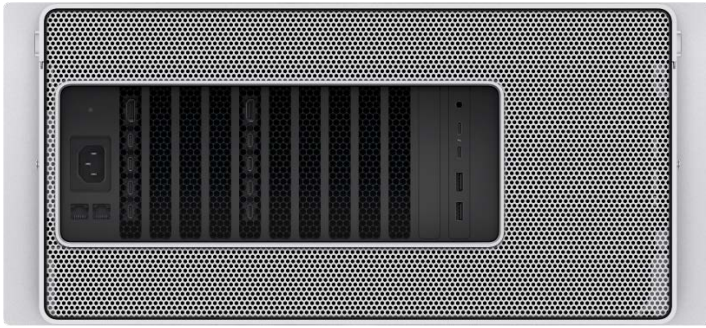# Mac Pro Essentials

for Mac Pro (Rack)

Look around your new Mac Pro

See the ports, connectors, and other features.

Take a tour of Mac Pro

Configure your Mac Pro

Your Mac Pro has user-accessible memory, graphics modules, and expansion cards that are user-upgradeable.
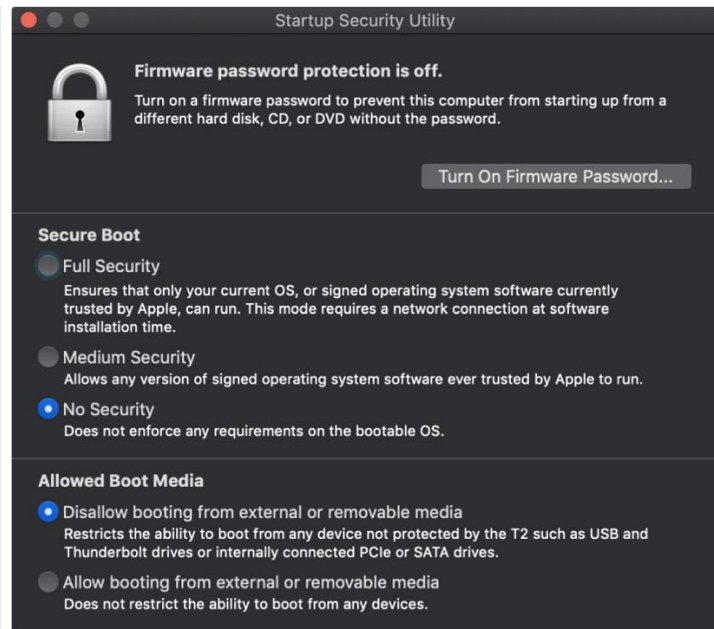
[Configure your Mac Pro](#)

Secure storage and secure boot

Built-in security features ensure your data is safe and your computer starts up only with legitimate macOS software.

[Secure storage and secure boot on your Mac Pro](#)

Startup Security Utility

Firmware password protection is off.

Turn on a firmware password to prevent this computer from starting up from a different hard disk, CD, or DVD without the password.

Turn On Firmware Password...

Secure Boot

○ Full Security
Ensures that only your current OS, or signed operating system software currently trusted by Apple, can run. This mode requires a network connection at software installation time.

○ Medium Security
Allows any version of signed operating system software ever trusted by Apple to run.

● No Security
Does not enforce any requirements on the bootable OS.

Allowed Boot Media

● Disallow booting from external or removable media
Restricts the ability to boot from any device not protected by the T2 such as USB and Thunderbolt drives or internally connected PCIe or SATA drives.

○ Allow booting from external or removable media
Does not restrict the ability to boot from any devices.

Stay in sync

Access your documents, photos, music, apps, contacts, and calendars across all your devices with iCloud.

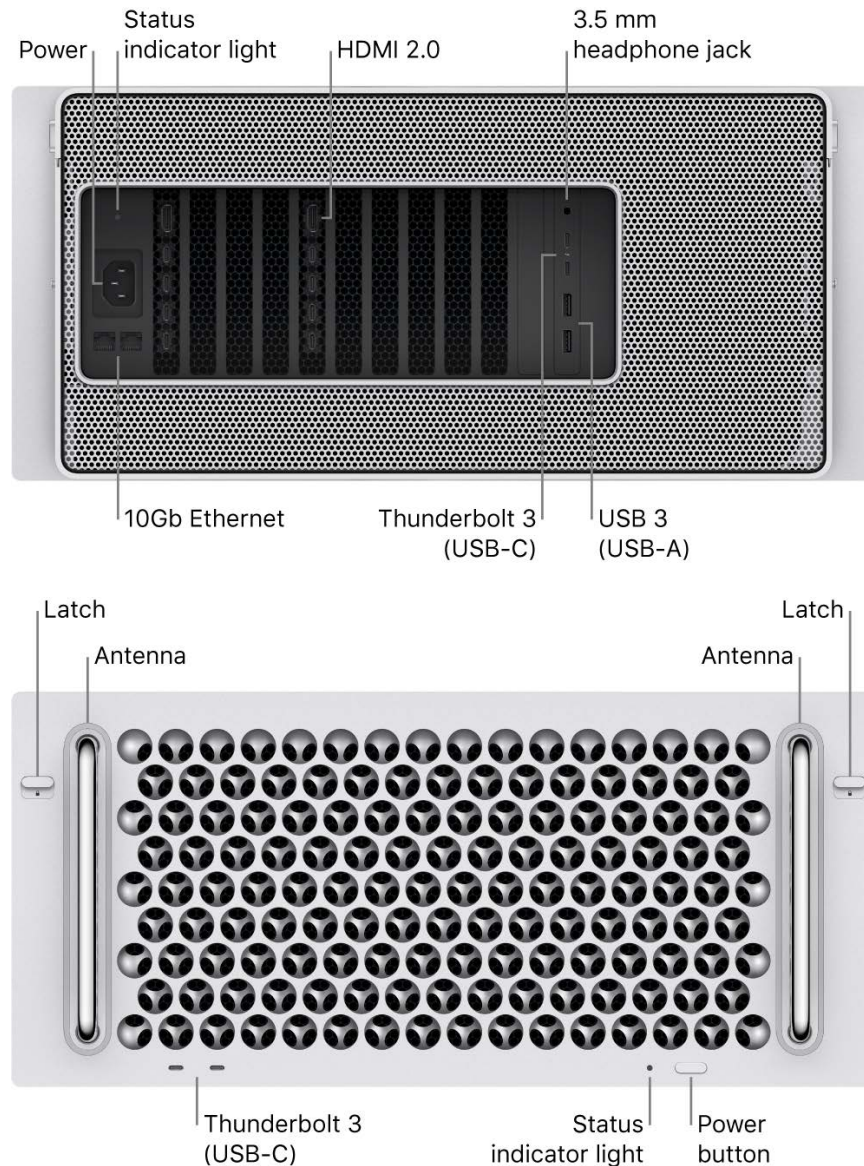Access your iCloud content on your MacAccess your iCloud content

Mac Pro at a glance

Your Mac Pro is packed with advanced technologies.

Power — Status indicator light — HDMI 2.0 — 3.5 mm headphone jack

10Gb Ethernet — Thunderbolt 3 (USB-C) — USB 3 (USB-A)

Latch — Antenna — Latch — Antenna

Thunderbolt 3 (USB-C) — Status indicator light — Power button

- *3.5 mm headphone jack:* Plug in stereo headphones or speakers to experience high-quality sound while listening to music or watching movies. Or plug in an analog headset with a built-in mono microphone to make audio and video calls.

- *USB 3 (USB-A) ports:* Connect an iPad, iPhone, iPod, digital camera, external storage device, or printer. The Mac Pro USB 3 ports support USB 3 and USB 2 devices at up to 5 Gbit/s.

