### Manage photos

The photos you take with Photo Booth are saved to the Camera Roll album or, if you use iCloud Photo Library, in the All Photos album in the Photos app on iPad.

**Delete a photo.** Select a thumbnail, then tap  $\widehat{\mathbb{m}}$ .

**Share or copy a photo.** Tap a thumbnail, tap ①, then tap a share option or choose Copy.

**View photos in the Photos app.** In the Photos app, tap Photos. Or tap Albums, tap All Photos (or Camera Roll if iCloud Photo Library is turned off), then tap a thumbnail. Swipe left or right to see the next or previous photo. See View photos and videos.

**Share photos on all your devices.** If you use iCloud Photo Library, you can share your photos with other devices (iOS 8.1 or later), Mac computers (OS X 10.10.3 or later), and on iCloud.com. You must be signed in using the same Apple ID. See iCloud Photo Library.

**Upload photos to your computer.** Connect iPad to your computer using the included USB cable.

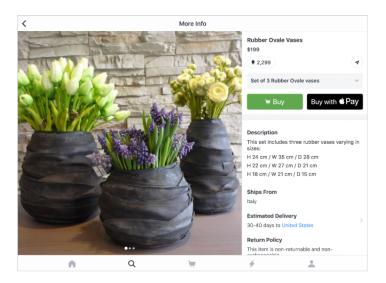
- *Mac:* Select the photos to upload, then click the Import or Download button in Photos or other supported photo app on your computer.
- *PC*: Follow the instructions that came with your photo app.

If you delete the photos from iPad when you upload them to your computer, they're removed from Photos. You can use the Photos settings pane in iTunes to sync photos to the Photos app on iPad.

# Apple Pay

## Buy with Apple Pay

On supported models, use Apple Pay (not available in all regions) to make secure payments in apps and on websites that support Apple Pay. You can also send and receive money in Messages. Using Apple Pay can be simpler than using a physical card, and safer too.



Not all Apple Pay features are available in all regions. For information, go to the Apple Pay website.

**Set up Apple Pay.** Go to Settings > Wallet & Apple Pay, then tap Add Credit or Debit Card. You may be asked to sign in to iCloud with your Apple ID.

- Add a new card: Position iPad so that your card appears in the frame, or enter the card details manually.
- Add your previous cards: Select the card associated with your Apple ID, cards you
  use with Apple Pay on your other devices, or cards that you've removed. Tap
  Continue, then enter the CVV number of each card.

The card issuer determines whether your card is eligible for Apple Pay, and may ask you for additional information to complete the verification process.

Pay in an app or on the web. During checkout, tap the Apple Pay or Buy with Apple Pay button. To complete the payment, use Touch ID or your passcode.

You may receive a notification with the merchant name and the amount authorized for the purchase. Your zip or postal code may be provided to the merchant to calculate tax and shipping costs. Payment information—such as billing and shipping addresses, email

address, and phone number—may also be provided to the merchant after you authorize the payment with Touch ID or a passcode.

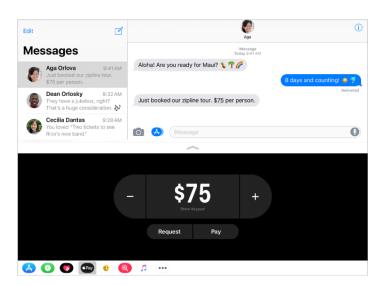
## Send and receive money (U.S. only)

Use Apple Pay to send and receive money quickly and easily in Messages. There's no app to download, and you can use the cards you already have with Apple Pay.

When you receive money in Messages, it's added to your Apple Pay Cash card. You can use Apple Pay Cash right away to make purchases using Apple Pay in stores, in apps, and on the web. You can also transfer your Apple Pay Cash balance to your bank account. See Set up and manage Apple Pay Cash (U.S. only).

Before you use Apple Pay Cash or send or receive payments with Apple Pay, you need to agree to the terms and conditions of these services.

**Send a payment.** In an iMessage conversation, tap (A), then tap (Pay). Enter the amount, tap Pay, then add a comment if you want.



**Tip:** If there's an underlined monetary amount in a message, tap it to preset the payment.

To complete the payment, tap ①, then authenticate with Touch ID or enter your passcode.

**Ask Siri.** Say something like, "Apple Pay 75 dollars to Aga Orlova for the zipline tour" or "Send 75 dollars to Aga Orlova."

The payment is made with Apple Pay Cash if your balance has sufficient funds. Otherwise, you can choose a credit, debit, or eligible prepaid card. Credit card payments incur a 3 percent transaction fee.

**Cancel a payment.** If you sent a payment that hasn't been accepted, tap the payment bubble, then tap Cancel Payment.

Request a payment. Tap 🗪, enter the amount, then tap Request.

Ask Siri. Say something like, "Ask mom for 12 dollars for lunch yesterday."

**Manually accept or reject payments.** By default, payments are automatically accepted and added to Apple Pay Cash. To manually accept payments instead, go to Settings > Wallet & Apple Pay, tap the Apple Pay Cash card, tap (i), then select Manually Accept Payments.

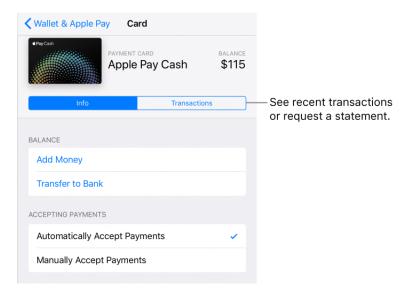
- Accept a payment: Tap Accept in the payment bubble. You have 7 days to accept a payment before it's returned to the sender.
- Reject a payment: Tap the payment bubble, then tap Reject Payment.

#### View your payment history.

- Single payment details: Tap the payment bubble.
- All payments: Go to Settings > Wallet & Apple Pay, tap the Apple Pay Cash card, tap
   (i), then tap Transactions. To get a PDF statement of your transaction history by
   email, scroll to the bottom, then tap Request Transaction Statement.

## Set up and manage Apple Pay Cash (U.S. only)

When you receive money in Messages, it's added to your Apple Pay Cash card. You can use Apple Pay Cash right away to make purchases using Apple Pay in stores, in apps, and on the web. You can also transfer your Apple Pay Cash balance to your bank account.



**Set up Apple Pay Cash.** Go to Settings > Wallet & Apple Pay, then turn on Apple Pay Cash. Or just send or accept a payment in Messages.

#### **Use Apple Pay Cash.**

- Send and receive money (U.S. only)
- Buy with Apple Pay

Manage your Apple Pay Cash. Go to Settings > Wallet & Apple Pay, then tap the Apple Pay Cash card. You can:

- Add money from a debit card.
- Transfer money from your Apple Pay Cash balance to your bank account.
- Tap Transactions to view your history and details (including comments sent with payments), manually accept or reject individual payments, and request a statement.
- Choose to manually or automatically accept all payments.
- See your suggested PIN. Apple Pay Cash doesn't require a PIN because every payment is authenticated by Touch ID or a secure passcode. However, some terminals may still require you to enter a four-digit code to complete the transaction.
- Verify your identity for account servicing and to increase your transaction limits.
- Contact Apple Support.

Apple Pay Cash and sending and receiving payments through Apple Pay are services provided by Green Dot Bank, member FDIC.

# View card activity and manage cards

**View and manage card information.** Go to Settings > Wallet & Apple Pay, then tap a card. You can:

- Tap Transactions to view your recent history. To hide this information, turn off Transaction History. To view all your Apple Pay activity, see the statement from your card issuer.
- View the last four digits of the card number and Device Account Number—the number transmitted to the merchant.
- Change the billing address.
- Remove the card from Apple Pay.

**Manage Apple Pay settings.** Go to Settings > Wallet & Apple Pay to:

Set your default card.

• Add the shipping address and contact information for purchases.

If your iPad is lost or stolen. If you enabled Find My iPad, you can use it to help locate and secure your iPad. You can also suspend or remove the ability to make purchases using your cards in Apple Pay:

- On a Mac or PC: Sign in to iCloud.com using your Apple ID, click Settings, click the lost iPad in the My Devices section, then click Remove in the Apple Pay section.
- On another iOS device: Go to Settings > [your name], tap the lost iPad, then tap Remove All Cards (below Apple Pay).

You can also call the issuers of your cards.

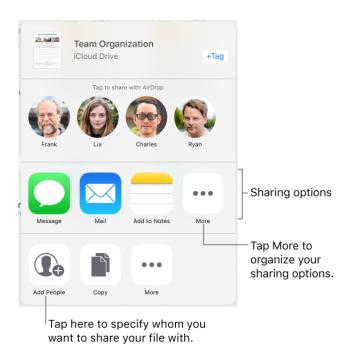
*Note:* If you sign out of iCloud in Settings > [your name], all your credit and debit cards for Apple Pay are removed from iPad. You can add the cards again the next time you sign in to iCloud.

# Sharing

# Share from apps

**Share from an app (except Files).** In many apps that support sharing, tap Share or ①, then choose how to share. Options vary by app and may include choices from apps you've downloaded. For example, if you download Pinterest, Pinterest may appear as another option for sharing. For more information, see App extensions.

**Share from the Files app.** You can send a copy of any document in Files. Touch and hold the document, tap Share, then choose an option for sending the document (for example, Message, Mail, and so on).



**Organize your sharing options.** Tap the More button, then touch and drag  $\equiv$  to move items to new positions.

### Share files from iCloud Drive

With iCloud Drive, you can store files in iCloud and access them from all your devices. Any changes you make appear on all your devices set up with iCloud Drive.

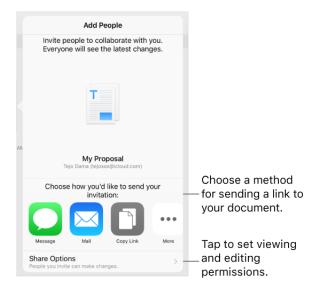
You can also invite others to view and edit your files in iCloud Drive. They can access your shared file by tapping a link you send—you don't need to send the file.

To use iCloud Drive, you must be signed in to iCloud using your Apple ID, and have iCloud Drive turned on.

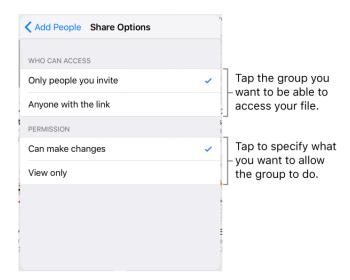
**Turn on iCloud Drive.** Go to Settings > [your name] > iCloud, then turn on iCloud Drive). See Use iCloud Drive.

**Invite others to view or edit a file.** Tap Files > Browse > iCloud Drive. Touch and hold a file in iCloud Drive, tap Share, tap **(**, then do one of the following:

Send a link to the people you want to view and edit the file: Tap a method for sending
a link to the file, enter any other requested information, then send or post the
invitation. People need an Apple ID to open the file.



- Choose specific permission and access options: Tap Share Options, then select permission settings:
  - Who can open, view, and print the file, but not make changes—only people you invite or anyone with the link.
  - Who can open, view, print, and make changes to the file—only people you invite or anyone with the link.



When you allow people to edit a file, it's updated with everyone's changes automatically.

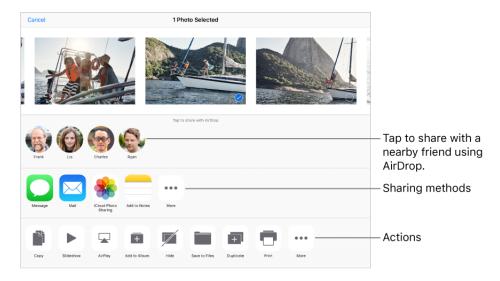
*Note:* If you don't see ①, the file may be owned by someone else who shared it with you. Tap Show People to see the owner's name.

After you set the share options, tap Add People at the top left. Tap a method for sending a link to the document (Message, Mail, and so on), enter any other requested information, then send or post the invitation. See Use iCloud Drive.

**Important:** When you share a file that you have in iCloud Drive, a link to it (including its name) is sent in your invitation. If the document is confidential, be sure to ask recipients not to forward the link to anyone else.

## Share files with AirDrop

With AirDrop you can share your photos, videos, websites, locations, and more wirelessly with other nearby devices (iOS 7 or later). With iOS 8 or later, you can share with Mac computers with OS X 10.10 or later. AirDrop transfers information using Wi-Fi and Bluetooth—both must be turned on. To use AirDrop, you need to be signed in to iCloud using your Apple ID. Transfers are encrypted for security.



**Share an item using AirDrop.** Tap Share  $\hat{\Box}$ , then tap the name of a nearby AirDrop user.

Receive AirDrop items from others. Open Control Center, then tap (a) (if you don't see (a), tap and hold the top left group of controls). Then choose to receive items from Contacts only or from Everyone. You can accept or decline each request as it arrives.

For more information, see the Apple Support article How to use AirDrop with your iPhone, iPad, or iPod touch.

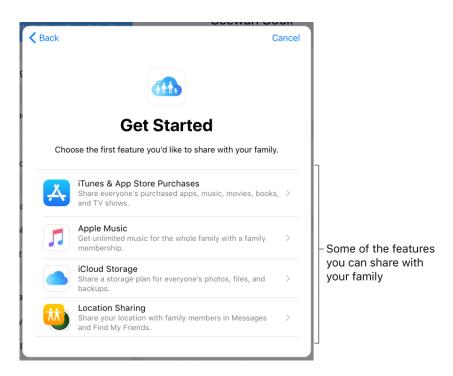
## Family Sharing

With Family Sharing, up to six family members can share iTunes Store, App Store, and iBooks Store purchases; an Apple Music family membership; an iCloud storage plan; a family calendar; family photos; and more, all without sharing accounts. For more information, see the Apple Support article Family Sharing.

To use Family Sharing, one adult family member (the *organizer*) chooses features for the family to share and invites up to five additional family members to participate. When family members join, Family Sharing is set up on their devices automatically.

Family Sharing requires you to sign in to iCloud with your Apple ID, and to confirm the Apple ID you use for the iTunes Store, App Store, and iBooks Store (you usually use the same Apple ID for everything). Family Sharing is available on iOS devices with iOS 8 or later, Mac computers with OS X 10.10 or later, and PCs with iCloud for Windows 5 or later. You can be part of only one family group at a time.

**Set up Family Sharing.** Go to Settings > [your name] > Set Up Family Sharing, then follow the onscreen instructions. As the family organizer, you choose the features you want to share and invite family members to join. Depending on the services you choose, you may be asked to set up an Apple Music family membership or an iCloud Storage subscription. If you choose to share iTunes Store, App Store, and iBooks Store purchases with your family members, you agree to pay for any purchases they initiate while part of the family group.



Create an Apple ID for a child. Go to Settings > [your name] > Family Sharing, then tap Create a Child Account. For more information, see the Apple Support article Family Sharing and Apple ID for your child.

**Accept an invitation to Family Sharing.** Tap Accept in your invitation. Or, if you are near the organizer during the setup process, you can enter the Apple ID and password you use for iCloud on the organizer's device.

**Share purchases.** When your family uses iTunes Store, App Store, and iBooks Store purchase sharing, all items are billed directly to the family organizer's Apple ID. Once purchased, an item is added to the initiating family member's account and is shared with the rest of the family.

Access shared purchases from the iTunes Store. Open the iTunes Store, tap Purchased, then tap My Purchases at the top left. Choose a family member, tap a category (for example, Music or Movies) at the top of the screen, then tap a purchased item.

Access shared purchases from the App Store. Open the App Store, then tap the photo or ① at the top right. Tap Purchased, choose a family member, then tap a purchased item.

Access shared purchases from the iBooks Store. Open iBooks, tap Reading Now, then tap the photo or ① at the top right. Choose a family member, tap a category (for example, Books or Audiobooks), tap a genre, then tap a purchased item.

**Use a shared Apple Music family membership.** If your family has an Apple Music family membership, you can simply open Apple Music and start listening. Each family member gets their own music library and personal recommendations. Make sure you're signed in with the Apple ID you entered in Family Sharing settings.

**Use a shared iCloud storage plan.** If your family is sharing an iCloud storage plan (200 GB or 2 TB), you can privately use as much storage as you need. You can also purchase or use your own storage plan if you need more space.

**Turn on Ask to Buy.** The family organizer can require young family members to request approval for purchases or free downloads. Go to Settings > [your name] > Family Sharing, then tap the person's name.

