



# **Boot Camp** Installation & Setup Guide

# Contents

3	Introduction
4	Installation overview
4	Step 1: Check for updates
4	Step 2: Prepare your Mac for Windows
4	Step 3: Install Windows on your Mac
4	Step 4: Install the Windows support software
4	Step 1: Check for updates
5	Step 2: Prepare your Mac for Windows
5	If you have problems creating a partition
6	Step 3: Install Windows on your Mac
7	If you have problems installing Windows
7	If you get a message saying “Installer Disc Not Found” when installing Windows
7	If Windows doesn’t install properly
7	If the Windows installer isn’t responding
7	If you insert the wrong disc during installation
7	Step 4: Install the Windows support software
8	If the Windows support software doesn’t install successfully
8	If you have problems using Windows on your Mac
8	If you see “No Boot Disk Attached” when starting up your Mac
9	If the screen is blank or distorted
9	If you can’t rename the Windows partition
9	If you have a RAID configuration
9	Start up using OS X or Windows
9	Set the default operating system
10	Select an operating system during startup
10	Remove Windows from your Mac
10	Learn more, support, and feedback

## Introduction

This guide shows you how to install and set up Boot Camp, so you can use either Windows or OS X on your Mac computer.

The Boot Camp Assistant app and this guide walk you through the steps needed to create a Windows partition on your Mac and then restart your Mac using your Windows installation disc. Then, follow this guide to install Windows and install software drivers that let Windows work with your Mac hardware.

You install Windows with an installation disc you provide. On some Mac computers, you can use a USB flash drive that contains a Windows 7 or Windows 8 ISO image downloaded from Microsoft. Boot Camp Assistant helps you burn the image to the flash drive.

If you want to upgrade the version of Boot Camp or Windows on your Windows partition, you don't need to use Boot Camp Assistant. Instead, click the Finder icon in the Dock, choose Help > Help Center, then search for "upgrade Boot Camp" or "upgrade Windows."

## What you need

- A printed copy of this guide, which contains information you need to refer to when installing Windows.
- The keyboard and mouse or trackpad that came with your Mac. (If they aren't available, use a USB keyboard and mouse.)

To install Windows with an installation disc, you need the following:

- A built-in disc drive or a compatible external optical drive.  
For information about using your Mac with an external optical drive, see the documentation that came with your Mac.
- An installation disc with the 64-bit version of Windows 7 Home Premium, Windows 7 Professional, Windows 7 Ultimate, Windows 8, or Windows 8 Pro.  
You must use a single full-install Windows installation disc. You cannot use an upgrade version of Windows.
- An external drive formatted as MS-DOS (FAT).  
After you install Windows, you need to install support software that lets Windows work with your Mac hardware. You can download the support software to an external drive. To format an external drive as MS-DOS (FAT), use Disk Utility, located in the Other folder in Launchpad.

You may be able to install Windows with a USB flash drive that contains a Windows ISO image downloaded from Microsoft. To find out, open Boot Camp Assistant, click Continue, and see if the option “Create a Windows 7 or later install disk” is available.

To install Windows with a USB flash drive, you need the following:

- An ISO image of Windows 7 Home Premium, Windows 7 Professional, Windows 7 Ultimate, Windows 8, or Windows 8 Pro, downloaded from Microsoft.
- A USB flash drive that is 8 GB or larger.

Boot Camp Assistant erases the flash drive and copies the Windows ISO and support software to it.

To see how much free space you need on your Windows partition, refer to the documentation that came with Windows.

## Installation overview

Installing Windows on your Mac involves the following steps:

### Step 1: [Check for updates](#)

### Step 2: [Prepare your Mac for Windows](#)

Boot Camp Assistant (in the Other folder in Launchpad) prepares your Mac for Windows by creating a Windows partition and then starting the Windows installer. Optionally, you can download the Windows support software and copy a Windows ISO image to a USB flash drive.

### Step 3: [Install Windows on your Mac](#)

### Step 4: [Install the Windows support software](#)

**Important:** Before you begin, make sure you back up important files.

### Step 1: [Check for updates](#)

Be sure to install all OS X updates first, so Windows installs successfully.

- 1 Log in to an administrator account on your Mac, quit all open apps, then log out any other users.
- 2 Choose Apple menu > Software Update.