- *Thunderbolt 3 (USB-C) ports:* Mac Pro has two Thunderbolt 3 (USB-C) ports on the front and two ports on the back. If an Apple MPX Module is installed, it may have additional ports. Use these ports to transfer data, and connect docking stations and RAID arrays. The ports support displays if an Apple MPX Module is installed. The ports also support USB 3 with speeds up to 10 Gbit/s, and can charge devices, such as an iPad or a rechargeable trackpad or keyboard.

- *Status indicator lights:* One light is on the front of your Mac Pro next to the power button and another is on the back, beside the power port. A steady white light indicates that your Mac Pro is awake or in sleep; no light indicates that your Mac Pro is turned off.

  Note: If there is a memory detection or data error, the status light is solid orange for 0.2 seconds and repeats every second. If the lights blink amber twice every two seconds, your Mac Pro has a PCIe configuration error. For more information, see the Apple Support article Mac Pro (2019) status indicator behavior.

- *HDMI 2.0 ports:* Mac Pro can have one or more HDMI 2.0 ports, depending on its GPU configuration. The ports can connect your Mac Pro to a TV or an external display.

- *10 Gigabit Ethernet (RJ-45) ports:* Your Mac Pro has two 10 Gigabit Ethernet ports that can use Nbase-T Ethernet technology, which supports multiple data rates for speeds up to 10 Gbit/s over standard twisted-pair copper cable up to 100 meters (328 feet) in length. Depending on the device you're connecting to, the cable type and technology used, and the cable length, the highest link speed is automatically negotiated. For example, if the device you're connecting to is 10 Gbit/s-capable and the cable can support that speed, the two devices negotiate the 10 Gbit/s speed.

  See the following chart for connection speeds and cable types. Speeds are for cables up to 100 meters (328 feet) in length, unless otherwise specified.

(table aria-label=Supported Connection Speeds for Cable Types)

Cable Type	1 Gbit/s	2.5 Gbit/s	5 Gbit/s	10 Gbit/s
Category 5e	✅	✅	✅	Not supported
Category 6	✅	✅	✅	✅ Up to 55 m (180 feet)
Category 6a	✅	✅	✅	✅

- *Power port:* Plug the power cord into the power port on the back of your Mac Pro, then plug the other end of the cord into a power outlet.

- *Power button:* Press to turn on your Mac Pro. Choose Apple menu > Shut Down to turn off your Mac Pro, or choose Apple menu > Sleep to put it to sleep.

Connect accessories

Work wirelessly

Using Bluetooth® technology, your Mac Pro can wirelessly connect (that is, pair) with devices such as the included Magic Keyboard with Numeric Keypad, and with devices like the Magic Mouse 2 and Magic Trackpad 2, AirPods, peripheral devices, wearable sports accessories, and others. To connect your Mac Pro with a device that's not already paired, choose Apple menu > System Preferences, then click Bluetooth.

Note: Your Magic Keyboard with Numeric Keypad and the optional Magic Trackpad 2 behave like a wired keyboard and pointing device when connected using the included Lightning to USB-C Cable. Bluetooth isn't used, and all communication is over the cable.

See the next section, What's included.

What's included

To use your Mac Pro, you need two accessories included in the box—the Magic Keyboard with Numeric Keypad and either the Magic Mouse 2 or Magic Trackpad 2.

Important: To begin using your Magic Keyboard with Numeric Keypad and Magic Mouse 2 or Magic Trackpad 2, make sure the on/off switch of each device is on 🟢 (green is visible). The devices connect to your Mac Pro automatically.
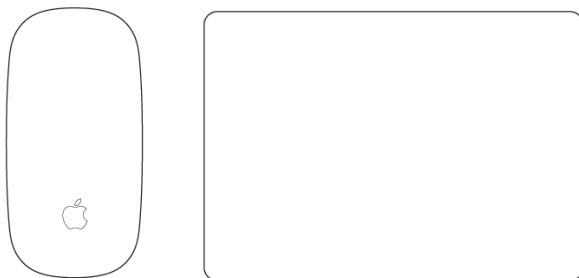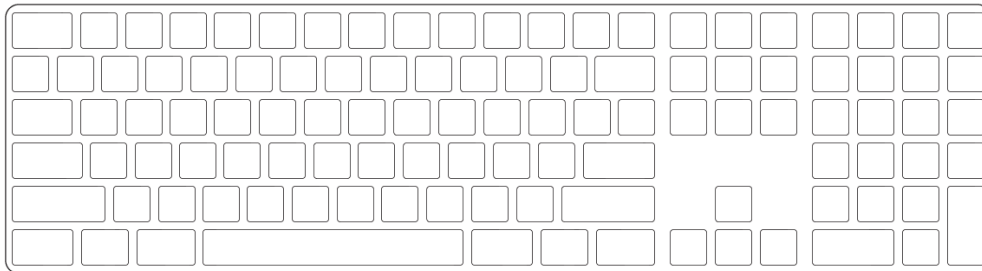
- *Magic Keyboard with Numeric Keypad:* Your rechargeable Magic Keyboard with Numeric Keypad is already connected with your Mac Pro and is ready to use. When you need to charge the keyboard or if you need to connect it again, connect it to your Mac Pro using the included USB-C to Lightning Cable.

To customize how your keyboard works, use the Keyboard pane of System Preferences. Choose Apple menu > System Preferences, click Keyboard, then click the buttons at the top to see the options available for keyboard, text, shortcuts, and input sources. To learn what the function keys on the keyboard do, see Keyboard.

- *Magic Mouse 2:* Like the Magic Keyboard with Numeric Keypad, your rechargeable Magic Mouse 2 is already connected with your Mac Pro out of the box; you can use it anywhere within range of your computer. When you need to charge the mouse or if you need to connect it again, connect it to your Mac Pro using the included USB-C to Lightning Cable.

  To customize your gestures, use the Mouse pane of System Preferences. Choose Apple menu > System Preferences, click Mouse, then click the buttons at the top to see all the scrolling, clicking, swiping, and tapping options.

- *Magic Trackpad 2:* If you configured your Mac Pro with the optional Magic Trackpad 2, it comes connected with your Mac Pro and is ready to use out of the box; you can use it anywhere within range of your computer. When you need to charge the trackpad or if you need to connect it again, connect it to your Mac Pro using the included USB-C to Lightning Cable.

  To customize your gestures, use the Trackpad pane of System Preferences. Choose Apple menu > System Preferences, click Trackpad, then click the buttons at the top to see all the Point & Click, Scroll & Zoom, and Gestures options.

If you purchased a Magic Mouse 2 or Magic Trackpad 2 separately, connect it to your Mac Pro with the included USB-C to Lightning Cable to use Bluetooth. Use this same cable to charge your devices as necessary, then unplug them and use them in the location that works best for you.

## Keyboard

The function keys on your Magic Keyboard with Numeric Keypad provide shortcuts for common functions, such as increasing the volume or screen brightness.
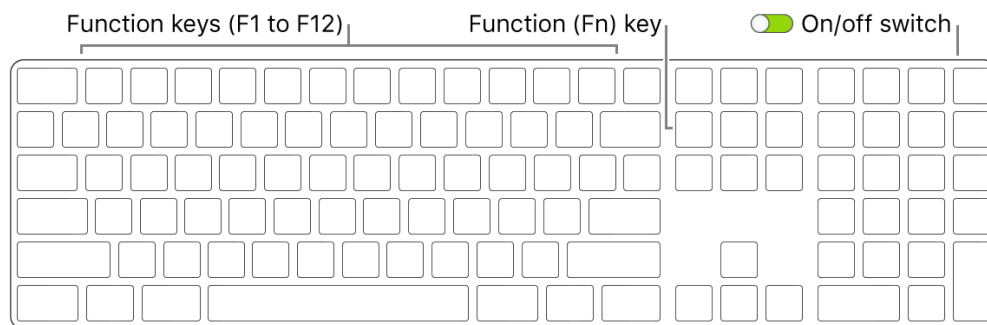
- *On/off switch:* Slide the on/off switch on the back edge of the keyboard to turn it on (green is visible) or off.