*Note:* Age restrictions for Ask to Buy vary by region. In the United States, the family organizer can enable Ask to Buy for any family member under age 18; for children under age 13, it's enabled by default.

**Hide your iTunes Store, App Store, and iBooks Store purchases.** To hide all your purchases from family members, go to Settings > [your name] > Family Sharing, then turn off Share My Purchases. On your computer, you can also hide specific purchases so they aren't available to other family members. For more information, see the Apple Support article Hide and unhide apps for your iPhone, iPad, iPod touch, or Mac.

Share photos or videos with family members. When you set up Family Sharing, a shared album called *Family* is automatically created in the Photos app on all family members' devices. To share a photo or video with family members, open the Photos app, then view a photo or video or select multiple photos or videos. Tap ①, tap iCloud Photo Sharing, add comments, then share to your shared family album. Members can unsubscribe from the family album, and the family organizer can delete it. See iCloud Photo Sharing.

Add an event to the family calendar. When you set up Family Sharing, a shared calendar called *Family* is automatically created in the Calendar app on all family members' devices. To add a family event, open the Calendar app, create an event, then add the event to the family calendar. Members can unsubscribe from the family calendar, and the family organizer can delete it. See Share iCloud calendars.

**Set up a family reminder.** When you set up Family Sharing, a shared list is automatically created in the Reminders app on all family members' devices. To add a reminder to the family list, open the Reminders app, tap the family list, then add a reminder to the list. Members can unsubscribe from the family reminder list, and the family organizer can delete it. See Reminder lists.

**Share your location with family members.** Go to Settings > [your name] > iCloud > Share My Location. To find a family member's location, use the Find My Friends app. You can also send or share your location with the Messages app (iOS 8 or later required). For more information about using Messages to share your location, see Send and receive messages.

**Keep track of your family's devices.** If family members enabled Share My Location in iCloud, you can help them locate missing devices. Open Find iPhone on your device or at iCloud.com. For more information, see Find your iPad.

**Leave Family Sharing.** Go to Settings > [your name] > Family Sharing > [your name], then tap Leave Family Sharing. If you're the organizer, tap Stop Family Sharing. For more information, see the Apple Support article Leave Family Sharing.

## iPad and other devices

### Connect Bluetooth devices

You can use Bluetooth devices such as wireless headphones, speakers, and more with iPad. For information, see the Apple Support article Supported Bluetooth profiles.

**WARNING:** For important information about avoiding hearing loss and avoiding distractions that could lead to dangerous situations, see Important safety information.

*Note:* The use of certain accessories with iPad may affect wireless performance. Not all iOS accessories are fully compatible with iPad. Turning on airplane mode may eliminate audio interference between iPad and an accessory. Reorienting or relocating iPad and the connected accessory may improve wireless performance.

**Turn Bluetooth on or off.** Go to Settings > Bluetooth. To quickly disconnect from Bluetooth devices without turning Bluetooth off, open Control Center, then tap ★.

**Pair a Bluetooth device.** Follow the instructions that came with the device to put it in discovery mode. Then go to Settings > Bluetooth, and tap the device in the Devices list to connect.

iPad must be within about 33 feet (10 meters) of the Bluetooth device.

If you have AirPods and you set them up with one iOS device or Mac computer, they are automatically set up with your other devices where you're signed in using the same iCloud account (iOS 10, macOS Sierra, watchOS 3, or later required). For more information about setting up AirPods, go to the AirPods Support website.

For information about Apple Wireless Keyboard, see Use an Apple Wireless Keyboard.

**Unpair a device.** Go to Settings > Bluetooth, tap (i) next to the device, then tap Forget This Device. If you don't see the Devices list, make sure Bluetooth is on.

If you have AirPods and you tap Forget This Device, they are automatically removed from other devices that are set up through your iCloud account.

### Stream audio and video to other devices

Stream content from iPad to AirPlay-enabled or Bluetooth devices, or mirror your iPad screen. (Apple TV, AirPlay-enabled devices, and Bluetooth devices are available separately.)

Stream audio to an Apple TV, an AirPlay-enabled device, or a connected Bluetooth device. Open the audio app you want to use, tap , then choose a playback destination, such as HomePod, Apple TV, or wireless headphones. While audio is playing, you can also change the playback destination from the Lock screen or Control Center.



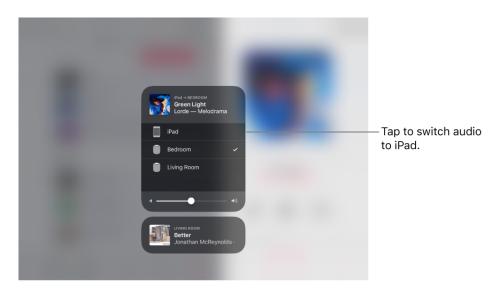
*Note:* If your AirPlay-enabled devices don't appear as a destination, make sure everything is on the same Wi-Fi network.

With a Bluetooth device, the playback destination returns to iPad if the device moves out of range.

Stream photos and video to an Apple TV using AirPlay. Open the photo or video app you want to use. Tap , tap , then tap AirPlay. Then choose your Apple TV as the playback destination. If an AirPlay passcode appears on the TV screen, enter the passcode on your iPad.

Mirror your iPad screen on an Apple TV. Open Control Center, tap , then choose your Apple TV as the playback destination. If an AirPlay passcode appears on the TV screen, enter the passcode on your iPad.

**Switch back to iPad.** Tap  $\square$  or  $\bigcirc$ , then choose your iPad.



You can also connect iPad to a TV, projector, or other external display using the appropriate Apple cable or adapter. For more information, see the Apple Support article About Apple Digital AV Adapters for iPhone, iPad, and iPod touch.

### Control audio on multiple devices

With AirPlay and iPad, you can play different audio streams on AirPlay-compatible devices connected to the same Wi-Fi network. For example, while playing your Chill Mix on iPad, you can also play a podcast on the kitchen HomePod, and a favorite jazz playlist on the living room Apple TV.

Choose a device in the Music or Podcasts app. On iPad, open the Music or Podcasts app. Tap Now Playing at the bottom of the screen, then tap ② to see separate cards for iPad and each Apple TV, HomePod, or other AirPlay-compatible device.

Tap the card for the device you want to control, then choose some music or a podcast to play. Tap a different card and choose some audio to play on that device.

**Choose a device from Control Center.** Open Control Center, then touch and hold the audio card. Tap , then tap the card for the device you want to control.



## **Apple Pencil**

With iPad Pro or iPad (6th generation), you can use Apple Pencil (available separately) to:

- Write a note by hand
- Create a detailed sketch
- Sign a document
- Markup a PDF file, photo, email, and more

For more information, see the Apple Support article Use Apple Pencil with iPad Pro.

### **AirPrint**

Use AirPrint to print wirelessly to an AirPrint-enabled printer from apps such as Mail, Photos, and Safari. Many apps available on the App Store also support AirPrint.

iPad and the printer must be on the same Wi-Fi network. For more information about AirPrint, see the Apple Support article About AirPrint.

**Print a document.** Tap  $\triangleleft \!\!\! \wedge$  or  $\triangle \!\!\!\! \wedge$  (depending on the app you're using).

**See the status of a print job.** Open the App Switcher, then tap Print Center. The badge on the icon shows how many documents are in the queue.

Cancel a job. Select it in Print Center, then tap Cancel Printing.

### Handoff

Continue working on one device where you left off on another. You can use Handoff with many Apple apps—for example, Mail, Safari, Pages, Numbers, Keynote, Maps, Messages, Reminders, Calendar, and Contacts—and even some third-party apps. To use Handoff, you must be signed in to iCloud using the same Apple ID on all your devices. Your devices must have Bluetooth on and be within Bluetooth range of one another (about 33 feet or 10 meters).

#### Switch devices.

- From Mac to iPad: The Handoff icon of the app you're using on your Mac appears on iPad on the right side of the Dock. Tap the Handoff icon to continue working in the app on iPad.
- From iPad to Mac: The Handoff icon of the app you're using on iPad appears on your Mac at the left end of the Dock (or the top, depending on the Dock position). Click the icon to continue working in the app.

#### Disable Handoff on your devices.

- *iOS devices:* Go to Settings > General > Handoff.
- Mac: Choose Apple Menu > System Preferences > General, then turn off "Allow Handoff between this Mac and your iCloud devices."

## **Universal Clipboard**

Cut or copy content (a block of text or an image, for example) on your iPad, then paste it on another iOS device or Mac computer, and vice versa.

For Universal Clipboard to work, you must be signed in to iCloud using the same Apple ID on all your devices. Your devices must be connected to Wi-Fi, be within Bluetooth range of one another (about 33 feet or 10 meters), have Bluetooth on, and have Handoff enabled. Universal Clipboard requires iOS 10 and macOS Sierra.

You must cut, copy, and paste your content within a short period of time.

**Copy or cut.** Touch and hold a word or image to display the selection options, then choose Copy or Cut.

**Paste.** Double-tap to place an insertion point and display the selection options, then choose Paste.

For more information about selecting text or placing the insertion point, see Type and edit text.

### Make and receive Wi-Fi calls on iPad

Wi-Fi calling lets you make and receive calls on your iPad, iPod touch, or Mac by relaying calls through your iPhone. To make calls this way, you need iOS 9 or later and OS X 10.10 or later. You must be signed in to iCloud and FaceTime on all your devices using the same Apple ID as on iPhone.

*Note:* Wi-Fi calling on other devices is available with some carriers, and cellular charges may apply.

You must first set up your iPhone, then your other devices. If you log out of iCloud or FaceTime on iPhone, Wi-Fi calling is disabled.

**Turn on Wi-Fi calls on your iPhone.** Go to Settings > Phone > Wi-Fi Calling, then turn on Wi-Fi Calling on This iPhone. Go to Settings > Phone > Call on Other Devices, turn on Allow Calls on Other Devices, then select your iPad.

**Turn on Wi-Fi Calling on your iPad.** Go to Settings > FaceTime, turn on FaceTime, then turn on Calls from iPhone.

*Note:* If you enable Wi-Fi Calling, emergency calls may be made over Wi-Fi, and your device's location information may be used for emergency calls to aid response efforts, regardless of whether you enable Location Services. Some carriers may use the address you registered with the carrier when signing up for Wi-Fi Calling as your location.

Make a phone call on your iPad. Tap a phone number in Contacts, Calendar, FaceTime, Messages, or Safari.

**Receive a call on your iPad.** Swipe the notification to answer, ignore, or respond with a quick message.

For more information about Wi-Fi calls, see the Apple Support article Make a call with Wi-Fi Calling.

## **Instant Hotspot**

You can use Instant Hotspot on your iPhone (with iOS 8 or later) or iPad (Wi-Fi + Cellular models with iOS 8 or later) to provide Internet access to your other devices (iOS 8 or later) and Mac computers (OS X 10.10 or later) where you're signed in to iCloud with the same Apple ID. Instant Hotspot uses your iPhone or iPad Personal Hotspot, without you having to enter a password or even turn on Personal Hotspot.

**Use Instant Hotspot.** Go to Settings > Wi-Fi on your iOS (models without cellular capabilities). Below Personal Hotspots, choose your iPhone or iPad network. On your Mac, choose your iPhone or iPad network from your Wi-Fi settings.

When you're not using the hotspot, your devices disconnect to save battery life. For more information about ways to set up a Personal Hotspot see Personal Hotspot.

*Note:* This feature may not be available with all carriers. Additional fees may apply. Contact your carrier for more information.

## Personal Hotspot

Use Personal Hotspot to share your iPad (Wi-Fi + Cellular models) Internet connection. Computers can share your Internet connection using Wi-Fi, Bluetooth, or a USB cable. Other iOS devices can share the connection using Wi-Fi. Personal Hotspot works only if iPad is connected to the Internet over the cellular data network.

*Note:* This feature may not be available with all carriers. Additional fees may apply. Contact your carrier for more information.

**Share an Internet connection.** Go to Settings > Cellular Data, then tap Personal Hotspot —if it appears—to set up the service with your carrier.

After you turn on Personal Hotspot, other devices can connect in the following ways:

• Wi-Fi: On the device, choose your iPad from the list of available Wi-Fi networks.

- USB: Connect iPad to your computer using the cable that came with it. In your computer's Network preferences, choose iPad, then configure the network settings.
- *Bluetooth:* On iPad, go to Settings > Bluetooth, then turn on Bluetooth. To pair and connect iPad with your Bluetooth device, refer to the documentation that came with your device.

*Note:* When a device is connected, a blue band appears at the top of the iPad screen. The Personal Hotspot icon appears in the status bar of iOS devices using Personal Hotspot.

**Change the Wi-Fi password for iPad.** Go to Settings > Personal Hotspot > Wi-Fi Password, then enter a password of at least eight characters.

Change the name of your Personal Hotspot. You can change the name of your Personal Hotspot by changing the name of your iPad. Go to Settings > General > About > Name.

Monitor your cellular data network usage. Go to Settings > Cellular. See Cellular data settings.

### Use iTunes to transfer files

You can transfer files between iPad and your computer or other iOS devices with Files, AirDrop, email attachments, or by connecting iPad to your computer and using iTunes.

**Transfer files using iTunes.** Connect iPad to your computer using the included cable. In iTunes on your computer, select iPad, then click Apps. Use the File Sharing section to transfer documents between iPad and your computer.

Apps that support file sharing appear in the Apps list. To delete a file, select it in the Documents list on your computer, then press the Delete key. For more information, see the Apple Support article About File Sharing on iPhone, iPad, and iPod touch.

# Privacy and security

## Privacy

#### **Location Services**

Location Services lets location-based apps such as Reminders, Maps, and Camera gather and use data indicating your location. Your approximate location is determined using available information from local Wi-Fi networks, if you have Wi-Fi turned on. The location data collected by Apple isn't collected in a form that personally identifies you. When an app is using Location Services,  $\checkmark$  appears in the status bar.

Privacy settings let you see and control which apps and system services have access to Location Services, and to Contacts, Calendars, Reminders, and Photos.

**Turn Location Services on or off.** Go to Settings > Privacy > Location Services. You can turn it off for some or for all apps and services. If you turn off Location Services, you're asked to turn it on again the next time an app or service tries to use it.

**Turn Location Services off for system services.** Several system services, such as location-based ads, use Location Services. To see their status, turn them on or off, or show  $\checkmark$  in the status bar when these services use your location, go to Settings > Privacy > Location Services > System Services.

**Turn off access to private information.** Go to Settings > Privacy. You can see which apps and features have requested, and you have granted, access to private information. You can turn off each app's access to each of these categories of information:

- Contacts
- Calendar
- Reminders
- Photos
- Bluetooth Sharing
- Microphone
- Speech Recognition
- Camera

- HomeKit
- Media & Apple Music
- Motion & Fitness

Review the terms and privacy policy for each third-party app to understand how it uses the data it's requesting. For more information, see the Apple Support article About privacy and Location Services.

#### Advertising and tracking

**Turn off location-based ads and offers.** Go to Settings > Privacy > Location Services > System Services, then turn off Location-Based Apple Ads.

**Reset or limit Ad Tracking.** Go to Settings > Privacy > Advertising (at the bottom of the screen). To clear the data used to determine which ads might be relevant to you, tap Reset Advertising Identifier. To opt out of targeted advertising, turn on Limit Ad Tracking.

*Note:* If you turn on Limit Ad Tracking, you may still receive the same number of ads, but they may be less relevant to you.

View the information Apple uses to deliver targeted ads. Go to Settings > Privacy > Advertising > View Ad information. The information is used by Apple to deliver more relevant ads in Apple News and the App Store. Your personal data is not provided to other parties.

**Keep your Safari browsing activities to yourself.** While browsing the web, you can prevent cross-site tracking, block cookies, erase your browsing history, and more. See Privacy and security for Safari.

For more information, go to Settings > Privacy > Advertising > About Advertising & Privacy.

## Security

#### Passcode

For better security, you can set a passcode that must be entered each time you turn on or wake up iPad.

**Set, change, or turn off the passcode.** Go to Settings > Touch ID & Passcode (supported models) or Settings > Passcode (other models).

To adjust when iPad automatically locks (and then requires the passcode to unlock), go to Settings > Display & Brightness > Auto-Lock.

Setting a passcode turns on data protection, using your passcode as a key to encrypt Mail messages and attachments stored on iPad, using 256-bit AES encryption. (Other apps may also use data protection.)