Install all available updates. If your Mac restarts after installing an update, choose Apple menu > Software Update again to install any additional updates.

- 3 Go to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp) to see if you need additional updates.

## Step 2: Prepare your Mac for Windows

Boot Camp Assistant helps prepare your Mac for Windows by creating a new partition for Windows and then starting the Windows installer. Optionally, you can download the Windows support software and copy a Windows ISO image to a USB flash drive.

**Important:** If you're using a portable computer, connect the power adapter before continuing.

- 1 Open Boot Camp Assistant, located in the Other folder in Launchpad.
- 2 Select the option to install Windows, select other options you need, then click Continue.

Here are the other options you can choose:

- If you want to install Windows from a USB flash drive and you have a Windows ISO image, select the option to copy the image to a USB flash drive. If this option isn't available, your Mac doesn't support installing Windows from a USB flash drive.
- If you haven't already downloaded the Windows support software for your Mac, select the option to download it. In a later step, you'll install the Windows support software on your Windows partition.

- 3 Follow the onscreen instructions for the options you selected.
- 4 When you're asked to create a Windows partition, specify a partition size.

If you need help determining the best size for your Windows partition, refer to your Windows installer documentation. For Windows 8, create a partition that is at least 30 GB.

In a later step, you'll format the Windows partition.

- 5 Insert the installation disc for the 64-bit version of Windows into your Mac's optical drive or external optical drive, or insert the USB flash drive with the 64-bit version of Windows into a USB port on your Mac.
- 6 Click Install.

Boot Camp Assistant creates the Windows partition, restarts your Mac, and opens the Windows installer.

### If you have problems creating a partition

If you have problems creating a Windows partition, check the following:

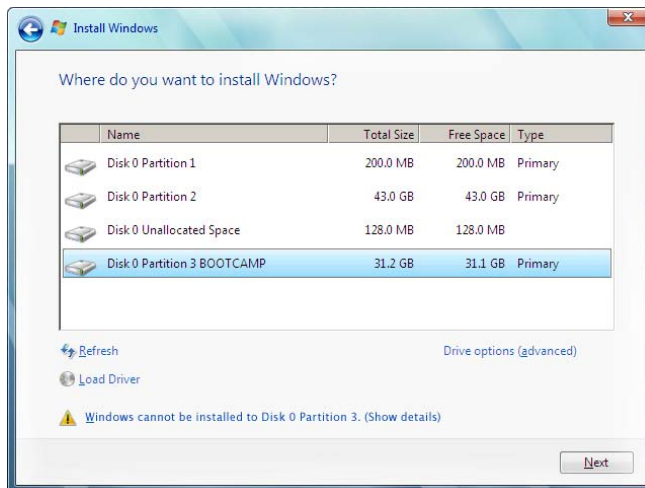
- The disk on your Mac must be a single partition, formatted as Mac OS Extended (Journaled). If the disk already has more than one partition, you must repartition it.
- The disk on your Mac must be an internal disk. You cannot use Boot Camp Assistant to install Windows on an external disk.
- If you have a Mac Pro with more than one internal disk and you want to install Boot Camp on a disk that isn't in the first hard drive bay, remove the drives in the lower-numbered bays. You can reinstall the drives after you install Boot Camp.
- If a dialog appears saying "The disk cannot be partitioned because verification failed," try repairing the disk using Disk Utility and opening Boot Camp Assistant again. If that doesn't work, back up all the information on your Mac, then reinstall OS X. For more information, click the Finder icon in the Dock, choose Help > Help Center, and search for "reinstall OS X."

### Step 3: Install Windows on your Mac

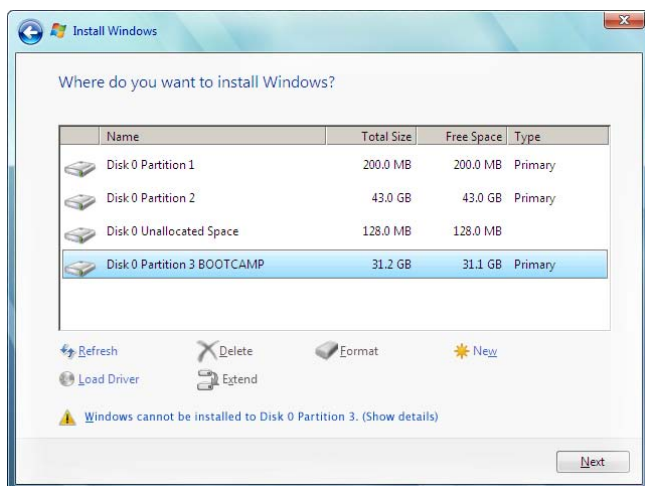
Follow these instructions for installing Windows on your Mac. Refer to your Windows documentation for general information about installing and setting up Windows.