- *Brightness keys (F1, F2):* Press or to increase or decrease the brightness of the screen.

- *Mission Control key (F3):* Press ⬓□ to view what's running on your Mac Pro, including all your spaces and open windows.

- *Launchpad key (F4):* Press ⊞ to instantly see all the apps on your Mac Pro. Click an app to open it.

- *Media keys (F7, F8, F9):* Press ◁◁ to rewind, ▷‖ to play or pause, or ▷▷ to fast-forward a song, movie, or slideshow.

- *Mute key (F10):* Press ◁ to mute the sound from the built-in speakers or 3.5 mm headphone jack.

- *Volume keys (F11, F12):* Press ◁⟩⟩ or ◁⟩ to increase or decrease the volume of sound from the built-in speakers or 3.5 mm headphone jack.

- *Function (Fn) key:* Each function key (on the top row) can also perform other functions. Hold down the Fn key while you press a function key to trigger the action associated with the key.

Tip: Press the Fn key twice to turn on dictation, which lets you dictate text wherever you can type it, such as in Messages, Mail, Pages, and many other apps. (Requires an external microphone, which is sold separately at apple.com and your local Apple Store.)

Set keyboard preferences. Use the Keyboard pane of System Preferences (choose Apple menu > System Preferences, click Keyboard, then click the buttons at the top to see the available options).

Learn about keyboard shortcuts. You can press key combinations to do things on your Mac Pro that you'd normally do with a trackpad, mouse, or other device. For a list of commonly used keyboard shortcuts, see Keyboard shortcuts on your MacKeyboard shortcuts.

Mouse

Here are some common gestures you can use with your Magic Mouse 2.

(table aria-label=Mouse gestures)

| Gesture	Action
	Turn on/off: Slide the on/off switch on the bottom of the mouse to turn it on (green is visible).
	Click: Press the upper part of the mouse surface to click or double-click.

Secondary click (that is, right-click): Press the left or right side of the mouse to perform a "secondary click." (Enable right- and left-click in System Preferences ⚙ > Mouse > Secondary click.)

360º scroll: Brush one finger along the surface to scroll or pan in any direction.
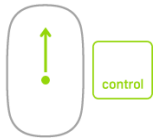
Screen zoom: Hold down the Control key and scroll with one finger to enlarge items on the screen. (Enable this feature in System Preferences ⚙ > Accessibility > Zoom > Use scroll gesture with modifier keys to zoom.)
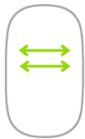
Two-finger swipe: Swipe left or right to move through pages, photos, and more.

Customize your gestures. To set preferences and enable gestures, choose Apple menu > System Preferences (or click the System Preferences icon ⚙ in the Dock), click Mouse, then click the buttons at the top to see the available options.

Trackpad

You can do a lot on your Mac Pro using simple trackpad gestures—scroll through webpages, zoom in on documents, rotate photos, and more. With the Force Touch trackpad, pressure-sensing capabilities add another level of interactivity. The trackpad provides feedback—when you drag or rotate objects, you feel a subtle vibration when they're aligned, allowing you to work with greater precision.

Here are some common gestures:

(table aria-label=Magic Trackpad gestures)

Gesture	Action
●	**Click:** Press anywhere on the trackpad. Or enable "Tap to click" in Trackpad preferences, and simply tap.
◎	**Force click:** Click and then press deeper. You can use force click to look up more information—click a word to see its definition, or an address to see a preview that you can open in Maps.

Secondary click (that is, right-click): Click with two fingers to open shortcut menus. If "Tap to click" is enabled, tap with two fingers.

Two-finger scroll: Slide two fingers up or down to scroll.

Pinch to zoom: Pinch your thumb and finger open or closed to zoom in or out of photos and webpages.

Swipe to navigate: Swipe left or right with two fingers to flip through webpages, documents, and more—like turning a page in a book.

Open Launchpad: Quickly open apps in Launchpad. Pinch closed with four or five fingers, then click an app to open it.

Swipe between apps: To switch from one full-screen app to another, swipe left or right with three or four fingers.

Customize your gestures. Choose Apple menu > System Preferences or click the System Preferences icon in the Dock, then click Trackpad.

In Trackpad preferences you can:

- Learn more about each gesture

- Set the click pressure you prefer to use

- Decide whether to use pressure-sensing features

- Customize other trackpad features

Tip: If you're force clicking when you don't intend to, try adjusting the click pressure to a firmer setting in Trackpad preferences. Or change the "Look up and data detectors" option from the "Force Click with one finger" default setting to "Tap with three fingers."

For examples of force click options, see the Apple Support article How to use the Force Touch trackpad.

Charge the battery

Your Magic Keyboard with Numeric Keypad, Magic Mouse 2, and Magic Trackpad 2 each have a built-in rechargeable battery.

Charge the battery. Connect your Magic Keyboard with Numeric Keypad or Magic Mouse 2 (or optional Magic Trackpad 2) to your Mac Pro with the included USB-C to Lightning Cable. To check the charge level, click in the menu bar at the top of the screen, then choose the device.

If you don't see the Bluetooth icon in the menu bar, choose Apple menu > System Preferences (or click the System Preferences icon in the Dock), click Bluetooth, then select "Show Bluetooth in menu bar."

See Disposal and recycling information or visit Apple Lithium-ion Batteries.

NAV TITLE: Adapters

The following Apple adapters are available to connect external devices, displays, and more, to the Thunderbolt 3 (USB-C) ports on your Mac Pro.

(table aria-label=Adapters that can be purchased separately.)

Adapter	Description
	Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter: Connect your Mac Pro to Thunderbolt 2 devices or a Thunderbolt display.
	USB-C Digital AV Multiport Adapter: Connect your Mac Pro to an HDMI device, while also connecting a standard USB device.
	USB-C VGA Multiport Adapter: Connect your Mac Pro to a VGA projector or display, while also connecting a USB device to your Mac Pro.
	USB-C to USB-A Adapter: Use a USB-C port to connect your Mac Pro to a USB-A device.
	USB-C to SD Card Reader: Insert an SD card to transfer high-resolution photos and videos to your Mac Pro.

For a full list of suitable adapters, see the Apple Support article Adapters for the Thunderbolt 3 (USB-C) or USB-C port on your Mac or iPad Pro.

Adapters and other accessories are sold separately. Visit apple.com, your local Apple Store, or other resellers for more information and availability. Review the documentation or check with the manufacturer to make sure you choose the right product.

NAV TITLE: Connect a display

The Thunderbolt 3 (USB-C) ports ⚡ support video output when an Apple MPX Module graphics card is installed. (A third-party GPU doesn't enable video on Thunderbolt 3 (USB-C) ports ⚡.) The HDMI 2.0 port on your Mac Pro also supports video. You can use an external display, a projector, or an HDTV with your Mac Pro.

Note: Mac Pro has at least one HDMI 2.0 port and four Thunderbolt 3 (USB-C) ports. The Thunderbolt 3 (USB-C) ports on your Mac Pro are managed by two controllers—one controls the two ports on the front of Mac Pro and one controls the two ports on the I/O card on the back of the computer. There are additional controllers and HDMI ports if Apple MPX Module graphics cards are installed.

(table aria-label=Connect to an external display.)