**Increase security.** Turn off Simple Passcode and use a longer passcode. To enter a passcode that's a combination of numbers and letters, you use the keyboard. If you prefer to unlock iPad using the numeric keypad, set up a longer passcode using numbers only.

**Add fingerprints and set options for Touch ID.** (Supported models) Go to Settings > Touch ID & Passcode. See Touch ID.

**Allow access to features when iPad is locked.** Go to Settings > Touch ID & Passcode (supported models) or Settings > Passcode (other models). Optional features include:

- Today View (see Today View)
- Recent Notifications (see Notifications)
- Control Center (see Control Center)
- Siri (see Make requests)
- Home Control (see Home overview)
- Return Missed Calls (see Make and answer calls)

**Erase data after ten failed passcode attempts.** Go to Settings > Touch ID & Passcode (supported models) or Settings > Passcode (other models), then tap Erase Data. After ten failed attempts to enter your passcode, all settings are reset, all your information and media are erased, and you must restore iPad from a backup or set it up again as new.

#### Two-factor authentication

Two-factor authentication is an extra layer of security for your Apple ID designed to ensure that you're the only person who can access your account, even if someone knows your password. It's built into iOS 9 and later, and OS X 10.11 and later.

**Turn on two-factor authentication.** Turn it on when asked while setting up iPad. Or, go to Settings > [your name] > Password & Security, then tap Turn On Two-Factor Authentication.

When asked, verify your identity with a six-digit verification code (as described below). You won't be asked for a verification code again on your iPad unless you sign out completely, erase your iPad, sign in to your Apple ID account page in Safari on your iPad, or need to change your Apple ID password for security reasons.

*Note:* If you use two-step verification and upgrade to iOS 11 or later, your account might be migrated to use two-factor authentication. Your account will have an optional, additional recovery factor: a recovery key that can be generated on iPad. For more information, see the Apple Support article Switch from two-step verification to two-factor authentication.

**Verify your identity with a six-digit verification code.** When you're asked on your iPad for the code, look for a notification on any of your trusted devices or at a trusted phone number. On a trusted device, tap or click Allow to make a code appear on that device. To send the code to a trusted phone number, tap "Didn't get a verification code?", then choose the phone number. Enter the code on your iPad.

If you can't receive a verification code automatically on your trusted devices (described below), and a trusted phone number (described below) is unavailable, you can get a verification code from Settings on a trusted device, even if your device is offline. On a trusted iOS device, go to Settings > [your name] > Password & Security, then tap Get Verification Code. On a trusted Mac, choose Apple Menu > System Preferences > iCloud > Account Details > Security, then click Get Verification Code.

Add another iOS device (iOS 9 or later) or a Mac (OS X El Capitan or later) as a trusted device. After you turn on two-factor authentication, use the same Apple ID to sign in to iCloud on another device. If you previously signed in, sign in again. (On an iOS device, go to Settings > [your name]. On a Mac, choose Apple Menu > System Preferences > iCloud.) Verify your identity with a six-digit verification code (as described above). You can receive verification codes on all your trusted devices.

You won't be asked for a verification code again on a trusted device unless you sign out completely, erase your device, sign in to your Apple ID account page in Safari on that device, or need to change your Apple ID password for security reasons.

**Add a trusted phone number.** Go to Settings > [your name] > Password & Security, tap Edit (above the list of trusted phone numbers), then tap Add a Trusted Phone Number.

You must verify at least one trusted phone number to enroll in two-factor authentication. You should also consider verifying other phone numbers you can access, such as a home phone, or a number used by a family member or close friend. Trusted phone numbers don't automatically receive verification codes. If you can't access any trusted devices when setting up a new device for two-factor authentication, tap "Didn't get a verification code?" on the new device, then choose one of your trusted phone numbers to receive the verification code.

**Remove a trusted phone number.** Go to Settings > [your name] > Password & Security, tap Edit (above the list of trusted phone numbers), then tap  $\bigcirc$  next to the phone number.

**Get a verification code on a trusted iPad, even when you're offline.** If you need to enter a verification code on another device when setting it up for two-factor authentication, but you can't receive the code on a trusted iPad automatically, you can get a verification code from Settings on the trusted iPad. Go to Settings > [your name] > Password & Security, then tap Get Verification Code.

**View or remove trusted devices.** Go to Settings > [your name]. A list of the devices associated with your Apple ID appears near the bottom of the screen. To see if a listed device is trusted, tap it, then look for "This device is trusted and can receive Apple ID verification codes." To remove a device, tap it, then tap Remove From Account.

**Turn off two-factor authentication.** Sign in to your Apple ID account page, tap Security, tap Edit, then tap Turn Off Two-Factor Authentication.

For more help with two-factor authentication, see the Apple Support article Two-factor authentication for Apple ID.

#### Touch ID

(Supported models) When you set up Touch ID, you can unlock iPad by placing a finger on the Home button. You can use Touch ID to authorize purchases from the iTunes Store, App Store, and iBooks Store, and to authorize payments with Apple Pay. You can also sign in to many third-party apps using Touch ID.

To use Touch ID, you must set a passcode on your iPad. You must enter your passcode for additional security validation when you do the following:

- Turn on or restart your device
- Update your software
- Erase your device

- View or change passcode settings
- Install iOS configuration profiles

**Set up fingerprint recognition.** Follow the onscreen instructions when you first set up iPad, or go to Settings > Touch ID & Passcode. Set whether you want to use a fingerprint to unlock iPad and to make purchases. Tap Add a Fingerprint, then follow the onscreen instructions. You can add multiple fingerprints (both of your thumbs and forefingers, for example, and one for your spouse).

Name a fingerprint. Tap the fingerprint, then enter a name, such as "Thumb."

**Delete a fingerprint.** Tap the fingerprint, then tap Delete Fingerprint. If you added more than one fingerprint, place a finger on the Home button to find out which fingerprint it is.

Use Touch ID to make a payment in the iTunes Store, App Store, or iBooks Store. Follow the instructions to enable purchases with your fingerprint. Or go to Settings > Touch ID & Passcode, then turn on iTunes & App Store.

*Note:* You're asked for your Apple ID password for the first purchase you make in the iTunes Store, App Store, or iBooks Store.

Use Touch ID to make a payment within an app or on a website that supports

Apple Pay. Go to Settings > Touch ID & Passcode to ensure that Apple Pay is turned on
for Touch ID. To complete a payment with Apple Pay, approve with Touch ID. For more
information about Apple Pay, go to the Apple Pay website.

**Turn off Touch ID.** Go to Settings > Touch ID & Passcode, then turn off one or more options: iPad Unlock, Apple Pay, or iTunes & App Store.

### iCloud Keychain

iCloud Keychain keeps your Safari website user names and passwords, credit card information, and Wi-Fi network information up to date across all of your approved devices (iOS 7 or later) and Mac computers (OS X 10.9 or later). iCloud Keychain is secured with 256-bit AES encryption during storage and transmission, and its data cannot be read by Apple.

iCloud Keychain works with Safari Password Generator and AutoFill. When you're setting up a new account, Safari Password Generator suggests unique, hard-to-guess passwords. You can use AutoFill to have iPad enter your user name, password, and credit card info automatically. To protect your personal information, set a passcode if you turn on iCloud Keychain and AutoFill.

*Note:* Some websites do not support AutoFill.

iCloud Keychain can also keep the accounts you use in Mail, Contacts, Calendar, and Messages up to date across all of your iOS devices and Mac computers.

To learn more about iCloud Keychain, see the Apple Support article Frequently asked questions.

**Set up iCloud Keychain.** Go to Settings > [your name] > iCloud > Keychain. Turn on iCloud Keychain, then follow the onscreen instructions.

When you set up iCloud Keychain, you create an iCloud Security Code. You can use your iCloud Security Code to authorize additional devices to use your iCloud Keychain. It's also used to verify your identity so that you can perform other iCloud Keychain actions, such as recovering your iCloud Keychain if you lose all your devices.

**Set up iCloud Keychain on additional devices.** Set up iCloud Keychain for each device that you want to add. When you turn on iCloud Keychain on an additional device, your other devices that use iCloud Keychain receive a notification requesting approval for the additional device. After you approve the additional device, your iCloud Keychain automatically begins updating on that device.

To approve iCloud Keychain on an additional device when you don't have access to your other devices, follow the onscreen instructions to use your iCloud Security Code.

**Forgot your iCloud Security Code?** If you enter the wrong iCloud Security Code too many times when using iCloud Keychain, your iCloud Keychain is disabled on that device, and your keychain in iCloud is deleted. To reset or create a new iCloud Security Code, see the Apple Support article If you enter your iCloud Security Code incorrectly too many times.

### Find your iPad

If you misplace your iPad, the Find My iPhone app can help you locate it and protect your data. Use the Find My iPhone app on another iPad, iPhone, or iPod touch—or use the Find My iPhone web app on any Mac or PC—to locate your iPad on a map, lock it remotely, play a sound, display a message, or erase all its data. Find My iPhone includes a feature called *Activation Lock* that prevents anyone else from activating and using your iPad, even if it's completely erased.

You can also use Find My iPhone to locate your AirPods, your Apple Watch, and your other iOS devices.

Note: For more information about Find My iPhone, refer to the Help in the app.

Allow Find My iPhone to locate your iPad. Go to Settings > [your name] > iCloud, then turn on Find My iPad. Also turn on Send Last Location to have iPad send its last location prior to the battery running out. (See iCloud if you need help setting up iCloud.)

**Important:** To use these features, the Find My iPad setting must be turned on *before* your iPad is lost. iPad must be able to connect to the Internet for you to locate and secure the device.

**Use Find My iPhone.** On iPad or another iOS device, open the Find My iPhone app. Or on a computer, go to the Find My iPhone web app. Sign in, then select the device you want to locate.

- *Play Sound:* Play a sound at full volume for two minutes, even if the ringer is set to silent.
- Lost Mode: Immediately lock your missing iPad with a passcode and display a custom message on the screen with a contact number. Find My iPhone tracks and reports the location of your iPad, so you can see where it's been.
  - When iPad is in Lost Mode on models that support Apple Pay, Find My iPhone attempts to suspend the ability to pay with credit and debit cards used for Apple Pay.
- Erase iPad: Protect your privacy by erasing all the information and media on your iPad and restoring it to its original factory settings. Activation Lock prevents anyone else from activating and using your iPad, even after you erase it with Find My iPhone. On models that support Apple Pay, erasing iPad also removes the ability to pay with credit and debit cards used for Apple Pay.

Before you sell or give away your iPad, you should completely erase it in Settings, which removes Activation Lock. The next owner can then activate and use the device normally.

# Restart, update, reset, and restore

### Restart an app or iPad

If something isn't working right, try restarting the problem app or your iPad.

**Restart an app.** If an app isn't working properly, you can force it to quit and then try to reopen it. (Typically, there is no reason to quit an app; quitting it doesn't save battery power, for example.) To quit the app, double-click the Home button, then swipe up on the app in the App Switcher. Opening it again may resolve the problem.

**Restart iPad.** Press and hold the Sleep/Wake button until the slider appears. Drag the slider to turn off iPad. To turn iPad back on, press and hold the Sleep/Wake button until the Apple logo appears.

**Force restart iPad.** If iPad isn't responding, press and hold the Sleep/Wake button and the Home button at the same time for at least ten seconds, until the Apple logo appears.

If iPad still doesn't respond or turn on, see the Apple Support article If your iPad won't turn on.

## Update iOS software

You can update the iOS software in Settings or by using iTunes. Your content and settings remain unchanged.

Before you update, make a backup of iPad using iCloud or iTunes.

**Update wirelessly on iPad.** If a message says that an update is available, tap Install Now. Or go to Settings > General > Software Update to check for available software updates.

**Update software using iTunes.** iTunes checks for available software updates each time you sync iPad using iTunes.

For more information, see the Apple Support articles Update the iOS software and If you can't update or restore your device.

## Reset iPad settings

Without erasing your content, you can return iPad settings to their defaults. If you want to save your settings, back them up in iCloud or back them up using iTunes before resetting them.

If you want to use iTunes to delete your content along with your settings, and then restore iPad to factory settings, see Restore iPad. If you want to completely erase all content and settings, see Erase iPad.

**Return settings to their defaults.** Go to Settings > General > Reset, then choose an option:

**WARNING:** If you choose the Erase All Content and Settings option, all of your content is removed. See Erase iPad.

- Reset All Settings: All settings are reset.
- Reset Network Settings: Only network settings are removed.

When you reset network settings, previously used networks and VPN settings that weren't installed by a configuration profile or mobile device management (MDM) are removed. Wi-Fi is turned off and then back on, disconnecting you from any network you're on. The Wi-Fi and Ask to Join Networks settings remain turned on.

To remove VPN settings installed by a configuration profile, go to Settings > General > Profiles & Device Management, select the configuration profile, then tap Remove Profile. This also removes other settings and accounts provided by the profile. For more information, see Profiles settings in this guide. To remove network settings installed by MDM, go to Settings > General > Profiles & Device Management, select the management, then tap Remove Management. This also removes other settings and certificates provided by MDM. For more information, see "Mobile device management (MDM)" in the iOS Deployment Reference.

- Reset Keyboard Dictionary: You add words to the keyboard dictionary by rejecting words iPad suggests as you type. Resetting the keyboard dictionary erases only the words you've added.
- Reset Home Screen Layout: Returns the built-in apps to their original layout on the Home screen.
- Reset Location & Privacy: Resets the location services and privacy settings to their defaults.

### Restore iPad

To restore copies of your content and settings to iPad, you must first create a backup of your iPad. See Back up iPad with iCloud Backup and Back up iPad with iTunes.

If you're asked to enter your passcode or Apple ID password and you've forgotten either, see Forgot your Apple ID, iPad passcode, or iCloud Security Code?

**Erase then restore iPad from a backup.** Go to Settings > General > Reset, then tap Erase All Content and Settings. After iPad restarts, follow the setup assistant to restore iPad from an iCloud or iTunes backup.

**Restore iPad from an iTunes backup.** Connect iPad to the computer you normally sync with, then in iTunes choose File > Devices > Restore from Backup.

**Restore iPad to factory settings using iTunes.** Connect iPad to a computer, open iTunes on the computer, click the iPad button near the top of the iTunes window, then click Restore iPad in the Summary pane. All of the content and settings on iPad are deleted, and the latest iOS software is installed.

**Important:** Restoring iPad to factory settings using iTunes deletes all your information and settings, but doesn't erase it. Deleted information can't be accessed through the iPad interface, but it remains on your device. For information about erasing all content and settings, see Erase iPad.

For more information, see the Apple Support articles Restore your iPhone, iPad, or iPod touch from a backup and If you can't update or restore your iPhone, iPad, or iPod touch. For more information about iTunes, refer to the Help in the app.

## Restore purchased items

You can redownload items from the iTunes Store, App Store, and iBooks Store, without repurchasing them. If you're part of a Family Sharing group, you can download items purchased by other family members, too.

If you see  $\bigcirc$  next to an item, it's already been purchased, and you can download it again. To find purchases that aren't on your iPad, do the following:

- *iTunes Store:* Tap Purchased, tap a category (Music, Movies, or TV Shows), then tap Not on this iPad. To see purchases from other family members, tap My Purchases in the top-left corner, then choose a family member.
- App Store: Tap Updates, tap your profile picture at the top right, then tap Purchased, tap My Purchases (or a family member's purchases), then tap Not on this iPad.
- *iBooks Store:* Tap Purchased, tap a category from your purchases (or from a family member's purchases), then tap Not on this iPad.

**Download all your purchased ringtones and alerts.** Go to Settings > Sounds > Ringtone > Download All Purchased Tones.

### Erase iPad

When you delete data, it's no longer accessible through the iPad interface, but it isn't erased from iPad. To remove all of your content and settings, erase iPad. If you want to save your content and settings, back them up in iCloud or back them up using iTunes before erasing iPad.

**Important:** Erase iPad before you sell it or give it away. If you previously turned on Find my iPad, Activation Lock is removed when you erase iPad, making it ready for a new owner. For more information, see the Apple Support article What to do before selling or giving away your iPad.

Erase all content and settings from iPad. Go to Settings > General > Reset, then tap Erase All Content and Settings. (If you're asked to enter your passcode or Apple ID password and you've forgotten either, see Forgot your Apple ID, iPad passcode, or iCloud Security Code?)

After iPad restarts, follow the setup assistant to either set up iPad as new or restore it from an iCloud or iTunes backup.