- 1 In the Windows installer, follow the onscreen instructions until you're asked whether to do an upgrade or custom installation. Choose Custom.
- 2 When you're asked where to install Windows, select the partition named "BOOTCAMP."

**WARNING:** Do not create or delete a partition, or select any other partition. Doing so may delete the entire contents of your OS X partition.



- 3 Click "Drive options (advanced)."
- 4 Click Format, then click OK.



- 5 Click Next.

The installer formats the Windows partition using the NTFS file system.

- 6 Follow the onscreen instructions to finish installing and configuring Windows.

After you install the Windows software, your Mac automatically restarts using Windows. Use the Windows setup screens to configure Windows.

- 7 Keep the flash drive with the support software installed on it inserted while installing Windows.

### If you have problems installing Windows

If you have problems installing Windows, try the following solutions.

#### If you get a message saying “Installer Disc Not Found” when installing Windows

Make sure you’re logged in to OS X as an administrator.

#### If Windows doesn’t install properly

Verify that you’re using an original, full version of the 64-bit version of Windows 7 Home Premium, Windows 7 Professional, Windows 7 Ultimate, Windows 8, or Windows 8 Pro.

Restart your Mac and hold down the Option key until one or more disk icons appear on your screen. Insert the Windows installation disc into the optical drive or insert the USB flash drive with Windows into a USB port on your Mac. Select the Windows installation disk icon, then click the arrow beneath it. Quickly press any key on your keyboard to start the installer. Follow the onscreen instructions to repair or reinstall Windows.

#### If the Windows installer isn’t responding

Be sure you are using the original keyboard and mouse that came with your Mac.

If you’re using an Apple mouse, the Windows installer may not respond if the mouse is connected directly to your Mac. Connect the mouse to the USB port on your keyboard.

#### If you insert the wrong disc during installation

Eject the disc by holding down the Eject key on your keyboard while restarting your Mac.

## Step 4: Install the Windows support software

After installing Windows, install Mac drivers and other support software for Windows. The support software installs Boot Camp drivers to support your Mac hardware, including AirPort devices, the built-in camera, the Apple Remote, the trackpad on a portable Mac, and the function keys on an Apple keyboard. The software also installs the Boot Camp control panel for Windows and the Apple Boot Camp system tray item.

You can download the support software by selecting the “Download the latest Windows support software from Apple” option in Boot Camp Assistant. The support software must be copied to a USB flash drive formatted as MS-DOS (FAT).

- 1 An installer may start automatically. If it doesn’t, double-click the setup.exe file in the BootCamp folder of the USB flash drive that has the support software.
- 2 Follow the onscreen instructions.

**Important:** Do not click the Cancel button in any of the installer dialogs.

If a message appears that says the software you’re installing has not passed Windows Logo testing, click Continue Anyway.

You don’t need to respond to installer dialogs that appear only briefly during the installation.

If nothing appears to be happening, there may be a hidden window that you must respond to. Check the taskbar and look behind open windows.

- 3 After your computer restarts, follow the instructions for any other installers that appear.
- 4 Check for updated Windows support software by using Software Update or going to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp).

### **If the Windows support software doesn't install successfully**

If the Windows support software doesn't install successfully, your hardware may not work as expected. Try any of the following:

#### **Repair the Windows support software**

- 1 Start up your Mac in Windows. See "Start up using OS X or Windows" on page 9.
- 2 Connect the USB flash drive that has the Windows support software.  
  
The installer may start automatically. If it doesn't, double-click the setup.exe file in the BootCamp folder.
- 3 Click Repair and follow the onscreen instructions.

If a message appears that says the software you're installing has not passed Windows Logo testing, click Continue Anyway.

#### **Reinstall a specific driver**

If you need to reinstall specific drivers, you can install one driver at a time. For example, if the built-in camera on your Mac isn't working, you can reinstall just the camera driver.