To connect this device to Mac Pro	Use a cable, or an adapter and cable
Apple Pro Display XDR	Thunderbolt 3 (USB-C) cable
Thunderbolt 3 (USB-C) display	Thunderbolt 3 (USB-C) cable
USB-C display	USB-C (USB 3.1) cable
HDMI display or HDTV	The HDMI cable that came with your display or HDTV
Thunderbolt 2 display	Thunderbolt 3 (USB-C) to Thunderbolt 2 adapter and the cable that came with your Thunderbolt 2 display
VGA display or projector	USB-C VGA Multiport adapter and the cable that came with your display or projector
DisplayPort or Mini DisplayPort display	USB-C to DisplayPort cable, or DisplayPort or Mini DisplayPort adapter and the cable that came with your display
DVI display or projector	USB-C to DVI adapter and the cable that came with your display or projector

Adapters and other accessories are sold separately. Visit apple.com, your local Apple Store, or other resellers for more information and availability. Review the documentation or check with the manufacturer to make sure you choose the right product.

Install Mac Pro into a rack

Install Mac Pro into a rack

Important: Before installing Mac Pro into a rack, read the safety notes found in Important safety information for your Mac.

Mac Pro and the rail assemblies can be installed into any of the three industry standard rack types. The rails come assembled to fit into square holes, but if you remove the outer nut, the rails fit into round hole racks. To install into a threaded rack, remove the screws from the rails, then replace the screws to secure the rails to the rack. This requires a standard 3mm (1/8-inch) hex wrench and a 6mm (1/4-inch) wrench. Examples of the different types of rack are below.

Square hole rack

No tools required.

Round hole rack

Use a 1/8-inch hex wrench.

Threaded rack

Use a 1/8-inch hex wrench.

Use a 1/4-inch wrench.

Use a 1/8-inch hex wrench.
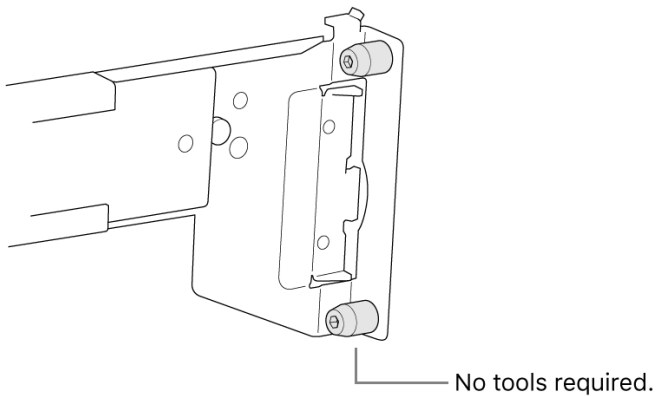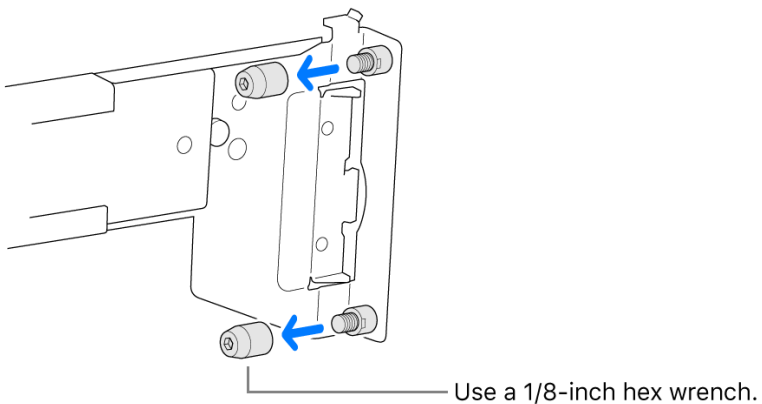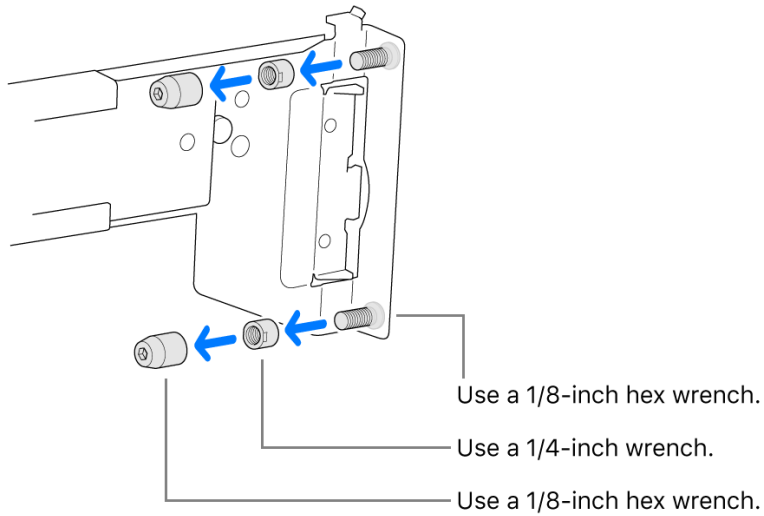
To install Mac Pro into a rack, you need to attach the rail assemblies to Mac Pro and the rack. The minimum depth of the rack must be at least 24 inches; the maximum depth should be no more than 42 inches.

Note: Mac Pro requires five rack units (5U). The top two units should be left vacant, the rail assemblies should be installed in the next two units, and one unit below the rail assemblies should be left vacant.

2U

5U space needed for entire unit

2U (Rails fit here)

1U
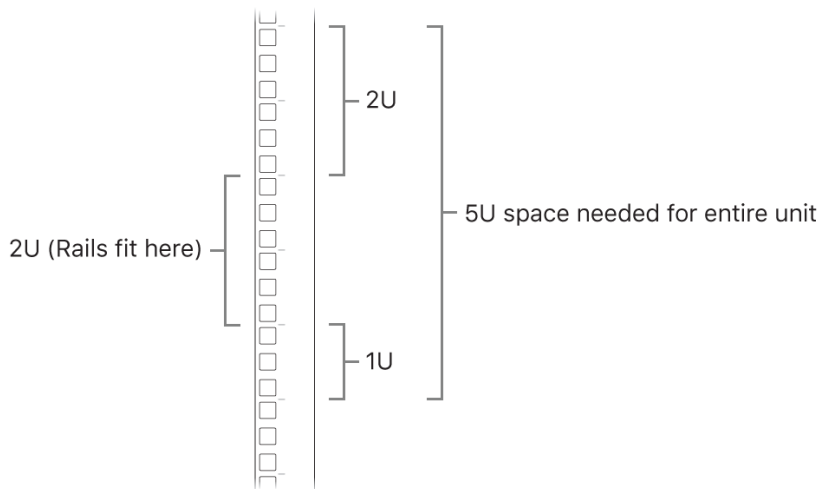
Air to cool Mac Pro flows from front to back. Make sure nothing blocks any of the openings in the front and back of the housing.
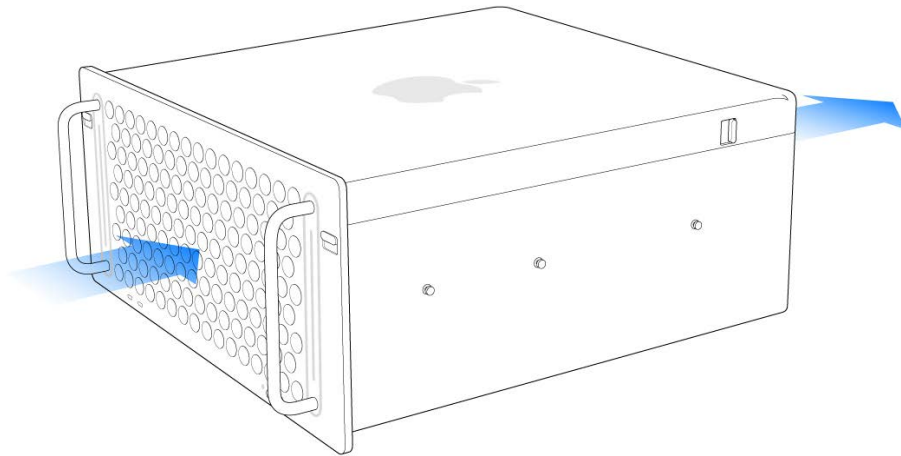
1. Extend one of the unmounted rails assemblies (either left or right).