# Accessibility

# Accessibility features

iPad provides many accessibility features to support your vision, interaction, hearing, and learning needs.

#### **Vision**

- VoiceOver
- Zoom
- Magnifier
- Display accommodations
- Speak Selection, Speak Screen, and Typing Feedback
- Large, bold, and high-contrast text
- Button shapes
- Reduce motion
- On/off switch labels
- Assignable tones
- Audio descriptions

#### Interaction

- Switch Control
- AssistiveTouch
- Touch Accommodations
- Use accessibility features with Siri
- Widescreen keyboards
- Software and hardware keyboards

#### Hearing

- Made for iPhone hearing aids
- Mono audio and balance
- Subtitles and closed captions
- LED Flash for Alerts

#### Learning

Guided Access

**Turn on accessibility features.** Go to Settings > General > Accessibility to set up and configure features. Then, you can quickly turn features on or off with the following methods:

- Ask Siri. Say something like: "Turn on VoiceOver." See Use accessibility features with Siri.
- Use accessibility shortcuts.

Use iTunes on your computer to configure accessibility on iPad. In iTunes, you can enable a limited number of accessibility features, including VoiceOver, Zoom, Invert Colors, Speak Auto-text, mono audio, and "Show closed captions when available." Click Summary, then click Configure Accessibility at the bottom of the Summary screen. For more information, see iTunes Help on your computer.

## Use accessibility shortcuts

You can quickly turn on or off many accessibility features using the Home button or Control Center.

#### Use the Home button.

- Set up Accessibility Shortcut: Go to Settings > General > Accessibility > Accessibility Shortcut, then select the features you use the most.
- Use Accessibility Shortcut: Triple-click the Home button.
- Slow down the double-click or triple-click speed for the Home button: Go to Settings > General > Accessibility > Home Button.

#### **Use Control Center.**

- Customize Control Center: Go to Settings > Control Center > Customize Controls, then tap ① next to accessibility features such as Accessibility Shortcuts, Magnifier, Hearing Aids, Touch Accommodations, and Guided Access.
- Activate an accessibility feature from Control Center: Open Control Center, then tap the accessibility feature.

#### Vision

#### VoiceOver

#### VoiceOver overview

VoiceOver is a gesture-based screen reader that lets you use iPad even if you don't see the screen. Add VoiceOver to Accessibility Shortcut to enable it wherever you are in iOS. Hear a description of what's on your screen—from battery level, to who's calling, to which app your finger is on. You can also adjust the speaking rate and pitch to suit you.

VoiceOver tells you about each item you select. The VoiceOver cursor (a black outline) encloses the item and VoiceOver speaks its name or describes it.

When you touch the screen or drag your finger over it, VoiceOver speaks the item your finger is on, including icons and text. To interact with an item, such as a button or link, or to navigate to another item, use VoiceOver gestures.

When you go to a new screen, VoiceOver plays a sound, then selects and speaks the first item on the screen (typically in the upper-left corner). It tells you when the display changes to landscape or portrait orientation, when the screen becomes dimmed or locked, and what's active on the Lock screen when you wake iPad.

*Note:* VoiceOver is available in many languages. Go to Settings > General > Language & Region to choose a language.

#### Learn VoiceOver gestures

**Important:** VoiceOver changes the gestures you use to control iPad. When VoiceOver is on, you must use VoiceOver gestures to operate iPad—even to turn VoiceOver off.

When VoiceOver is on, standard touchscreen gestures have different effects, and additional gestures let you move around the screen and control individual items. VoiceOver gestures include two-, three-, and four-finger taps and swipes. For best results using multifinger gestures, let your fingers touch the screen with some space between them.

You can use different techniques to perform VoiceOver gestures. For example, you can perform a two-finger tap using two fingers on one hand, or one finger on each hand. You can even use your thumbs. Some people use a split-tap gesture: instead of selecting an item and double-tapping, touch and hold an item with one finger, then tap the screen with another finger.

Try different techniques to discover which works best for you. If a gesture doesn't work, try a quicker movement, especially for a double-tap or swipe gesture. To swipe, try brushing the screen quickly with your finger or fingers.

In VoiceOver settings, you can enter a special area where you can practice VoiceOver gestures without affecting iPad or its settings.

**Practice VoiceOver gestures.** Go to Settings > General > Accessibility > VoiceOver, then tap VoiceOver Practice. When you finish practicing, tap Done. If you don't see the VoiceOver Practice button, make sure VoiceOver is turned on.

Here are some key VoiceOver gestures:

#### Navigate and read

- *Tap:* Selects and speaks the item.
- Swipe right or left: Selects the next or previous item.
- Swipe up or down: Depends on the rotor setting. See Use the VoiceOver rotor.
- Two-finger swipe up: Reads all from the top of the screen.
- Two-finger swipe down: Reads all from the current position.
- Two-finger tap: Stops or resumes speaking.
- Two-finger scrub (move two fingers back and forth three times quickly, making a "z"): Dismisses an alert or returns to the previous screen.
- Three-finger swipe up or down: Scrolls one page at a time.
- Three-finger swipe right or left: Goes to the next or previous page (on the Home screen, for example).
- Three-finger tap: Speaks additional information, such as position within a list or whether text is selected.
- Four-finger tap at top of screen: Selects the first item on the page.
- Four-finger tap at bottom of screen: Selects the last item on the page.

#### **Activate**

- Double-tap: Activates the selected item.
- *Triple-tap:* Double-taps an item.
- *Split-tap:* As an alternative to selecting an item and double-tapping to activate it, touch and hold an item with one finger, then tap the screen with another.
- Double-tap and hold (1 second) + standard gesture: Use a standard gesture. The double-tap and hold gesture tells iPad to interpret the next gesture as standard. For example, you can double-tap and hold your finger on the screen until you hear three rising tones, and then without lifting your finger, drag your finger on a slider.
- Two-finger double-tap: Initiates an action or halts or pauses an action in progress. For example, you can:
  - Play or pause in Music, Videos, or Photos (slideshows).
  - Take a photo or start or pause recording in Camera.
  - Start or stop the stopwatch.
- Two-finger double-tap and hold: Changes an item's label to make it easier to find.
- Two-finger triple-tap: Opens the Item Chooser.
- Three-finger double-tap: Mutes or unmutes VoiceOver. If both VoiceOver and Zoom are enabled, use the three-finger triple-tap gesture.
- Three-finger triple-tap: Turns the screen curtain on or off. If both VoiceOver and Zoom are enabled, use the three-finger quadruple-tap gesture.

#### Use iPad with VoiceOver

**Turn VoiceOver on or off.** Summon Siri and say "turn on VoiceOver" or "turn off VoiceOver." You can also go to Settings > General > Accessibility > VoiceOver, or use accessibility shortcuts.

**Unlock iPad.** Press either the Sleep/Wake or Home button, then double-tap the screen. On iPad models with Touch ID, you can unlock iPad by placing your finger on the Home button. See Wake and unlock iPad.

**Enter your passcode silently.** To avoid having your passcode spoken as you enter it, enable handwriting mode or type onscreen braille.

**Unlock iPad with Touch ID.** You can unlock iPad by pressing your finger on the Home button if you set up Touch ID (on supported models). To use Touch ID by touching instead of pressing the Home button, go to Settings > General > Accessibility > Home

Button, then turn on Rest Finger to Open.

**Open an app, toggle a switch, or tap an item.** Tap the item, then double-tap the screen.

**Double-tap the selected item.** To invoke a command normally executed by tapping twice on the screen—selecting a word or zooming an image, for example—tap three times.

Adjust a slider. Tap the slider, then swipe up or down with one finger.

**Use a standard gesture.** Double-tap and hold your finger on the screen until you hear three rising tones, then make the gesture. When you lift your finger, VoiceOver gestures resume. For example, to drag a volume slider with your finger instead of swiping up and down, select the slider, double-tap and hold, wait for the three tones, then slide left or right.

**Scroll a list or area of the screen.** Swipe up or down with three fingers.

- Use the list index: Some lists have an alphabetical table index along the right side. Select the index, then swipe up or down to move through the index. You can also double-tap, hold, then slide your finger up or down.
- Reorder a list: You can change the order of items in some lists, such as the Rotor items in Accessibility settings. Tap == to the right of an item, double-tap and hold until you hear three rising tones, then drag up or down.

**Open the notifications screen.** Tap any item in the status bar, then swipe down with three fingers. Or touch and hold the top of the screen until you hear a sound, then swipe down. To return to where you were, do a two-finger scrub (move two fingers back and forth three times quickly, making a "z") or press the Home button.

**Open Control Center.** Tap any item in the status bar, then swipe up with three fingers. Or touch and hold the bottom of the screen until you hear a sound, then swipe up. To dismiss Control Center, do a two-finger scrub or press the Home button.

**Search from the Home screen.** Tap anywhere on the Home screen outside the status bar, then swipe down with three fingers.

**Activate Slide Over.** Tap any item in the status bar, then swipe left with three fingers. Or touch and hold the right edge of the screen until you hear a sound, then swipe left.

- Select the divider: Tap the divider.
- Turn on Split View: Double-tap the divider.
- Resize the divider: Double-tap and hold the divider, then drag it.

**Switch apps.** Open the App Switcher, swipe left or right with one finger to select an app, then double-tap to switch to it. Or, set the rotor to Actions while viewing open apps, then swipe up or down to cycle through the apps.

Rearrange apps on your Home screen. Use one of the following methods:

- Drag and drop: Tap an icon on the Home screen, then double-tap and hold your finger
  on the screen until you hear three rising tones. The item's relative location is
  described as you drag. Lift your finger when the icon is in its new location. Drag an
  icon to the edge of the screen to move it to another Home screen. You can continue
  to select and move items until you press the Home button.
- Move actions: Tap an app, then swipe down to hear available actions. When you hear
  Arrange Apps, double-tap to start arranging apps. Find the app you wish to move,
  then swipe down to the Move action and double-tap. Move the VoiceOver cursor to
  the new destination for the app, then choose from the available actions: Cancel Move,
  Create New Folder, Add to Folder, Move Before, or Move After. You can continue to
  select and move items until you press the Home button.

**Speak iPad status information.** Tap the status bar at the top of the screen, then swipe left or right to hear information about the time, battery state, Wi-Fi signal strength, and more.

**Speak notifications.** Go to Settings > General > Accessibility > VoiceOver, then turn on Always Speak Notifications. Notifications, including the text of incoming text messages, are spoken as they occur, even if iPad is locked. Unacknowledged notifications are repeated when you unlock iPad.

**Turn the screen curtain on or off.** Triple-tap with three fingers. When the screen curtain is on, the screen contents are active even though the display is turned off.

**Set audio routing options.** Go to Settings > General > Accessibility > VoiceOver > Audio. Device-specific options are shown if you connect additional devices, such as an instrument amplifier or DJ mixer.

### Use the VoiceOver rotor

Use the rotor to choose what happens when you swipe up or down with VoiceOver turned on, or to select special input methods such as Braille Screen Input or Handwriting.

**Operate the rotor.** Rotate two fingers on the screen around a point between them. If you prefer to use one finger on each hand, simultaneously flick up with one finger and flick down with the other.



**Choose your rotor options.** Go to Settings > General > Accessibility > VoiceOver > Rotor, then select the options you want to include in the rotor.

The available rotor options and their effects depend on what you're doing. For example, if you're reading an email, you can use the rotor to switch between hearing text spoken word-by-word or character-by-character when you swipe up or down. If you're browsing a webpage, you can set the rotor to speak all the text (either word-by-word or character-by-character), or to jump from one item to another of a certain type, such as headings or links.

When you use an Apple Wireless Keyboard to control VoiceOver, the rotor lets you adjust settings such as volume, speech rate, use of pitch or phonetics, typing echo, and reading of punctuation.

#### VoiceOver basics

**Important:** VoiceOver changes the gestures you use to control iPad. When VoiceOver is on, you must use VoiceOver gestures—even to turn VoiceOver off.

**Explore.** Drag your finger over the screen. VoiceOver speaks each item you touch. Lift your finger to leave an item selected.

- Activate an item: Tap once to select an item, then double-tap to activate it.
- Select the next or previous item: Swipe right or left with one finger. Item order is left-to-right, top-to-bottom.
- Select the first or last item on the screen: Tap with four fingers at the top or bottom of the screen.
- Select an item by name: Triple-tap with two fingers anywhere on the screen to open
  the Item Chooser. Then type a name in the search field, or swipe right or left to move
  through the list alphabetically, or tap the table index to the right of the list and swipe
  up or down to move quickly through the list of items. You can also use handwriting to
  select an item by writing its name; see Write with your finger. To dismiss the Item
  Chooser without making a selection, double-tap.
- Change an item's name so it's easier to find: Select the item, then double-tap and hold with two fingers anywhere on the screen.
- Speak the text of the selected item: Set the rotor to characters or words, then swipe down or up with one finger. See Use the VoiceOver rotor.

- Hear additional detail about using a button or feature: Go to Settings > General >
   Accessibility > VoiceOver, then turn Speak Hints on or off.
- Use phonetic spelling: Go to Settings > General > Accessibility > VoiceOver > Phonetic Feedback.
- Speak the entire screen, from the top: Swipe up with two fingers.
- Speak from the current item to the bottom of the screen: Swipe down with two fingers.
- Pause speaking: Tap once with two fingers. Tap again with two fingers to resume, or select another item.
- Mute VoiceOver: Double-tap with three fingers; repeat to unmute. If both VoiceOver and Zoom are enabled, triple-tap with three-fingers. If you're using an external keyboard, press the Control key.
- Silence sound effects: Go to Settings > General > Accessibility > VoiceOver > Audio, then turn off Use Sound Effects.

**Use a larger VoiceOver cursor.** Go to Settings > General > Accessibility > VoiceOver, then turn on Large Cursor.

**Adjust the speaking voice.** You can adjust the VoiceOver speaking voice:

- Adjust the volume: Use the volume buttons on iPad. You can also add volume to the rotor, then swipe up or down to adjust it. See Use the VoiceOver rotor.
- Change the speaking rate: Go to Settings > General > Accessibility > VoiceOver, then drag the Speaking Rate slider. You can also set the rotor to Speaking Rate, then swipe up or down to adjust.
- Adjust the pitch of the speaking voice: Go to Settings > General > Accessibility > VoiceOver > Speech, then drag the Pitch slider.
- Use pitch change: VoiceOver can use a higher pitch when speaking the first item of a group (such as a list or table) and a lower pitch when speaking the last item of a group. Go to Settings > General > Accessibility > VoiceOver > Speech, then turn on Use Pitch Change.
- Control audio ducking: To choose whether audio that's playing is turned down while VoiceOver speaks, set the rotor to Audio Ducking, then swipe up or down.
- Change the language for iPad: Go to Settings > General > Language & Region.

  VoiceOver pronunciation of some languages is affected by the Region Format you choose there.

- Change pronunciation: Set the rotor to Language, then swipe up or down. Language
  is available in the rotor only if you select more than one pronunciation in Settings >
  General > Accessibility > VoiceOver > Speech > Rotor Languages.
- Choose which dialects are available in the rotor: Go to Settings > General > Accessibility > VoiceOver > Speech > Rotor Languages. To adjust voice quality or speaking rate, tap a language. To remove languages from the rotor or change their order, tap Edit, tap the Delete button or drag ≡ up or down, then tap Done.
- Set the default voice for the current iPad language: Go to Settings > General >
   Accessibility > VoiceOver > Speech > Voice.
- Download an enhanced quality reading voice: Go to Settings > General >
   Accessibility > VoiceOver > Speech, tap a language, then choose an enhanced voice.
   If you're using English, you can choose to download Alex (869 MB), the same high-quality U.S. English voice used for VoiceOver on Mac computers.
- Specify the pronunciation of certain words: Go to Settings > General > Accessibility >
  Speech > Pronunciations. Tap +, enter a phrase, then dictate or spell out how you
  want the phrase to be pronounced.

**Control verbosity.** To control how much VoiceOver tells you, go to Settings > General > Accessibility > VoiceOver > Verbosity. You can control whether VoiceOver speaks hints, punctuation, uppercase letters, embedded links, and more. You can even have VoiceOver say "emoji" after it reads an emoji in text.

## Use the onscreen keyboard

When you activate an editable text field, the onscreen keyboard appears (unless you have an Apple Wireless Keyboard attached).

