, or on an external storage unit. Any data loss or corruption while using the OWC Data Doubler is the sole responsibility of the user, and under no circumstances will Other World Computing be held liable for compensation or the recovery of any lost data.

3.4 TECHNICAL SUPPORT HOURS AND CONTACT INFORMATION

8AM - 8PM (CT) Monday - Friday
9AM - 4PM (CT) Saturday

By telephone: (800) 275-4576 (North America only)
International customers please call: (815) 338-8685

Live chat is available during normal business hours as well.
For more information, visit: `http://www.macsales.com/livechat`

Or you can email us. Submit your email at:
`http://www.macsales.com/ts_email`

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Changes:

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FCC Statement:

Warning! Modifications not authorized by the manufacturer may void the user's authority to operate this device.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

  • Reorient or relocate the receiving antenna.
  • Increase the separation between the equipment and receiver.
  • Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Health And Safety Precautions:

• Use proper anti-static precautions while performing the installation of your hard drives into this device. Failure to do so can cause damage to your drive mechanisms and/or the Data Doubler.
• Read this user guide carefully and follow the correct procedures when setting up the device.
• Do not attempt to disassemble or modify the device. To avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions, never insert any metallic object into the device. If it appears to be malfunctioning, contact Other World Computing technical support.
• Never expose your device to rain, or use it near water or in damp or wet conditions. Never place objects containing liquids on the drive, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.

General Use Precautions:

• To avoid damage, do not expose the device to temperatures outside the range of 5° C to 40° C (41° F to 104° F).
• Always unplug your computer from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
• Do not use the device near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
• Do not place the device near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of hard drives.
• Do not place heavy objects on top of the device.
• Protect your device from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
• Do not block any ventilation openings on your computer. These help to keep the device cool during operation. Blocking the ventilation openings may cause damage to the device and cause an increased risk of short-circuiting or fire.
• For up-to-date product and warranty information, please visit the product webpage.

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