Rear   Front
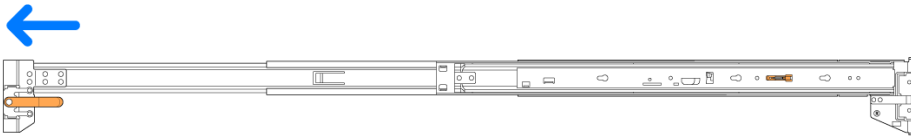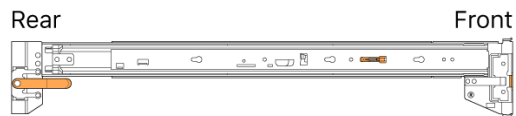
2. Insert the assembly's rear rail pins into the back of the rack, then pull the assembly to lock it into place.
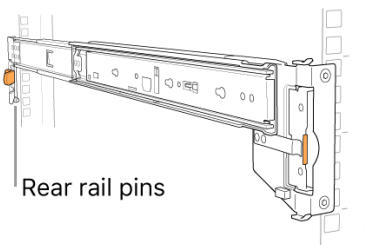
Rear rail pins

3. Insert the assembly's front rail pins into the front of the rack, then push the assembly to lock it into place.

   The assembly should snap into place.

Front rail pins
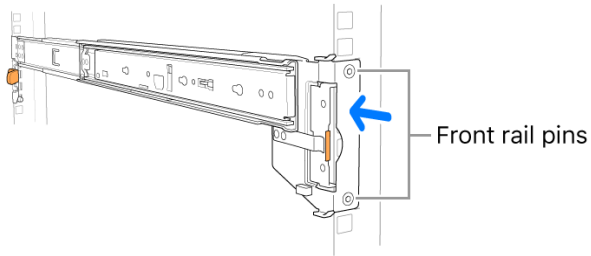
4. Slide out the inner rail until it locks.
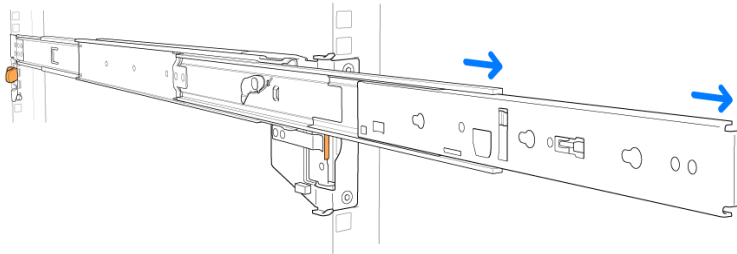
5. Slide the release latch to detach the inner rail from the assembly.

The release latch is located
on the outside surface of the rail.
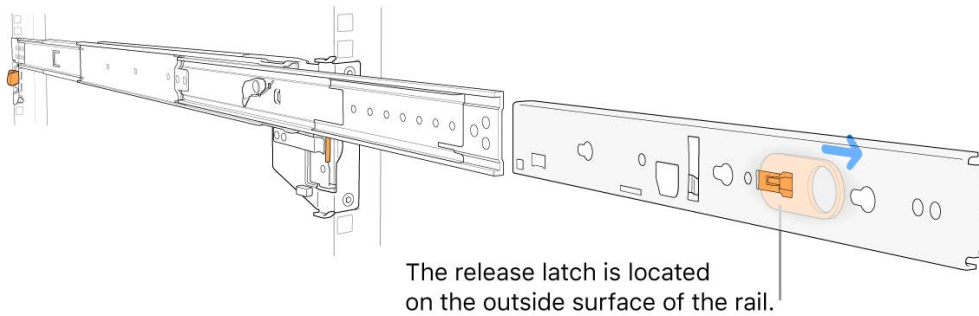
6. Repeat steps 1 to 4 for the other rail assembly.

7. Attach the inner rails to the sides of Mac Pro, making sure that the release latches are towards the front of the computer and the rail eyelets are well placed onto the Mac Pro rail posts.

Rail posts
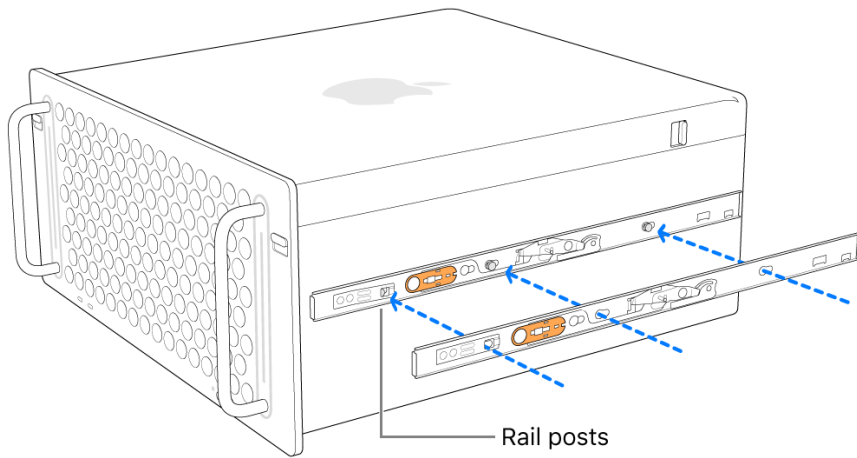
8. Slide the rail section forward until the spring lock engages the forward post.

Forward rail post
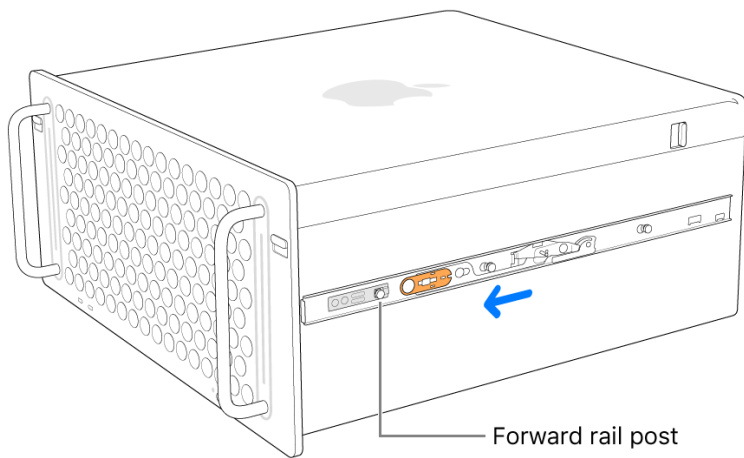
9. With one person on each side, lift Mac Pro.
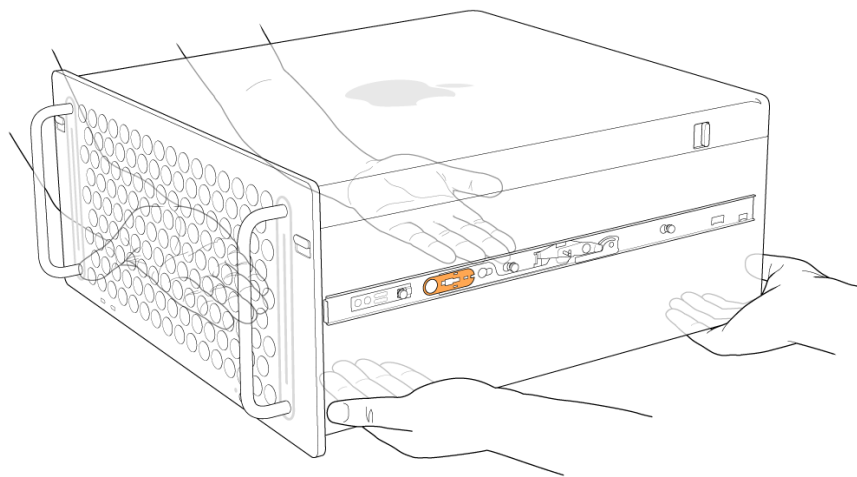
10. Align the rails attached to Mac Pro with the middle rails in the rack, then slide the computer into the rack. Ensure the locking latches are fully engaged.
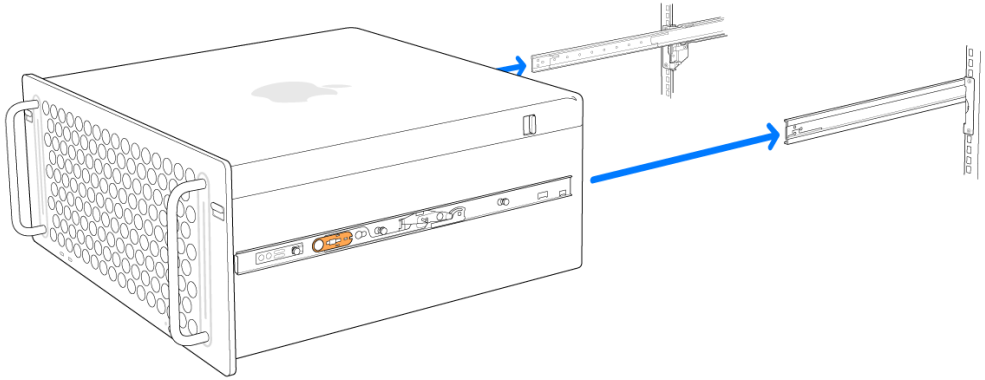
Remove Mac Pro from a rack