**Activate a text field.** Select the text field, then double-tap. The insertion point and the onscreen keyboard appear.

**Choose a typing style.** Go to Settings > General > Accessibility > VoiceOver > Typing Style. Or, set the rotor to Typing Mode, then swipe up or down.

**Enter text.** Type characters using the onscreen keyboard:

 Standard typing: Select a key on the keyboard by swiping left or right, then doubletap to enter the character. Or move your finger around the keyboard to select a key and, while continuing to touch the key with one finger, tap the screen with another finger. VoiceOver speaks the key when it's selected, and again when the character is entered.

- Touch typing: Touch a key on the keyboard to select it, then lift your finger to enter
  the character. If you touch the wrong key, slide your finger to the key you want.
   VoiceOver speaks the character for each key as you touch it, but doesn't enter a
  character until you lift your finger.
- *Direct Touch typing:* VoiceOver is disabled for the keyboard only, so you can type just as you do when VoiceOver is off.

**Move the insertion point.** Swipe up or down to move the insertion point forward or backward in the text. Use the rotor to choose whether you want to move the insertion point by character, by word, or by line. To jump to the beginning or end, double-tap the text.

VoiceOver makes a sound when the insertion point moves, and speaks the character, word, or line that the insertion point moves across. When moving forward by words, the insertion point is placed at the end of each word, before the space or punctuation that follows. When moving backward, the insertion point is placed at the end of the preceding word, before the space or punctuation that follows it.

Move the insertion point past the punctuation at the end of a word or sentence. Use the rotor to switch back to character mode.

When moving the insertion point by line, VoiceOver speaks each line as you move across it. When moving forward, the insertion point is placed at the beginning of the next line (except when you reach the last line of a paragraph, when the insertion point is moved to the end of the line just spoken). When moving backward, the insertion point is placed at the beginning of the line that's spoken.

**Change typing feedback.** By default, VoiceOver speaks characters as well as words when you type. To hear no feedback, hear characters only, or hear words only, go to Settings > General > Accessibility > VoiceOver > Typing Feedback, then choose an option.

**Use phonetics in typing feedback.** Go to Settings > General > Accessibility > VoiceOver > Phonetic Feedback. Text is read character by character. VoiceOver first speaks the character, then its phonetic equivalent—for example, "f" and then "foxtrot."

**Delete a character.** Use  $\bigotimes$  with any of the VoiceOver typing styles. To control whether VoiceOver speaks each character as it's deleted, go to Settings > General > Accessibility > VoiceOver > Verbosity > Deleting Text. If you choose Change Pitch, VoiceOver speaks deleted characters in a lower pitch.

**Select text.** Set the rotor to Edit, swipe up or down to choose Select or Select All, then double-tap. If you choose Select, the word closest to the insertion point is selected when you double-tap. To increase or decrease the selection, do a two-finger scrub to dismiss the pop-up menu, then pinch.

**Cut, copy, or paste.** Set the rotor to Edit, select the text, swipe up or down to choose Cut, Copy, or Paste, then double-tap.

**Undo.** Shake iPad, swipe left or right to choose the action to undo, then double-tap.

**Enter an accented character.** In standard typing style, select the plain character, then double-tap and hold until you hear a sound indicating alternate characters have appeared. Drag left or right to select and hear the choices. Release your finger to enter the current selection. In touch typing style, touch and hold a character until the alternate characters appear.

**Change the keyboard language.** Set the rotor to Language, then swipe up or down. Choose "default language" to use the language specified in Language & Region settings. The Language rotor item appears only if you select more than one language in Settings > General > Accessibility > VoiceOver > Speech.

## Write with your finger

Handwriting mode lets you enter text by writing characters on the screen with your finger. In addition to normal text entry, use handwriting mode to enter your iPad passcode silently or open apps from the Home screen.

**Enter handwriting mode.** Use the rotor to select Handwriting. If Handwriting isn't in the rotor, go to Settings > General > Accessibility > VoiceOver > Rotor, then add it.

**Choose a character type.** Swipe up or down with three fingers to choose lowercase, numbers, uppercase, or punctuation.

**Hear the selected character type.** Tap with three fingers.

**Enter a character.** Trace the character on the screen with your finger.

**Enter an alternate character.** To use an alternate character (a character with an accent or umlaut, for example), write the character, then swipe up or down with two fingers until you hear the type of character you want.

**Enter a space.** Swipe right with two fingers.

**Go to a new line.** Swipe right with three fingers.

**Delete the character before the insertion point.** Swipe left with two fingers.

**Select an item on the Home screen.** Start writing the name of the item. If there are multiple matches, continue to spell the name until it's unique, or swipe up or down with two fingers to choose from the current matches.

**Enter your passcode silently.** Set the rotor to Handwriting on the passcode screen, then write the characters of your passcode.

Use a table index to skip through a long list. Select the table index to the right of the table (for example, next to your Contacts list or in the VoiceOver Item Chooser), then write the letter.

**Set the rotor to a web browsing element type.** Write the first letter of a page element type. For example, write "I" to have up or down swipes skip to links, or "h" to skip to headings.

**Exit handwriting mode.** Do a two-finger scrub, or set the rotor to a different selection.

### Type onscreen braille

If you turn on Braille Screen Input, you can use your fingers to enter 6-dot or contracted braille directly on the iPad screen. Enter braille with iPad lying flat in front of you (tabletop mode), or hold iPad with the screen facing away so your fingers curl back to tap the screen (screen away mode).

**Turn on Braille Screen Input.** Use the rotor to select Braille Screen Input. If you don't find it in the rotor, go to Settings > General > Accessibility > VoiceOver > Rotor, then add it.

**Enter braille.** Place iPad flat in front of you or hold it with the screen facing away, then tap the screen with one or several fingers at the same time.

**Adjust entry dot positions.** To move the entry dots to match your natural finger positions, tap and lift your right three fingers all at once to position dots 4, 5, and 6, followed immediately by your left three fingers for dots 1, 2, and 3.

**Switch between 6-dot and contracted braille.** Swipe to the right with three fingers. To set the default, go to Settings > General > Accessibility > VoiceOver > Braille > Braille Screen Input.

**Enter a space.** Swipe right with one finger. (In screen away mode, swipe to *your* right.)

**Delete the previous character.** Swipe left with one finger.

**Move to a new line (typing).** Swipe right with two fingers.

**Cycle through spelling suggestions.** Swipe up or down with one finger.

**Select an item on the Home screen.** Start entering the name of the item. If there are multiple matches, continue to spell the name until it is unique, or swipe up or down with one finger to cycle through match suggestions.

**Open the selected app.** Swipe right with two fingers.

**Lock the screen orientation.** Swipe up or down with three fingers.

**Use Exploring Mode.** To have iPad read dots aloud as they are tapped and released, tap and hold dots, then wait for the timer tones and announcement.

**Turn braille contractions on or off.** Swipe to the right with three fingers.

Translate immediately (when contractions are enabled). Swipe down with two fingers.

**Switch to the next keyboard.** Swipe up with two fingers.

**Turn off Braille Screen Input.** Do a two-finger scrub, or set the rotor to another setting.

### Use VoiceOver with an Apple Wireless Keyboard

You can control VoiceOver using an Apple Wireless Keyboard paired with iPad. See Use an Apple Wireless Keyboard. You activate VoiceOver commands on the Apple Wireless Keyboard with keyboard shortcuts.

You can use VoiceOver Help to learn the keyboard layout and the actions associated with various key combinations. VoiceOver Help speaks keys and keyboard commands as you type them, without performing the associated action.

**Choose the modifier keys.** Go to Settings > General > Accessibility > VoiceOver > Modifier Keys. You can choose the Control-Option key combination or the Caps Lock key, abbreviated as "VO" in the following list.

### VoiceOver keyboard commands

VO = Control-Option

- Turn on VoiceOver Help: VO-K
- Turn off VoiceOver Help: Escape
- Select the next or previous item: VO–Right Arrow or VO–Left Arrow
- Double-tap to activate the selected item: VO-Space bar
- Press the Home button: VO–H
- Touch and hold the selected item: VO-Shift-M
- Move to the status bar: VO–M
- Read from the current position: VO–A
- Read from the top: VO–B
- Pause or resume reading: Control
- Copy the last spoken text to the clipboard: VO-Shift-C

- Search for text: VO–F
- Mute or unmute VoiceOver: VO-S
- Open the notifications screen: Fn–VO–Up Arrow
- Open Control Center: Fn-VO-Down Arrow
- Open the Item Chooser: VO–I
- Change the label of the selected item: VO-/
- Double-tap with two fingers: VO-"-"
- Swipe up or down: VO-Up Arrow or VO-Down Arrow
- Adjust the rotor: VO-Command-Left Arrow or VO-Command-Right Arrow
- Adjust the setting specified by the rotor: VO–Command–Up Arrow or VO–Command– Down Arrow
- Turn the screen curtain on or off: VO-Shift-F11
- Return to the previous screen: Escape
- Switch apps: Command–Tab or Command–Shift–Tab

#### **Quick Nav**

Turn on Quick Nav to control VoiceOver using the arrow keys.

- Turn Quick Nav on or off: Left Arrow–Right Arrow
- Select the next or previous item: Right Arrow or Left Arrow
- Select the next or previous item specified by the rotor: Up Arrow or Down Arrow
- Select the first or last item: Control-Up Arrow or Control-Down Arrow
- Tap an item: Up Arrow–Down Arrow
- Scroll up, down, left, or right: Option-Up Arrow, Option-Down Arrow, Option-Left Arrow, or Option-Right Arrow
- Adjust the rotor: Up Arrow–Left Arrow or Up Arrow–Right Arrow

#### Single-key Quick Nav for web browsing

When you view a webpage with Quick Nav on, you can use the following keys on the keyboard to navigate the page quickly. Typing the key moves to the next item of the indicated type. To move to the previous item, hold the Shift key as you type the letter.

Turn on Single-key Quick Nav: VO-Q Heading: H Link: L Text field: R Button: B Form control: C lmage: I Table: T Static text: S ARIA landmark: W • List: X • Item of the same type: M • Level 1 heading: 1 • Level 2 heading: 2 • Level 3 heading: 3 • Level 4 heading: 4 • Level 5 heading: 5 • Level 6 heading: 6 **Text editing** Use these commands (with Quick Nav turned off) to work with text. VoiceOver reads the text as you move the insertion point. • Go forward or back one character: Right Arrow or Left Arrow • Go forward or back one word: Option-Right Arrow or Option-Left Arrow • Go up or down one line: Up Arrow or Down Arrow

• Go to the beginning or end of the line: Command–Left Arrow or Command–Down

• Go to the beginning or end of the paragraph: Option-Up Arrow or Option-Down Arrow

Arrow

- Go to the previous or next paragraph: Option-Up Arrow or Option-Down Arrow
- Go to the top or bottom of the text field: Command-Up Arrow or Command-Down Arrow
- Select text as you move: Shift + any of the insertion point movement commands above
- Select all text: Command–A
- Copy, cut, or paste the selected text: Command–C, Command–X, or Command–V
- Undo or redo last change: Command–Z or Shift–Command–Z

### Support for braille displays

You can use a Bluetooth braille display to read VoiceOver output, and a braille display with input keys and other controls to control iPad when VoiceOver is turned on. For a list of supported braille displays, go to the Braille Displays for iOS website.

**Connect a braille display.** Turn on the display, then go to Settings > Bluetooth and turn on Bluetooth. Then, go to Settings > General > Accessibility > VoiceOver > Braille and choose the display.

**Adjust Braille settings.** Go to Settings > General > Accessibility > VoiceOver > Braille, where you can:

- Choose contracted, uncontracted 8-dot, or uncontracted 6-dot braille input or output
- Turn on the status cell and choose its location
- Turn on Nemeth code for mathematical equations
- Display the onscreen keyboard
- Choose to have the page turned automatically when panning
- Change the braille translation from Unified English
- Change the alert display duration

Output closed captions in Braille during media playback. Go to Settings > General > Accessibility > VoiceOver > Verbosity, then choose Braille or Speech and Braille.

For information about common braille commands for VoiceOver navigation, and for information specific to certain displays, see the Apple Support article Common braille commands for VoiceOver navigation using iPhone, iPad, and iPod touch.

**Set the language for VoiceOver.** Go to Settings > General > Language & Region.

If you change the language for iPad, you may need to reset the language for VoiceOver and your braille display.

You can set the leftmost or rightmost cell of your braille display to provide system status and other information. For example:

- Announcement History contains an unread message
- The current Announcement History message hasn't been read
- VoiceOver speech is muted
- The iPad battery is low (less than 20% charge)
- iPad is in landscape orientation
- The screen display is turned off
- The current line contains additional text to the left
- The current line contains additional text to the right

**Set the leftmost or rightmost cell to display status information.** Go to Settings > General > Accessibility > VoiceOver > Braille > Status Cell, then tap Left or Right.

**See an expanded description of the status cell.** On your braille display, press the status cell's router button.

### Read PDFs

VoiceOver can read detailed information—such as forms, tables, and lists—in PDF documents in the Files and iBooks apps.

## Read math equations

VoiceOver can read aloud math equations encoded using:

- MathML on the web
- MathML or LaTeX in iBooks Author

**Hear an equation.** Have VoiceOver read the text as usual. VoiceOver says "math" before it starts reading an equation.

**Explore the equation.** Double-tap the selected equation to display it full screen and move through it one element at a time. Swipe left or right to read elements of the equation. Use the rotor to select Symbols, Small Expressions, Medium Expressions, or

Large Expressions, then swipe up or down to hear the next element of that size. You can continue to double-tap the selected element to "drill down" into the equation to focus on the selected element, then swipe left or right, up or down to read one part at a time.

Equations read by VoiceOver can also be output to a braille device using Nemeth code, as well as the codes used by Unified English Braille, British English, French, and Greek. See Support for braille displays.

### Use VoiceOver with Safari

**Search the web.** Select the search field, double-tap to invoke the keyboard, enter your search, then swipe right or left to move down or up the list of suggested search phrases. Then double-tap the screen to search the web using the selected phrase.

**Skip to the next page element of a particular type.** Set the rotor to the element type, then swipe up or down.

**Set the rotor options for web browsing.** Go to Settings > General > Accessibility > VoiceOver > Rotor. Tap to select or deselect options, or drag ≡ up or down to reposition an item.

**Skip images while navigating.** Go to Settings > General > Accessibility > VoiceOver > Navigate Images. You can choose to skip all images or only those without descriptions.

**Reduce page clutter for easier reading and navigation.** Select the Reader item in the Safari address field (not available for all pages).

If you pair an Apple Wireless Keyboard with iPad, you can use single-key Quick Nav commands to navigate webpages. See Use VoiceOver with an Apple Wireless Keyboard.

## Use VoiceOver with Maps

You can use VoiceOver to explore a region, browse points of interest, follow roads, zoom in or out, select a pin, or get information about a location.

Control how the map tracks your current location. Double-tap  $\neg$  until you hear the tracking option you want:

- *Tracking on:* The map automatically centers on your current location.
- *Tracking on with heading:* The map automatically centers on your current location and rotates so that the heading you're facing is at the top of the screen. In this mode, iPad speaks street names and points of interest as you approach them.
- *Tracking off:* The map doesn't automatically center on your current location.

**Explore the map.** Drag your finger around the screen, or swipe left or right to move to another item.

**Zoom in or out.** Select the map, set the rotor to Zoom, then swipe down or up with one finger.

Pan the map. Swipe with three fingers.

**Browse visible points of interest.** Set the rotor to Points of Interest, then swipe up or down with one finger.

**Follow a road.** Hold your finger down on the road, wait until you hear "pause to follow," then move your finger along the road while listening to the guide tone. The pitch increases when you stray from the road.

**Select a pin.** Touch a pin, or swipe left or right to select the pin.

**Get information about a location.** With a pin selected, double-tap to display the information flag. Swipe left or right to select the More Info button, then double-tap to display the information page.

### Edit videos with VoiceOver

You can use VoiceOver gestures to trim Camera videos.

**Trim a video.** While viewing a video in Photos, double-tap the screen to display the video controls, then select the beginning or end of the trim tool. Then swipe up to drag to the right, or swipe down to drag to the left. VoiceOver announces the amount of time the current position will trim from the recording. To complete the trim, select Trim, then double-tap.