Individual drivers are in the BootCamp/Drivers/ folder on the USB flash drive that has the Windows support software.

- 1 Connect the USB flash drive that has the Windows support software.
- 2 Using Windows Explorer or File Explorer, locate the driver that you want to reinstall.
- 3 Open the driver to start the installation.

### **If you have problems using Windows on your Mac**

If you're having trouble using Windows on your Mac, try the solutions below.

For more troubleshooting information, go to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp).

#### **If you see "No Boot Disk Attached" when starting up your Mac**

You may have formatted your Windows partition incorrectly so it cannot start up your Mac. Start up your Mac with OS X and open Boot Camp Assistant. Remove the Windows partition and then install Windows again, being sure to format the partition.

### **If the screen is blank or distorted**

Some graphics cards may not work with both OS X and Windows on a Mac computer. If you're having trouble with your screen display when using Windows, try the following:

- Use the graphics card that came with your Mac.
- Make sure you've installed the Boot Camp drivers. See "Step 4: Install the Windows support software" on page 4.
- Adjust the screen resolution setting in the Display control panel.
- Go to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp) and check for compatibility information and updated software for your computer.

### **If you can't rename the Windows partition**

You can rename the Windows partition only in Windows.

### **If you have a RAID configuration**

RAID configurations using Boot Camp are not supported. For more information, go to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp) and search for "RAID."

## **Start up using OS X or Windows**

After you install Windows and the support software, Boot Camp makes it easy to start up your Mac using either OS X or Windows. To set the operating system, choose a disk with that operating system installed as your startup disk and then restart your Mac.

### **Set the default operating system**

To set the default operating system in OS X, use the Startup Disk pane of System Preferences in OS X. To set it in Windows, use the Boot Camp control panel.

#### **Set the default operating system in OS X**

- 1 In OS X, choose Apple menu > System Preferences, then click Startup Disk.
- 2 Select the startup disk with the default operating system you want to use.
- 3 If you want to start up the default operating system now, click Restart.

#### **Set the default operating system in Windows**

- 1 In Windows 7, click the Boot Camp icon in the system tray and choose Boot Camp Control Panel.  
In Windows 8, move the cursor to the upper-right corner of the screen, then click Search. Search for "Boot Camp," click Settings, then click Boot Camp.
- 2 Select the startup disk with the default operating system you want to use.
- 3 If you want to start up the default operating system now, click Restart.

#### **Restart in OS X using the Boot Camp icon in the system tray**

- In Windows, click the Boot Camp icon in the system tray, then choose "Restart in OS X."

This also sets the default operating system to OS X.

## Select an operating system during startup

You can select which operating system to use during startup by holding down the Option key. This displays icons for all available startup disks and lets you override the default setting for the startup disk that is in Startup Disk preferences (OS X) or the Boot Camp control panel (Windows), without changing that setting.

- 1 Restart your Mac and hold down the Option key until disk icons appear onscreen.
- 2 Select the startup disk with the operating system you want to use, then click the arrow beneath the icon.

## Remove Windows from your Mac

How you remove Windows from your Mac depends on whether you installed Windows on a second partition or on a single-volume disk.

*If you installed Windows on a second disk partition:* Using Boot Camp Assistant as described below, remove Windows by deleting the Windows partition and restoring the disk to a single-partition OS X volume.

*If your Mac has multiple disks and you installed Windows on a disk that has only one partition:* Start up in OS X and use Disk Utility, located in the Other folder in Launchpad, to reformat it as an OS X volume.

- 1 Start up your Mac in OS X.
- 2 Quit all open apps and log out any other users on your Mac.
- 3 Open Boot Camp Assistant.
- 4 Select "Remove Windows 7," then click Continue.
- 5 Do one of the following:
  - If your Mac has a single internal disk, click Restore.
  - If your Mac has multiple internal disks, select the Windows disk, select "Restore to a single Mac OS partition," then click Continue.

## Learn more, support, and feedback

For Boot Camp support, go to [www.apple.com/support/bootcamp](http://www.apple.com/support/bootcamp).

Apple welcomes your feedback on Boot Camp. To submit feedback, go to [www.apple.com/macosx/feedback](http://www.apple.com/macosx/feedback).

Apple does not provide support for installing or using Microsoft Windows software. To find help for Windows issues, go to [windows.microsoft.com](http://windows.microsoft.com).

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019-2330/2013-01