Follow these steps to remove Mac Pro from a rack.

1. Move both locking latches down to the unlocked position.

2. Slide out the computer until it stops.
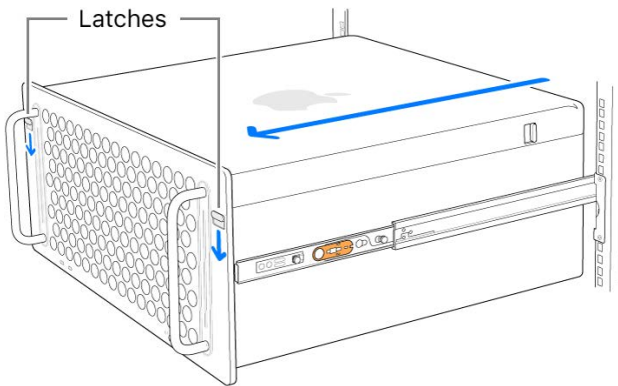
3. With one person on each side, safely hold Mac Pro.
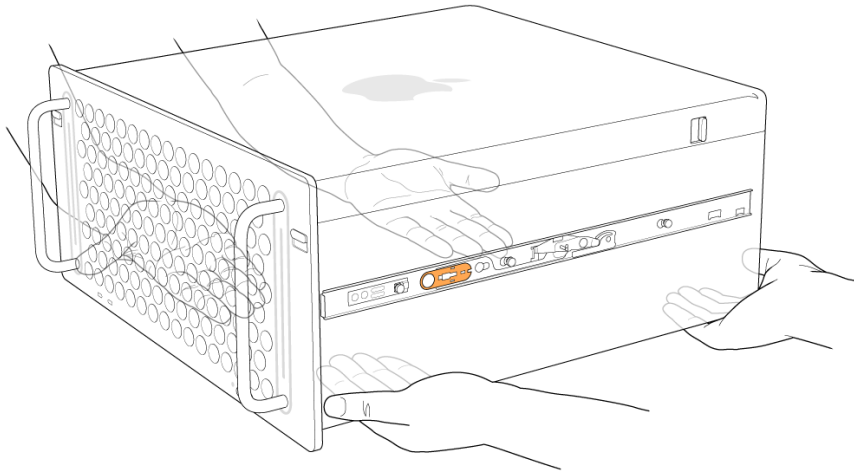
4. Pull the orange release latches on both rails, then remove Mac Pro from the rack.

Release latch
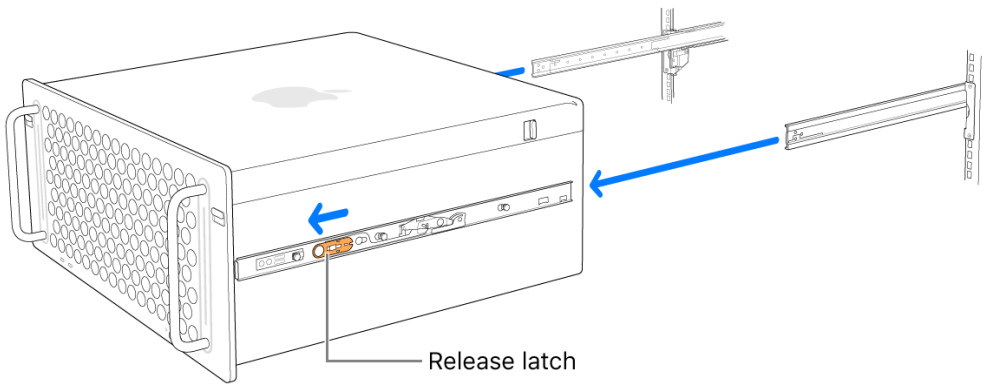
Note: You can detach the rails from the side of Mac Pro by pulling the spring latch forward, then sliding the rail back.

Spring latch
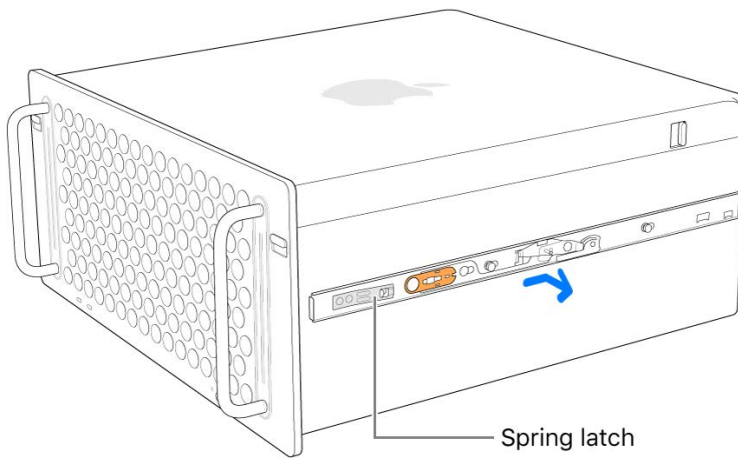
Remove Mac Pro rails from a rack

Follow these steps to remove Mac Pro rails from a rack.

1. If the inner rail is extended, pull the orange release latch, then slide the rail in.
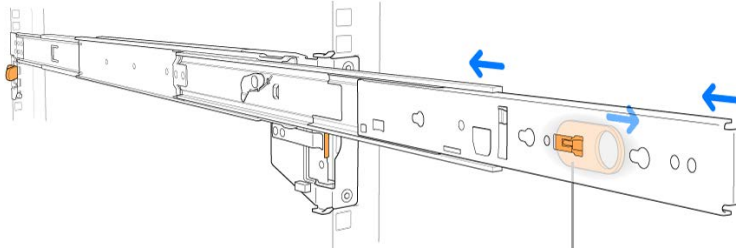
The release latch is located
on the outside surface of the rail.

2. Push in the rear orange latch at the back of the rail, then push the assembly back to unhook the rear pins.

Rear orange latch

Rear rail pins
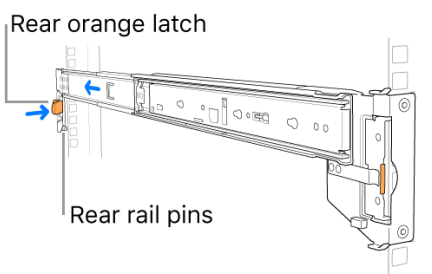
3. Open the latch at the front of the assembly to release the front pins, then lift the assembly out of the rack.