### Zoom

Many apps let you zoom in or out on specific items. For example, you can double-tap or pinch to look closer in Photos or expand webpage columns in Safari. There's also a general Zoom feature that lets you magnify the screen no matter what you're doing. You can zoom the entire screen (Full Screen Zoom) or zoom part of the screen in a resizable window and leave the rest of the screen unmagnified (Window Zoom). And, you can use Zoom together with VoiceOver.

**Turn Zoom on or off.** Go to Settings > General > Accessibility, then turn Zoom on or off. Or use accessibility shortcuts.

Zoom in or out. With Zoom turned on, double-tap the screen with three fingers.

**Adjust the magnification.** Double-tap with three fingers, then drag up or down. This gesture is similar to a double-tap, except you don't lift your fingers after the second tap—instead, drag your fingers on the screen. You can also triple-tap with three fingers, then

drag the Zoom Level slider in the zoom controls that appear. To limit the maximum magnification, go to Settings > General > Accessibility > Zoom, then drag the Maximum Zoom Level slider all the way to the left.

**Pan to see more.** Drag the screen with three fingers. Or hold your finger near the edge of the screen to pan to that side. Move your finger closer to the edge to pan more quickly. Or, if you have detached the Zoom Controller, drag it.

**Switch between Full Screen Zoom and Window Zoom.** Triple-tap with three fingers, then tap Window Zoom or Full Screen Zoom in the zoom controls that appear. To choose the mode that's used when you turn on Zoom, go to Settings > General > Accessibility > Zoom > Zoom Region.

**Resize the zoom window (Window Zoom).** Triple-tap with three fingers, tap Resize Lens, then drag any of the round handles that appear.

Move the zoom window (Window Zoom). Drag the handle at the bottom of the zoom window.

**Show the zoom controller.** Go to Settings > General > Accessibility > Zoom, then turn on Show Controller, or triple-tap with three fingers, then choose Show Controller. Then you can double-tap the floating Zoom Controls button to zoom in or out, single-tap the button to display the zoom controls, or drag it to pan. To move the Zoom Controls button, touch and hold the button, then drag it to a new location. To adjust the transparency of the zoom controller, go to Settings > General > Accessibility > Zoom > Idle Visibility.

Have Zoom track your selections or the text insertion point. Go to Settings > General > Accessibility > Zoom, then turn on Follow Focus. Then, for example, if you use VoiceOver, the zoom window magnifies each element on the screen as you select it.

**Zoom in on your typing without magnifying the keyboard.** Go to Settings > General > Accessibility > Zoom, then turn on Follow Focus. When you zoom in while typing (in Messages or Notes, for example), the area immediately around the text you type is magnified while all of the keyboard remains visible. Turn on Smart Typing, and the entire window (except the keyboard) is magnified.

**Display the magnified part of the screen in grayscale or inverted color.** Go to Settings > General > Accessibility > Zoom > Zoom Filter, then choose an option. Or triple-tap with three fingers, then tap Choose Filter in the zoom controls that appear.

While using Zoom with an Apple Wireless Keyboard, the screen image follows the insertion point, keeping it in the center of the display. See Use an Apple Wireless Keyboard.

## Magnifier

Turn your iPad into a magnifying glass to zoom in on objects near you.

**Set up Magnifier.** Go to Settings > General > Accessibility > Magnifier, then turn on Magnifier. This adds Magnifier to accessibility shortcuts.

Turn on Magnifier. Use accessibility shortcuts.

Adjust the magnification level. Drag the Zoom Level slider.

**Add more light.** Tap **★** to turn the flashlight on or off.

**Lock the focus.** Tap  $\triangle$ . Tap again to unlock the focus.

**Freeze the frame.** Tap  $\bigcirc$ . To adjust the magnification, drag the Zoom Level slider. To save the image, touch and hold the image, then tap Save Image. To unfreeze the frame, tap  $\bigcirc$  again.

**Apply color filters.** Tap ♠. Tap the different color filters to preview their effects. To adjust the brightness and contrast, drag the sliders. To invert the colors, tap ♣. To apply the selected filter and return to Magnifier screen, tap ♠ again.

**Turn off Magnifier.** Click the Home button.

## Display accommodations

If you have color blindness or other vision challenges, you can customize the display settings to make the screen easier to see.

**Automatically adjust the screen brightness.** Go to Settings > General > Accessibility > Display Accommodations, then turn on Auto-Brightness. iPad adjusts the screen brightness for current light conditions using the built-in ambient light sensor.

Invert the screen colors. Go to Settings > General > Accessibility > Display
Accommodations > Invert Colors, then choose Smart Invert or Classic Invert. Or use
accessibility shortcuts. Smart Invert Colors reverses the colors of the display, except for
images, media, and some apps that use dark color styles.

**Apply color filters or grayscale.** Go to Settings > General > Accessibility > Display Accommodations > Color Filters, then turn on Color Filters. Or, use accessibility shortcuts. Tap a filter to apply it. To adjust the intensity or hue, drag the sliders.

**Reduce the intensity of bright colors.** Go to Settings > General > Accessibility > Display Accommodations, then turn on Reduce White Point.

You can also apply these effects to only the contents of the zoom window. See Zoom.

**Set the maximum frame rate of the display to 60 frames per second.** (on supported models) Go to Settings > General > Accessibility > Display Accommodations, then turn on Limit Frame Rate.

## Speak Selection, Speak Screen, and Typing Feedback

Even if VoiceOver is turned off, you can have iPad speak selected text or the entire screen. iPad can also provide feedback and speak text corrections and suggestions as you type.

Go to Settings > General > Accessibility > Speech, where you can:

- Turn on Speak Selection.
- Turn on Speak Screen.
- Choose whether content is highlighted as it's spoken.
- Turn on and configure Typing Feedback; you can configure typing feedback for software and hardware keyboards and choose to have iPad speak each character, entire words, auto-corrections, auto-capitalizations, and typing predictions.
- Adjust the speaking rate.

**Hear selected text.** Select the text, then tap Speak.

**Hear screen content.** Swipe down with two fingers from the top of the screen. Use the controls that appear to pause speaking or adjust the rate.

Ask Siri. Say "speak screen."

Hear typing feedback. Start typing.

**Hear typing predictions.** Go to Settings > General > Keyboards, and turn on Predictive. Then, go to Settings > General > Accessibility > Speech > Typing Feedback, and turn on Hold to Speak Predictions. Touch and hold a prediction to hear it spoken.

## Large, bold, and high-contrast text

Display larger text in apps such as Settings, Calendar, Contacts, Mail, Messages, and Notes. Go to Settings > General > Accessibility > Larger Text, then turn on Larger Accessibility Sizes. Or, use accessibility shortcuts.

**Display bolder text on iPad.** Go to Settings > General > Accessibility, then turn on Bold Text.

**Increase text contrast where possible.** Go to Settings > General > Accessibility > Increase Contrast. You can choose to reduce transparency and darken colors.

## **Button shapes**

iPad can underline text buttons so they're easier to see.

**Emphasize buttons.** Go to Settings > General > Accessibility, then turn on Button Shapes.

### Reduce motion

If you have sensitivity to motion effects or screen movement on your iPad, you can stop or reduce the movement of some screen elements, such as:

- Parallax effect of wallpaper, apps, and alerts
- Screen transitions
- Siri animations
- Typing autocompletion
- Animated effects in Messages

**Reduce motion.** Go to Settings > General > Accessibility > Reduce Motion.

**Manually play effects in Messages.** If you don't want to automatically play bubble and full-screen effects in Messages, turn off Auto-Play Message Effects. To manually play effects in Messages, tap Replay below the message bubble.

## On/off switch labels

To make it easier to distinguish whether a setting is on or off, you can have iPad show an additional label on on/off switches.

**Add switch-setting labels.** Go to Settings > General > Accessibility, then turn on the On/Off Labels switch.

## Assignable tones

You can assign distinctive ringtones to people in your contacts list for audible FaceTime caller ID. You can also assign distinct tones to alert you of a variety of other events, including new voicemail, new mail, sent mail, and reminders. See Sounds and silence.

You can purchase ringtones from the iTunes Store on iPad. See Find music, movies, TV shows, and more.

## Audio descriptions

If you have a video that includes audio descriptions of scenes, iPad can play the descriptions for you.

**Hear audio descriptions.** Go to Settings > General > Accessibility > Audio Descriptions, then turn on Prefer Audio Descriptions.

## Interaction

### Switch Control

### Switch Control overview

If you have a motor impairment, Switch Control lets you control iPad using one or more connected physical switches. Use any of several methods to perform actions such as selecting, tapping, dragging, typing, invoking multitasking options on devices that support them, and even free-hand drawing. You use a switch to select an item or location on the screen, and then use the same (or different) switch to choose an action to perform on that item or location. Three basic methods are:

- *Item scanning (default)*, which highlights different items on the screen until you select one.
- Point scanning, which lets you use scanning crosshairs to pick a screen location.
- Manual selection, which lets you move from item to item on demand (requires multiple switches).

Whichever method you use, when you select an individual item (rather than a group), a menu appears so you can choose how to act on the selected item (tap, drag, or pinch, for example).

If you use multiple switches, you can set up each switch to perform a specific action and customize your item selection method. For example, instead of automatically scanning screen items, you can set up switches to move to the next or previous item on demand.

You can adjust the behavior of Switch Control in a variety of ways, to suit your specific needs and style.

### Add a switch and turn on Switch Control

You can use the following as a switch:

- An external adaptive switch: Choose a Bluetooth switch or a Made For iPhone switch that plugs into the lightning port.
- The iPad screen: Tap the screen to trigger the switch.
- The iPad front-facing camera: Use head movements while facing the camera to trigger the switch.

**Add a switch and choose its action.** Go to Settings > General > Accessibility > Switch Control > Switches. If you use only one switch, it is your Select Item switch by default.

If you're adding an external switch, you need to connect it to iPad before it will appear in the list of available switches. Follow the instructions that came with the switch. If it connects using Bluetooth, you need to pair it with iPad—turn on the switch, go to Settings > Bluetooth, tap the switch, then follow the onscreen instructions. For more information, see Connect Bluetooth devices.

If you connect a Made For iPhone (MFi) switch, Switch Control sets a Select Item switch and enables it automatically.

**Turn on Switch Control.** Go to Settings > General > Accessibility > Switch Control. Or, use accessibility shortcuts.

**Scan the keyboard.** VoiceOver scans the onscreen keyboard row by row, including the suggestions above the keyboard. To control how the keyboard is navigated, go to Settings > General > Accessibility > Switch Control, then turn the settings below Keyboard on or off.

**Turn off Switch Control.** Use any scanning method to select and tap Settings > General > Accessibility > Switch Control, then turn off Switch Control. Or, use accessibility shortcuts.

## Basic techniques

Whether you use item scanning or point scanning, the Switch Control basics are the same.

**Select an item.** Trigger your Select Item switch when the item is highlighted (item scanning) or under the crosshairs (point scanning).

**Perform an action on the selected item.** Choose a command from the control menu that appears when you select the item. The layout of the menu depends on how you configure tap behavior. (To choose an option, go to Settings > General > Accessibility > Switch Control > Tap Behavior.)

- With Default on: The control menu usually includes only the Tap button and the More button (two dots at the bottom). If you're in a scrollable area of the screen, a Scroll button also appears. To tap the highlighted item, trigger your Select Item button when Tap is highlighted. To see additional action buttons, choose More at the bottom of the menu. If you have multiple switches, you can set one up specifically for tapping.
- With Auto Tap on: To tap the item, do nothing—the item is automatically tapped when the Auto Tap interval expires (0.75 seconds if you haven't changed it). To see the control menu, trigger your Select Item button before the Auto Tap interval expires. The control menu skips the Tap button and goes right to the full set of action buttons.

With Always Tap on: Tap to select the highlighted item rather than display the control
menu. Wait until the end of the scan cycle, then tap a button to display the control
menu.

*Note:* Always Tap applies only when you choose item scanning. When point scanning, the default behavior applies.

**Work with recipes.** A recipe lets you temporarily assign a special action to a switch. For example, you can choose a recipe to turn pages in iBooks or control a game. To create, edit, or launch a recipe, go to Settings > General > Accessibility > Switch Control > Recipes.

**Dismiss the Scanner menu without choosing an action.** Tap while the original item is highlighted and all the icons in the control menu are dimmed. The menu goes away after cycling the number of times you specify in Settings > General > Accessibility > Switch Control > Loops.

**Perform screen gestures.** Choose Gestures from the Scanner menu.

**Scroll the screen.** Select an item in a scrollable part of the screen, then:

- With Auto Tap off: Choose the Scroll Down button (next to the Tap button) in the Scanner menu. Or, for additional scrolling options, choose More, then choose Scroll.
- With Auto Tap on: Choose Scroll from the control menu. If many actions are available, you might have to choose More first.

**Tap the Home button.** Choose Home from the Scanner menu.

**Perform other hardware actions.** Select any item, then choose Device from the menu that appears. Use the menu to mimic these actions:

- Double-click the Home button for multitasking
- Open the notifications screen or Control Center
- Press the Sleep/Wake button to lock iPad
- Rotate iPad to landscape or portrait orientation
- On iPad models with a side switch, flip the Side Switch to mute iPad volume
- Press the volume buttons
- Show the Search screen
- Press and hold the Home button to summon Siri
- Triple-click the Home button

- Shake iPad
- Take a screenshot
- Swipe down from the top with two fingers to speak the screen (if you have Speak Screen turned on)

**Control media playback.** Choose Media Controls from the Scanner menu to play, pause, or go backward or forward.

**Use Switch Control on another iOS device.** Ensure that you sign in to iCloud with the same Apple ID on the other iOS device, then choose the other device from the menu.

### Item scanning

Item scanning alternately highlights each item or group of items on the entire screen until you trigger your Select Item switch. If there are many items, Switch Control highlights them in groups. When you select a group, highlighting continues with the items in the group. When you select a unique item, scanning stops and the control menu appears. Item scanning is the default when you first turn on Switch Control.

You can choose from three scanning styles—auto scanning, manual scanning, and single-switch step scanning. Auto scanning automatically highlights items, one after the other. With manual scanning, you use one switch to highlight an item and another to activate it. Single-switch step scanning uses a switch to move the highlight from item to item. If you take no action after a period of time, the highlighted item activates.

**Select an item or enter a group.** Watch (or listen) as items are highlighted. When the item you want to control (or the group containing the item) is highlighted, trigger your Select Item switch. Work your way down the hierarchy of items until you select the individual item you want to control.

**Back out of a group.** Trigger your Select Item switch when the dashed highlight around the group or item appears.

**Dismiss the control menu without performing an action.** Trigger your Select Item switch when the item itself is highlighted. Or choose Escape from the control menu.

**Hear the names of items as they are highlighted.** Go to Settings > General > Accessibility > Switch Control, then turn on Speech. Or choose Settings from the control menu, then choose Speech On.

**Slow down or speed up the scanning.** Go to Settings > General > Accessibility > Switch Control > Auto Scanning Time.

## Point scanning

Point scanning lets you select an item on the screen by pinpointing it with scanning crosshairs.

**Switch to point scanning.** Use item scanning to choose Point Mode from the control menu. The vertical crosshair appears when you close the menu.

**Select an item.** Trigger your Select Item switch when the item you want is within the broad, horizontal scanning band, then trigger again when the fine scanning line is on the item. Repeat for vertical scanning.

Refine your selection point. Choose Refine Selection from the control menu.

**Return to item scanning.** Choose Item Mode from the control menu.

## Settings and adjustments

**Adjust basic settings.** Go to Settings > General > Accessibility > Switch Control, where you can:

- Add switches and specify their function
- Choose, create, and edit recipes
- Choose a scanning style
- Adjust how rapidly items are scanned
- Set scanning to pause on the first item in a group
- Choose how many times to cycle through the screen before hiding Switch Control
- Choose a tap behavior and set the interval for performing a second switch action to show the control menu
- Choose whether Switch Control resumes scanning at an item you tap or from the beginning
- Set whether a movement action is repeated when you press and hold a switch, and how long to wait before repeating
- Add another action to a switch by pressing and holding the switch for a long duration
- Choose which items appear in menus and the order in which they appear
- Set whether and how long you need to hold a switch down before it's accepted as a switch action
- Have Switch Control ignore accidental repeated switch triggers
- Adjust the point scanning speed
- Turn on sound effects or have items read aloud as they are scanned
- Choose what to include in the Switch Control menu
- Set whether items should be grouped while item scanning
- Make the selection cursor larger or a different color
- Save custom gestures to the control menu (in Gestures > Saved)

**Fine-tune Switch Control.** Choose Settings from the control menu to:

Adjust scanning speed

- Change the location of the control menu
- Turn sound or speech accompaniment on or off
- Turn off groups to scan items one at a time

### AssistiveTouch

AssistiveTouch helps you use iPad if you have difficulty touching the screen or pressing the buttons. You can use AssistiveTouch without any accessory to perform gestures that are difficult for you. You also can use a compatible adaptive accessory (such as a joystick) together with AssistiveTouch to control iPad. To configure the AssistiveTouch menu, go to Settings > General > Accessibility > AssistiveTouch.

AssistiveTouch lets you perform the following actions and more just by tapping (or the equivalent on your accessory):

- Open the AssistiveTouch menu
- Go to the Home screen
- Double-tap
- Perform multifinger gestures
- Summon Siri
- Access Control Center, notifications, Lock screen, or App Switcher
- Adjust volume on iPad
- Shake iPad
- Take a screenshot
- Use Apple Pay (on models that support Apple Pay)
- Speak screen
- Control Analytics
- Restart iPad

**Turn on AssistiveTouch.** Tell Siri "turn on AssistiveTouch," go to Settings > General > Accessibility > AssistiveTouch, or use Accessibility Shortcut. When AssistiveTouch is on, the floating menu button appears on the screen.

Add more actions to the AssistiveTouch menu. Go to Settings > General > Accessibility > AssistiveTouch > Customize Top Level Menu. The menu can have up to eight actions.

**Show or hide the AssistiveTouch menu.** Tap the floating menu button, or click the secondary button on your accessory.

**Show the Home screen.** Tap the menu button, then tap Home.

Lock or rotate the screen, adjust iPad volume, or simulate shaking iPad. Tap the menu button, then tap Device.

**Perform a swipe or drag that uses 2, 3, 4, or 5 fingers.** Tap the menu button, tap Device > More > Gestures, then tap the number of digits needed for the gesture. When the corresponding circles appear on the screen, swipe or drag in the direction required by the gesture. When you finish, tap the menu button.

**Perform a pinch gesture.** Tap the menu button, tap Custom, then tap Pinch. When the pinch circles appear, touch anywhere on the screen to move the pinch circles, then drag them in or out to perform a pinch gesture. When you finish, tap the menu button.

**Create your own gesture.** You can add your own favorite gestures to the control menu (for example, touch and hold or two-finger rotation). Tap the menu button, tap Custom, then tap an empty gesture placeholder. Or go to Settings > General > Accessibility > AssistiveTouch > Create New Gesture.

Example 1: To create the rotation gesture, go to Settings > General > Accessibility > AssistiveTouch > Create New Gesture. On the gesture recording screen that asks you to touch to create a gesture, rotate two fingers on the iPad screen around a point between them. (You can do this with a single finger or stylus—just create each arc separately, one after the other.) If it doesn't turn out quite right, tap Cancel, then try again. When it looks right, tap Save, then give the gesture a name—maybe "Rotate 90." Then, to rotate the view in Maps, for example, open Maps, tap the AssistiveTouch menu button, and choose Rotate 90 from Custom. When the blue circles representing the starting finger positions appear, drag them to the point around which you want to rotate the map, then release. You might want to create several gestures with different degrees of rotation.

Example 2: Let's create the touch-and-hold gesture that you use to start rearranging icons on your Home screen. This time, on the gesture recording screen, touch and hold your finger in one spot until the recording progress bar reaches halfway, then lift your finger. Be careful not to move your finger while recording, or the gesture will be recorded as a drag. Tap Save, then name the gesture. To use the gesture, tap the AssistiveTouch menu button, then choose your gesture from Custom. When the blue circle representing your touch appears, drag it over a Home screen icon and release.

If you record a sequence of taps or drags, they're all played back at the same time. For example, using one finger or a stylus to record four separate, sequential taps at four locations on the screen creates a simultaneous four-finger tap.

**Exit a menu without performing a gesture.** Tap anywhere outside the menu. To return to the previous menu, tap the arrow in the middle of the menu.

**Assign custom actions to the menu button.** By default, a single tap on the menu button opens the menu. To assign other actions to the menu button, go to Settings > General > Accessibility > AssistiveTouch. Below Custom Actions, you can assign different actions to a single tap, double tap, or long press.

Reduce the visibility of the menu button when not in use. Go to Settings > General > Accessibility > AssistiveTouch > Idle Opacity, then drag the slider.

**Move the menu button.** Drag it anywhere along the edge of the screen.

### **Touch Accommodations**

If you have trouble using the touchscreen or Home button, use Touch Accommodations to change how your device responds to your touch.

Choose how long you must touch the screen before a touch is recognized. You can configure iPad to respond only to touches of a certain duration. Go to Settings > General > Accessibility > Touch Accommodations, turn on Hold Duration, then use the Gesture Delay plus and minus buttons to choose a duration (the default is 0.10 seconds).

Choose the duration in which multiple touches are treated as a single touch. If you have trouble touching the screen just once, turn on Ignore Repeat. Then, if you touch the screen several times quickly, iPad treats the touches as one. To change the amount of time between touches before iPad treats them as one, go to Settings > General > Accessibility > Touch Accommodations, turn on Ignore Repeat, then use the Gesture Delay plus and minus buttons to adjust the timing.

Choose the location where iPad responds to the first or the last place you touch. Go to Settings > General > Accessibility > Touch Accommodations, then choose a Tap Assistance option (Use Initial Touch Location or Use Final Touch Location).

When you choose Use Initial Touch Location, iPad uses the location of your first tap—when you tap an app on the Home screen, for example. Choose Use Final Touch Location, and iPad registers the tap where you lift your finger. iPad responds to a tap when you lift your finger within a certain period of time. Use the Gesture Delay plus and minus buttons to adjust the timing. Your device can respond to other gestures, such as drags, if you wait longer than the gesture delay.

Choose how iPad responds when you press and hold the Home button. Go to Settings > General > Accessibility > Home Button, then choose Siri or Off.

## Use accessibility features with Siri

Siri is often the easiest way to start using accessibility features with iPad. With Siri, you can open apps, turn many settings on or off (for example, VoiceOver), or use Siri for what it does best—acting as your intelligent personal assistant. Siri knows when VoiceOver is on, so will often read more information back to you than appears on the screen. You can also use VoiceOver to read what Siri shows on the screen.

**Type to Siri.** To type instead of speaking to Siri, go to General > Accessibility > Siri, then turn on Type to Siri. After you summon Siri, interact with Siri by using the keyboard and text field.

## Widescreen keyboards

All built-in iPad apps show a larger onscreen keyboard when you rotate iPad to landscape view. You can also type using an Apple Wireless Keyboard.

## Software and hardware keyboards

If you have difficulty distinguishing characters on the iPad keyboard or manipulating a hardware keyboard, find help by going to Settings > General > Accessibility > Keyboard. You can adjust settings to:

- Show only uppercase keys on the iPad keyboard.
- Adjust the key repeat rate on hardware keyboards.
- Use Sticky Keys to press and hold modifier keys, such as Command and Option, as you press another key.
- Use Slow Keys to adjust the time between when a key is pressed and when it's activated.

## Hearing

## Made for iPhone hearing aids

If you have Made for iPhone hearing aids, you can use iPad to adjust their settings, stream audio, or use iPad as a remote mic.

**Pair with iPad.** If your hearing aids aren't listed in Settings > General > Accessibility > MFi Hearing Aids, you need to pair them with iPad. To start, open the battery door on each hearing aid. Next, on iPad, go to Settings > Bluetooth, and make sure Bluetooth is turned on. Then, go to Settings > General > Accessibility > MFi Hearing Aids. Close the battery doors on your hearing aids and wait until their name appears in the list of devices (this could take a minute). When the name appears, tap it and respond to the pairing request.

When pairing is finished, you hear a series of beeps and a tone, and a checkmark appears next to the hearing aids in the Devices list. Pairing can take as long as 60 seconds—don't try to stream audio or otherwise use the hearing aids until pairing is finished.

You should only need to pair once (and your audiologist might do it for you). After that, each time you turn your hearing aids back on, they reconnect to iPad.

**Turn on Hearing Aid Compatibility.** Hearing Aid Compatibility may reduce interference and improve audio quality with some hearing aid models. To turn it on, go to Settings > General > Accessibility > Hearing Aid Compatibility.

Adjust hearing aid settings and view status. Go to Settings > General > Accessibility > MFi Hearing Aids, or use accessibility shortcuts. Hearing aid settings appear only after your pair your hearing aids with iPad.

To access shortcuts from the Lock screen, go to Settings > General > Accessibility > MFi Hearing Aids, then turn on Control on Lock Screen. From the Lock screen, you can:

- Check hearing aid battery status.
- Adjust ambient microphone volume and equalization.
- Choose which hearing aids (left, right, or both) receive streaming audio.
- Control Live Listen.

**Stream audio to your hearing aids.** To stream audio from Siri, Music, Videos, and more, see Connect Bluetooth devices.

**Use iPad as a remote microphone.** You can use Live Listen to stream sound from the microphone in iPad to your hearing aids. This can help you hear better in some situations —for example, when having a conversation in a noisy environment. Triple-click the Home button, choose Hearing Devices, tap Start Live Listen, then position iPad near the sound source.

Use your hearing aids with more than one iOS device. If you pair your hearing aids with more than one iOS device (both iPad and iPhone, for example), the connection for your hearing aids automatically switches from one to the other when you do something that generates audio on the other device, or when you receive a phone call on iPhone. Changes you make to hearing aid settings on one device are automatically sent to your other iOS devices. To enable this feature, sign in to iCloud using the same Apple ID on all the devices, and connect all the devices to the same Wi-Fi network.

### Mono audio and balance

Mono Audio combines the sound from the left and right channels into a mono signal played on both channels. This way you can hear everything with either ear, or through both ears with one channel set louder.

**Turn on Mono Audio.** Go to Settings > General > Accessibility > Mono Audio.

**Adjust the balance.** Go to Settings > General > Accessibility, then drag the Left Right Stereo Balance slider.

## Subtitles and closed captions

The Videos app includes an Alternate Track button you can tap to choose subtitles and captions offered by the video you're watching. Standard subtitles and captions are usually listed, but if you prefer special accessible captions, such as subtitles for the deaf and hard of hearing (SDH), you can set iPad to list them instead, if they're available.

**Prefer accessible subtitles and closed captions for SDH.** Go to Settings > General > Accessibility > Subtitles & Captioning, then turn on Closed Captions + SDH. This also turns on subtitles and captions in the Videos app.

**Choose from available subtitles and captions.** Tap  $\Longrightarrow$  while watching a video in Videos.

**Customize your subtitles and captions.** Go to Settings > General > Accessibility > Subtitles & Captioning > Style, where you can choose an existing caption style or create a new style based on your choice of:

- Font, size, and color
- Background color and opacity

· Text opacity, edge style, and highlight

Note: Not all videos include subtitles or closed captions.

### LED Flash for Alerts

If you can't hear the sounds that announce incoming calls and other alerts, iPad can flash its LED (next to the camera lens on the back of iPad). The LED flashes only if iPad is locked.

**Tip:** LED Flash for Alerts is a useful feature for anyone who might miss the tones associated with calls and other alerts in a noisy environment.

**Turn on LED Flash for Alerts.** Go to Settings > General > Accessibility > LED Flash for Alerts. By default, the LED flashes even if iPad is in silent mode.

Prevent LED flashes when iPad is in silent mode. Turn off Flash on Silent.

## **Guided Access**

Guided Access helps an iPad user stay focused on a task. Guided Access temporarily restricts iPad to a single app and lets you control which app features are available. You can:

- Disable areas of the screen that aren't relevant to a task, or areas where an accidental gesture might cause a distraction
- Disable the iPad hardware buttons
- Limit how long someone can use the app

**Set up Guided Access.** Go to Settings > General > Accessibility > Guided Access, then turn on Guided Access. You can:

- Tap Passcode Settings to set a passcode that controls Guided Access and prevents someone from leaving a session; or turn on Touch ID as a way to end Guided Access
- Tap Time Limits to set a sound or have the remaining Guided Access time spoken before the time ends
- Set whether other accessibility shortcuts are available during a session

**Start a Guided Access session.** Open the app you want to use, then tell Siri "Turn on Guided Access" or use accessibility shortcuts. Adjust the following settings for the session, then tap Start:

- Disable app controls and areas of the app screen: Draw a circle or rectangle around any part of the screen you want to disable. Drag the mask into position or use the handles to adjust its size.
- Enable the Sleep/Wake or volume buttons: Tap Hardware Buttons Options.
- Prevent iPad from switching from portrait to landscape or from responding to other motions: Tap Hardware Buttons Options, then turn off Motion.
- Prevent typing: Tap Hardware Buttons Options, then turn off Keyboards.
- Ignore all screen touches: Turn off Touch at the bottom of the screen.
- Set a session time limit: Tap Time Limit Options.

**End the session.** Double-click the Home button, then unlock with Touch ID (if enabled). Or triple-click the side button, then enter the Guided Access passcode.

## Accessibility in macOS

Take advantage of the accessibility features in macOS when you use iTunes to sync information and content from your iTunes library to iPad. For more information, see iTunes Help on your computer.

# Safety, handling, and support

## Important safety information

**WARNING:** Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to iPad or other property. Read all the safety information below before using iPad.

**Handling** Handle iPad with care. It is made of metal, glass, and plastic and has sensitive electronic components inside. iPad or its battery can be damaged if dropped, burned, punctured, or crushed, or if it comes in contact with liquid. If you suspect damage to iPad or the battery, discontinue use of iPad, as it may cause overheating or injury. Don't use iPad with a cracked screen, as it may cause injury. If you're concerned about scratching the surface of iPad, consider using a case or cover.

**Repairing** Don't open iPad and don't attempt to repair iPad yourself. Disassembling iPad may damage it or may cause injury to you. If iPad is damaged, malfunctions, or comes in contact with liquid, contact Apple or an Apple Authorized Service Provider. Repairs by service providers other than Apple or an Apple Authorized Service Provider may not involve the use of Apple genuine parts and may affect the safety and functionality of the device. You can find more information about getting service at the iPad Repair website.

**Battery** Don't attempt to replace the iPad battery yourself. The lithium-ion battery in iPad should be replaced by Apple or an authorized service provider. Improper replacement or repair could damage the battery, cause overheating, or result in injury. The battery must be recycled or disposed of separately from household waste. Don't incinerate the battery. For information about battery services and recycling, go to the Battery Service and Recycling website.

**Distraction** Using iPad in some circumstances may distract you and might cause a dangerous situation (for example, avoid using headphones while riding a bicycle and avoid typing a text message while driving a car). Observe rules that prohibit or restrict the use of mobile devices or headphones.

**Navigation** Maps depends on data services. These data services are subject to change and may not be available in all regions, resulting in maps and location-based information that may be unavailable, inaccurate, or incomplete. Compare the information provided in Maps to your surroundings. Use common sense when navigating. Always observe current road conditions and posted signs to resolve any discrepancies. Some Maps features require Location Services.

**Charging** Charge iPad with the included USB cable and power adapter, or with other third-party "Made for iPad" cables and power adapters that are compatible with USB 2.0 or later, or power adapters compliant with applicable country regulations and with one or more of the following standards: EN 301489-34, IEC 62684, YD/T 1591-2009, CNS 15285, ITU L.1000, or another applicable mobile phone power adapter interoperability standard. Only charge with an adapter that is compliant with the applicable international and regional safety standards, including IEC 60950. Other adapters may not meet applicable safety standards, and charging with such adapters could pose a risk of death or injury.

Using damaged cables or chargers, or charging when moisture is present, can cause fire, electric shock, injury, or damage to iPad or other property. When you use the Apple USB Power Adapter to charge iPad, make sure the USB cable is fully inserted into the power adapter before you plug the adapter into a power outlet.

**Lightning cable and connector** Avoid prolonged skin contact with the connector when the Lightning to USB Cable is connected to a power source because it may cause discomfort or injury. Sleeping or sitting on the Lightning connector should be avoided.