Front orange latch
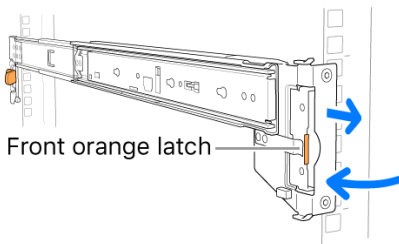
Pro Display XDR

Connect Apple Pro Display XDR

Retina 6K Resolution. Pro Display XDR is a 32-inch LCD display with Retina 6K resolution.

Extreme Dynamic Range. Extreme Dynamic Range (XDR) takes brightness and contrast to the extreme, surpassing what is considered standard dynamic range (SDR) and high dynamic range (HDR).

1000 nits of brightness. Pro Display XDR can sustain 1000 nits of brightness across the full screen. This means that a pro can edit an HDR photograph or video with the entire frame at 1000 nits of brightness, indefinitely. It also has a peak brightness of 1600 nits.

1,000,000:1 contrast ratio. A contrast ratio of 1,000,000:1 provides an incredible range of contrast, which along with extreme brightness, better replicates what the eye can see in real life.

P3 wide color. A P3 wide color gamut provides users with a vibrant, true-to-life color palette.

10-bit depth. Pro Display XDR also features true 10-bit color depth, with the ability to produce more than a billion colors.

Super-wide viewing angle. Polarizer technology reduces light leakage 25x off-axis versus a typical LCD display, providing accurate viewing from any angle.

Reference modes. Pro Display XDR has several reference modes that tailor the display's color, brightness, gamma, and white point to match the reference requirements for each media type, including several predefined reference modes for High Dynamic Range, HD, and SD video-digital cinema. There are also modes for broader use cases such as photography, internet and web development, and design and print. For more information, see the Apple Support article Use reference modes with your Pro Display XDR.

True Tone technology. The lighting around you can affect the way you see onscreen colors. True

Tone on Pro Display XDR uses a breakthrough dual ambient light sensor design—a sensor on the front and another on the back—to better gauge your overall lighting environment. This allows more exact adjustments to the color and intensity of your display, so you can have accurate viewing in all lighting conditions. For more information, see Change Display preferences on Mac.

Attach Pro Display XDR to Pro Stand

Follow these steps to attach the Apple Pro Display XDR to Pro Stand.

1. Position the display over Pro Stand. Hold the display with the top tilted back slightly, a few degrees past the magnetic connector.
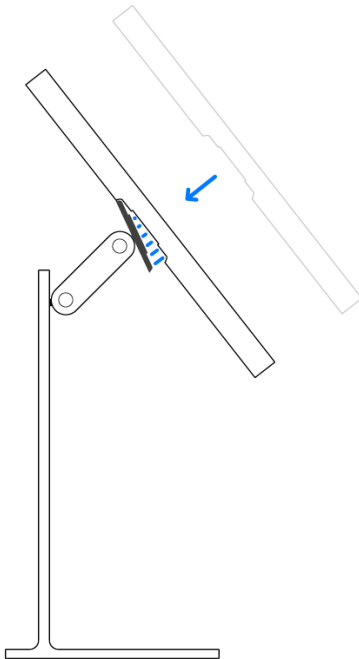
2. Lower the display onto the connector. When close, the display magnetically attaches to the stand. If placed correctly, the display locks into place.

   Important: With both hands on the display, confirm that it's attached before releasing.
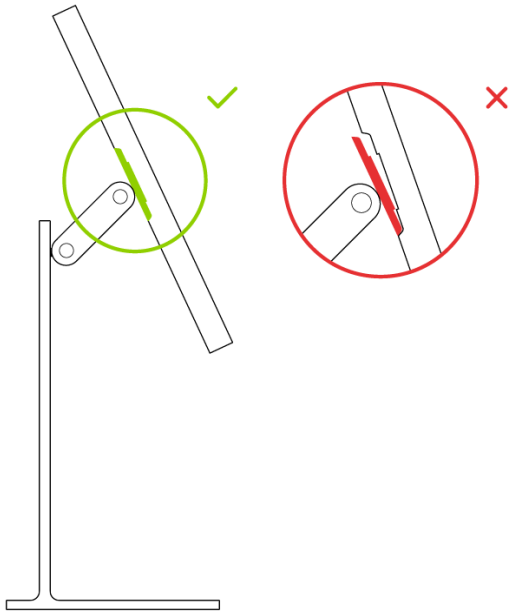
Plug in Pro Display XDR

Pro Display XDR automatically turns on when you plug it into power and connect your Mac using the included Thunderbolt 3 Pro Cable.

Route the cables through the opening in Pro Stand, ensuring that the Thunderbolt 3 Pro Cable is plugged into the Thunderbolt 3 port ⚡.

Thunderbolt 3
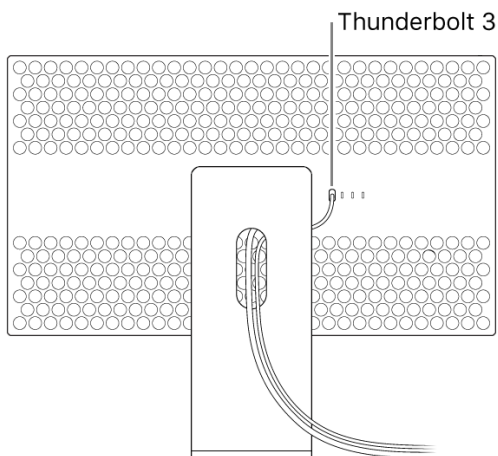
Detach Pro Display XDR from Pro Stand

Follow these steps to detach Apple Pro Display XDR from Pro Stand.

Important: Detach the display from the stand whenever you move or transport the display.

1. Before detaching the display from the stand, move the display to the highest position.
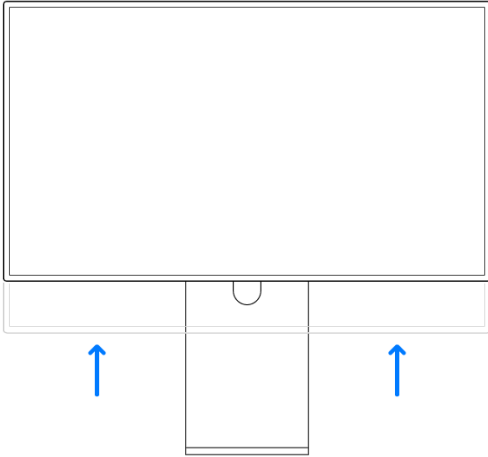
2. Unlock the slider on the magnetic connector.

   Important: The slider won't unlock unless the display is in the highest position.
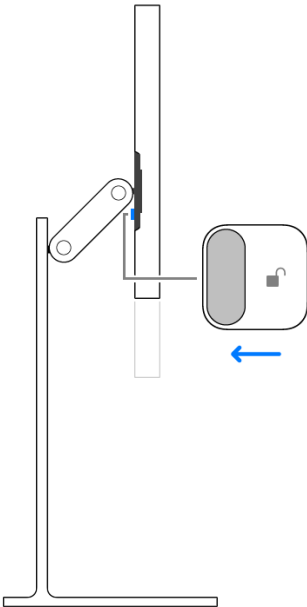
3. Tilt the display back and lift it from the magnetic connector.
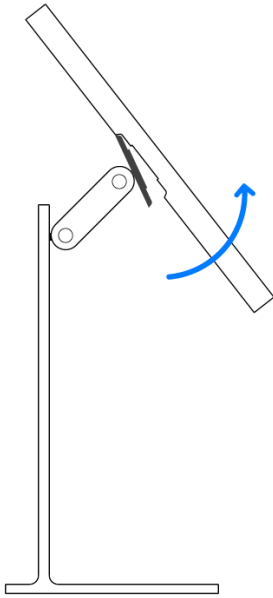
Rotate Pro Display XDR on Pro Stand

Follow these steps to rotate Apple Pro Display XDR on Pro stand.