**Prolonged heat exposure** iPad and its power adapter comply with applicable surface temperature standards and limits. However, even within these limits, sustained contact with warm surfaces for long periods of time may cause discomfort or injury. Use common sense to avoid situations where your skin is in contact with a device or its power adapter when it's operating or connected to a power source for long periods of time. For example, don't sleep on a device or power adapter, or place them under a blanket, pillow, or your body, when it's connected to a power source. It's important to keep iPad and its power adapter in a well-ventilated area when in use or charging. Take special care if you have a physical condition that affects your ability to detect heat against the body.

**Hearing loss** Listening to sound at high volumes may damage your hearing. Background noise, as well as continued exposure to high volume levels, can make sounds seem quieter than they actually are. Turn on audio playback and check the volume before inserting anything in your ear. For information about how to set a maximum volume limit on iPad, see Play music. For more information about hearing loss, go to the Sound and Hearing website.

To avoid hearing damage, use only compatible receivers, earbuds, headphones, speakerphones, or earpieces with iPad. The headsets sold with iPhone 4s or later in China (identifiable by dark insulating rings on the plug) are designed to comply with Chinese standards and are only compatible with iPhone 4s and later, iPad 2 and later, iPad Pro, iPad mini and later, and iPod touch 5th generation and later.

**WARNING:** To prevent possible hearing damage, do not listen at high volume levels for long periods.

**Radio frequency exposure** iPad uses radio signals to connect to wireless networks. For information about radio frequency (RF) energy resulting from radio signals, and steps you can take to minimize exposure, go to Settings > General > About > Legal > RF Exposure, or go to the RF Exposure website.

**Radio frequency interference** Observe signs and notices that prohibit or restrict the use of mobile devices (for example, in healthcare facilities or blasting areas). Although iPad is designed, tested, and manufactured to comply with regulations governing radio frequency emissions, such emissions from iPad can negatively affect the operation of other electronic equipment, causing them to malfunction. When use is prohibited, such as while traveling in aircraft, or when asked to do so by authorities, turn off iPad, or use airplane mode or Settings > Wi-Fi and Settings > Bluetooth to turn off the iPad wireless transmitters.

Medical device interference iPad contains components and radios that emit electromagnetic fields. iPad also contains magnets along the left edge of the device and on the right side of the front glass, which may interfere with pacemakers, defibrillators, or other medical devices. The iPad Smart Cover, iPad Pro Smart Cover, and iPad Pro Smart Keyboard (each available separately) also contain magnets. These electromagnetic fields and magnets may interfere with pacemakers, defibrillators, or other medical devices. Maintain a safe distance of separation between your medical device and iPad, the iPad Smart Cover, the iPad Pro Smart Cover, and the iPad Pro Smart Keyboard. Consult your physician and medical device manufacturer for information specific to your medical device. If you suspect iPad is interfering with your pacemaker, defibrillator, or any other medical device, stop using iPad.

**Not a medical device** iPad is not designed or intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease.

**Medical conditions** If you have any medical condition or experience symptoms that you believe could be affected by iPad or flashing lights (for example, seizures, blackouts, eyestrain, or headaches), consult with your physician prior to using iPad.

**Explosive atmospheres** Charging or using iPad in any area with a potentially explosive atmosphere, such as areas where the air contains high levels of flammable chemicals, vapors, or particles (such as grain, dust, or metal powders), may be hazardous. Obey all signs and instructions.

**Repetitive motion** When you perform repetitive activities such as typing, swiping, or playing games on iPad, you may experience discomfort in your hands, arms, wrists, shoulders, neck, or other parts of your body. If you experience discomfort, stop using iPad and consult a physician.

**High-consequence activities** This device is not intended for use where the failure of the device could lead to death, personal injury, or severe environmental damage.

**Choking hazard** Some iPad accessories may present a choking hazard to small children. Keep these accessories away from small children.

# Important handling information

**Cleaning** Clean iPad immediately if it comes in contact with anything that may cause stains or other damage—for example, dirt or sand, ink, makeup, soap, detergent, acids or acidic foods, and lotions. To clean:

- Disconnect all cables and turn iPad off (press and hold the Sleep/Wake button, then drag the slider).
- Use a soft, lint-free cloth—for example, a lens cloth.
- Avoid getting moisture in openings.
- Don't use cleaning products or compressed air.

The front of iPad is made of glass with a fingerprint-resistant oleophobic (oil-repellant) coating. This coating wears over time with normal usage. Cleaning products and abrasive materials will further diminish the coating and may scratch the glass.

**Using connectors, ports, and buttons** Never force a connector into a port or apply excessive pressure to a button, because this may cause damage that is not covered under the warranty. If the connector and port don't join with reasonable ease, they probably don't match. Check for obstructions and make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

**Lightning to USB Cable** Discoloration of the Lightning connector after regular use is normal. Dirt, debris, and exposure to moisture may cause discoloration. If your Lightning cable or connector become warm during use or your iPad won't charge or sync, disconnect it from your computer or power adapter and clean the Lightning connector with a soft, dry, lint-free cloth. Do not use liquids or cleaning products when cleaning the Lightning connector.

Certain usage patterns can contribute to the fraying or breaking of cables. The Lightning to USB Cable, like any other metal wire or cable, is subject to becoming weak or brittle if repeatedly bent in the same spot. Aim for gentle curves instead of angles in the cable. Regularly inspect the cable and connector for any kinks, breaks, bends, or other damage. Should you find any such damage, discontinue use of the Lightning to USB Cable.

**Operating temperature** iPad is designed to work in ambient temperatures between 32° and 95° F (0° and 35° C) and stored in temperatures between -4° and 113° F (-20° and 45° C). iPad can be damaged and battery life shortened if stored or operated outside of

these temperature ranges. Avoid exposing iPad to dramatic changes in temperature or humidity. When you're using iPad or charging the battery, it is normal for iPad to get warm.

If the interior temperature of iPad exceeds normal operating temperatures (for example, in a hot car or in direct sunlight for extended periods of time), you may experience the following as it attempts to regulate its temperature:

- iPad stops charging.
- The screen dims.
- A temperature warning screen appears.
- Some apps may close.

**Important:** You may not be able to use iPad while the temperature warning screen is displayed. If iPad can't regulate its internal temperature, it goes into deep sleep mode until it cools. Move iPad to a cooler location out of direct sunlight and wait a few minutes before trying to use iPad again.

For more information, see the Apple Support article Keeping iPhone, iPad, and iPod touch within acceptable operating temperatures.

# Forgot your Apple ID, iPad passcode, or iCloud Security Code?

Recover your Apple ID or reset your Apple ID password. Go to Apple's I Forgot website.

**Reset the iPad passcode.** If you enter the wrong passcode to iPad six times in a row, you'll be locked out, and a message will say that iPad is disabled. If you can't remember your passcode, you can erase iPad, then set a new passcode. (If you made an iCloud or iTunes backup before you forgot your passcode, you can restore your data and settings from the backup.) For more information, see the Apple Support article If you forgot the passcode for your iPhone, iPad, or iPod touch, or your device is disabled.

Reset or create a new iCloud Security Code. If you enter the wrong iCloud Security Code too many times when using iCloud Keychain, your iCloud Keychain will be disabled on that device, and your keychain in iCloud will be deleted. Go to the Apple Support article If you enter your iCloud Security Code incorrectly too many times.

## iPad Support site

Comprehensive support information is available online at the iPad Support website. To contact Apple for personalized support (not available in all regions), see the Apple Support website.

## An app doesn't fill the screen

Most apps for iPhone and iPod touch can be used with iPad, but they might not take advantage of the large screen. In this case, tap ② to zoom in on the app. Tap ③ to return to the original size.

Check the App Store to see if there's a version of the app that's optimized for iPad, or a universal version that's optimized for iPhone, iPod touch, and iPad.

# Onscreen keyboard doesn't appear

If iPad is paired with a Bluetooth keyboard, the onscreen keyboard doesn't appear. To make the onscreen keyboard appear, press the Eject key on a Bluetooth keyboard. You can also make the onscreen keyboard appear by moving the Bluetooth keyboard out of range or turning it off.

# Get information about your iPad

**View overall storage availability and storage used per app.** Go to Settings > General > iPad Storage. For more information, see the Apple Support articles Check your storage on your iPhone, iPad, and iPod touch and Manage your iCloud storage.

**See Battery Usage.** Go to Settings > Battery to see the elapsed time since iPad has been charged. You can also display battery level as a percentage. See Charge and monitor the battery in this guide.

**View cellular usage.** Go to Settings > Cellular. See Cellular data settings in this guide.

**See more information about iPad.** Go to Settings > General > About. The items you can view include:

- Name
- Network
- Number of songs, videos, photos, and apps

- · Capacity and available storage space
- iOS version
- (Cellular models) Carrier
- Model number
- Serial number
- (Cellular models) Cellular Data Number
- Wi-Fi and Bluetooth addresses
- (Cellular models) IMEI (International Mobile Equipment Identity)
- (Cellular models) ICCID (Integrated Circuit Card Identifier, or Smart Card) for GSM networks
- (Cellular models) MEID (Mobile Equipment Identifier) for CDMA networks
- Modem firmware
- Legal (including legal notices, and license, warranty, and RF exposure information)

To copy the serial number and other identifiers, touch and hold the identifier until Copy appears.

To see regulatory marks, go to Settings > General > Regulatory.

**View or turn off diagnostic information.** Go to Settings > Privacy > Diagnostics & Usage.

To help Apple improve products and services, iPad sends diagnostic and usage data. This data doesn't personally identify you, but may include location information.

# Cellular data settings

To activate cellular data service on iPad (Wi-Fi + Cellular models), turn cellular use on or off, or add a Personal Identification Number (PIN) to lock the SIM card, go to Settings > Cellular Data. With some carriers, you can also change your data plan.

*Note:* For help with cellular network services and billing, contact your wireless service provider.

If Cellular Data is off, all data services will use only Wi-Fi—including email, web browsing, push notifications, and other services. If Cellular Data is on, carrier charges may be incurred. For example, using certain features and services that transfer data, such as

Messages, could result in charges to your data plan.

**Turn Cellular Data on or off.** Go to Settings > Cellular Data, then turn Cellular Data on or off. The following options may also be available:

- Monitor and manage your cellular data network usage: You can see which apps use cellular data and turn off the option, if you want.
- Turn LTE on or off: Turning on LTE loads data faster.
- Turn Data Roaming on or off: Turning off Data Roaming avoids carrier charges when using a network provided by a different carrier.
- Set up Personal Hotspot: Personal Hotspot shares the Internet connection on iPad with your computer and other iOS devices. See Personal Hotspot in this guide.
- *Turn Wi-Fi Assist on or off:* If Wi-Fi connectivity is poor, Wi-Fi Assist uses cellular data to boost the signal.

Note: Using data over a cellular network may incur additional fees.

**Set whether cellular data is used for apps and services.** Go to Settings > Cellular Data, then turn cellular data on or off for any app that can use cellular data. If a setting is off, iPad uses only Wi-Fi for that service. The iTunes setting includes both iTunes Match and automatic downloads from the iTunes Store and the App Store.

**Activate, view, or change your cellular data account.** Go to Settings > Cellular Data, tap View Account, then follow the onscreen instructions.

**Lock the SIM card.** Go to Settings > Cellular Data > SIM PIN. Locking the SIM card with a PIN means you need to enter the PIN to use a cellular connection on iPad.

For more information about GSM, CDMA, and LTE cellular data networks, see the Apple Support article About cellular data networks.

## **VPN** settings

A VPN (virtual private network) provides secure access over the Internet to private networks, such as the network at your organization. You may need to install a VPN app from the App Store that configures iPad to access a network. Contact your system administrator for information about the app and settings you need.

# **Profiles settings**

Configuration profiles define settings for using iPad with corporate or school networks or accounts. You might be asked to install a configuration profile that was sent to you in an email, or one that is downloaded from a webpage. iPad asks for your permission to install the profile, and displays information about what it contains, when you open the file. You can see the profiles you have installed in Settings > General > Profiles & Device Management. If you delete a profile, all of the settings, apps, and data associated with the profile are also deleted.

# Sell or give away iPad

Before you sell or give away your iPad, see the Apple Support article What to do before selling or giving away your iPhone, iPad, or iPod touch, and be sure to perform the following tasks:

- Back up iPad with iCloud Backup or back up iPad with iTunes. If you replace one iPad with another, you can use the setup assistant to restore the backup to your new iPad.
- Erase all content and settings, which includes your personal information.

## Learn more, service, and support

Refer to the following resources to get more iPad-related safety, software, service, and support information.

To learn about	Do this
Using iPad safely	See Important safety information.
iPad service and support, tips, forums, and Apple software downloads	Go to the iPad Support website.
The latest information about iPad	Go to the iPad website.
Managing your Apple ID account	Sign in to your Apple ID account page.
Using iCloud	See iCloud Help.
Using iTunes	Open iTunes, then choose Help > iTunes Help. For an online iTunes tutorial (not available in all regions), go to the iTunes Support website.
Using other Apple iOS apps	Go to the Apple Apps Support website.
Finding your iPad serial number or IMEI	You can find your iPad serial number or International Mobile Equipment Identity (IMEI) on the iPad packaging. Or, on iPad, choose Settings > General > About. For more information, go to the Apple Support article Find the serial number and other information on your iPhone, iPad or iPod touch.
Obtaining warranty service	First follow the advice in this guide, then go to the iPad Support website.
Viewing iPad regulatory information	On iPad, go to Settings > General > Regulatory.
Battery service	Go to the Battery Service and Recycling website.
Using iPad in an enterprise environment	Go to the Business website.
Using iPad in education	Go to the Education website.

# FCC compliance statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

*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 to 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.
- Consult the dealer or an experienced radio/TV technician for help.

**Important:** Changes or modifications to this product not authorized by Apple could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.

This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

Responsible party (contact for FCC matters only):

Apple Inc.

One Apple Park Way, MS 911-2HW

Cupertino, CA 95014

# Canadian regulatory statement

This device complies with *Innovation, Science, and Economic Development Canada* licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

La bande 5 150 – 5 250 MHz est réservée uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

CAN ICES-3 (B)/NMB-3(B)

## Apple and the environment

At Apple, we recognize our responsibility to minimize the environmental impacts of our operations and products. For more information, go to the Apple and the Environment website.

# Disposal and recycling information

Apple Recycling Program (available in some regions)

For free recycling of your old iPad, a prepaid shipping label, and instructions, go to the Recycling website.



This symbol indicates that this product and/or battery should not be disposed of with household waste. You must dispose of iPad properly according to local laws and regulations. When iPad reaches its end of life, contact local authorities to learn about disposal and recycling options, or simply drop it off at your local Apple Retail Store or return it to Apple. The battery will be removed and recycled in an environmentally friendly manner. For more information, go to the Recycling website.

## European Union—Disposal Information

The symbol above means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

#### Brasil – Informações sobre descarte e reciclagem

O símbolo acima indica que este produto e/ou sua bateria não devem ser descartados no lixo doméstico. Quando decidir descartar este produto e/ou sua bateria, faça-o de acordo com as leis e diretrizes ambientais locais. Para informações sobre substâncias de uso restrito, o programa de reciclagem da Apple, pontos de coleta e telefone de informações, visite www.apple.com/br/environment.

## Información sobre eliminación de residuos y reciclaje

El símbolo de arriba indica que este producto y/o su batería no debe desecharse con los residuos domésticos. Cuando decida desechar este producto y/o su batería, hágalo de conformidad con las leyes y directrices ambientales locales. Para obtener información sobre el programa de reciclaje de Apple, puntos de recolección para reciclaje, sustancias restringidas y otras iniciativas ambientales, visite www.apple.com/la/environment o www.apple.com/mx/environment.

#### Turkey environmental information

Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur.

## Battery service

The lithium-ion battery in iPad should be serviced by Apple or an authorized service provider. For more information about battery services and recycling, go to the Battery Service and Recycling website.

Dispose of batteries according to your local environmental laws and guidelines.

## Battery charger system efficiency



Taiwan battery statement



廢電池請回收

警告:請勿戳刺或焚燒。此電池不含汞。

China battery statement

警告: 不要刺破或焚烧。该电池不含水银。

# **ENERGY STAR®** compliance statement



To save energy, iPad is set to lock after two minutes of user inactivity. To change this setting, go to Settings > Display & Brightness > Auto-Lock. To unlock iPad, press the Sleep/Wake button or the Home button.

iPad meets the ENERGY STAR guidelines for energy efficiency. Reducing energy consumption saves money and helps conserve valuable resources; for more information, go to the Energy Star website.

#### **4** Apple Inc.

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