1. Before rotating, move the display to the highest position.
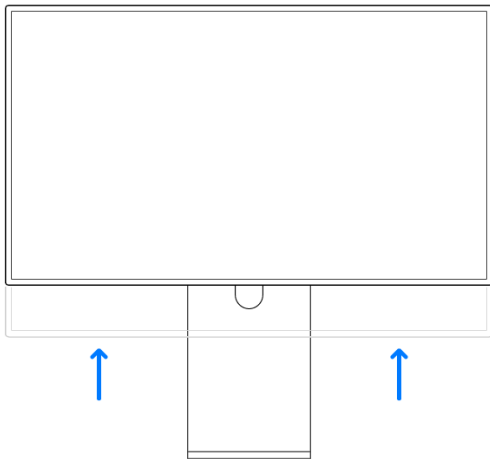
2. Unlock the slider on the magnetic connector.

   Important: The slider won't unlock unless the display is in the highest position.
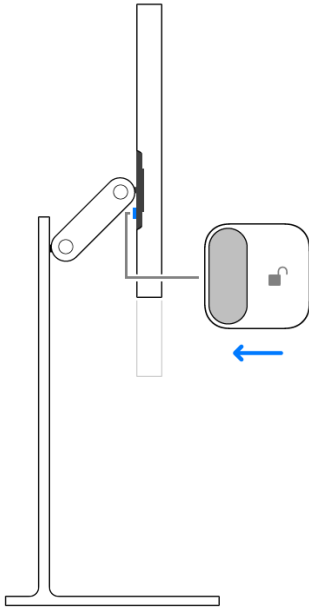
3. Rotate the display counterclockwise. When it reaches portrait orientation, the display automatically locks.
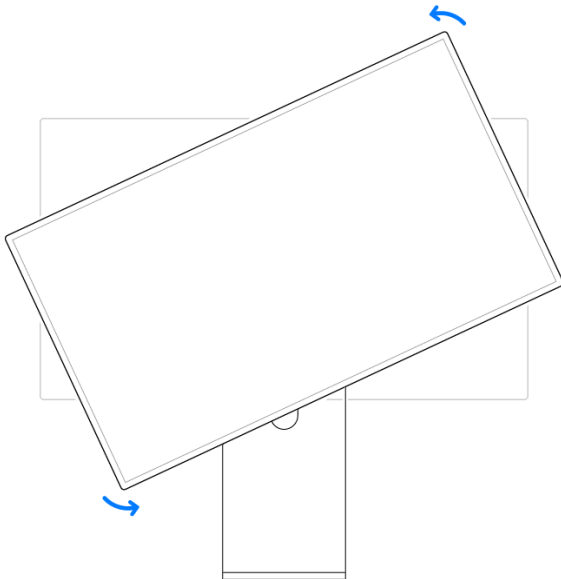
4. To rotate to landscape orientation, repeat step 2, then rotate the display clockwise.

Attach Pro Display XDR to VESA Mount Adapter

Follow these steps to attach Apple Pro Display XDR to a VESA Mount Adapter.

Important: Make sure the VESA mounting solution and installation method (type of bolt or bracket) are sufficient to handle the weight of the Pro Display XDR (up to 16.5 lbs/7.5 kg).

Important: Select a mounting location where Pro Display XDR will be free from accidental impact; don't mount Pro Display XDR so that it faces downward (for example, on the ceiling).

1. Place the display face down on a soft cloth to avoid scratching the glass.

2. Confirm that the pins on the back of the VESA Mount Adapter align with the holes in the display inset.
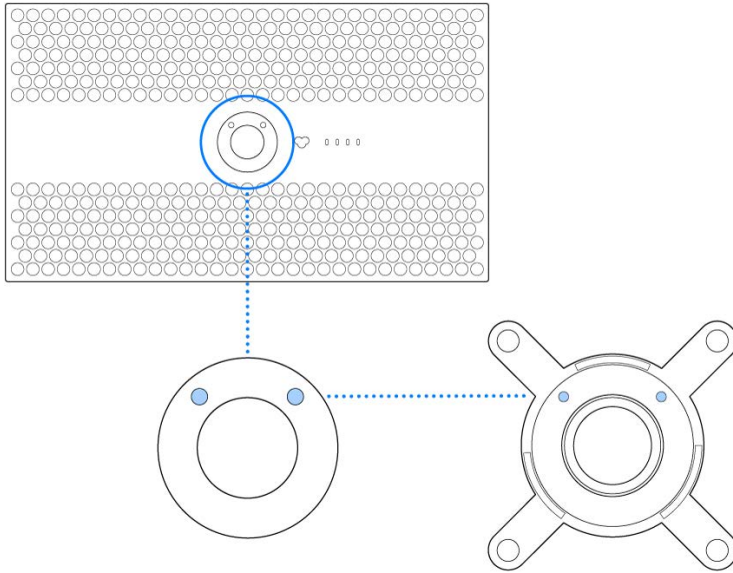
3. Place the adapter and rotate slightly in either direction until the pins click into place. The lock will be in the vertical position.
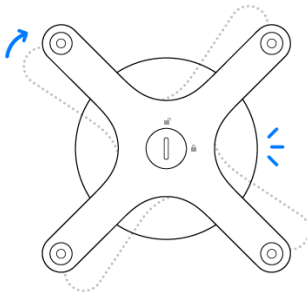
4. Use the key provided to turn the lock clockwise to secure the adapter.

   Important: When properly amounted, the lock will be in the horizontal position.
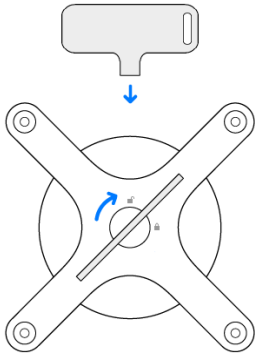
Detach Pro Display XDR from VESA Mount Adapter

Follow these steps to detach Apple Pro Display XDR from a VESA Mount Adapter.

1. Use the key provided to turn the lock counterclockwise.
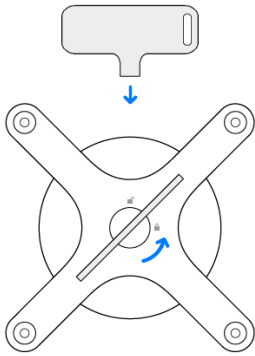
2. Remove the adapter from Pro Display XDR.
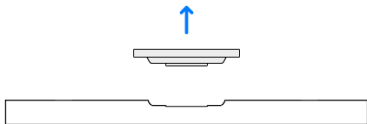
Clean Pro Display XDR

If your Apple Pro Display XDR has nano-texture glass, clean it only using the included polishing cloth. For additional cloths, contact AppleCare or visit support.apple.com.
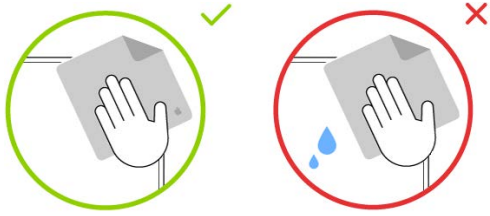
If your Pro Display XDR has standard glass, clean it using the included polishing cloth or a microfiber cloth and water.

Get started

Set up your Mac

The first time you turn on your Mac Pro, Setup Assistant walks you through the simple steps needed to start using your new Mac Pro. If you want to transfer your data from another computer, see Transfer your dataTransfer your data to your new for details.
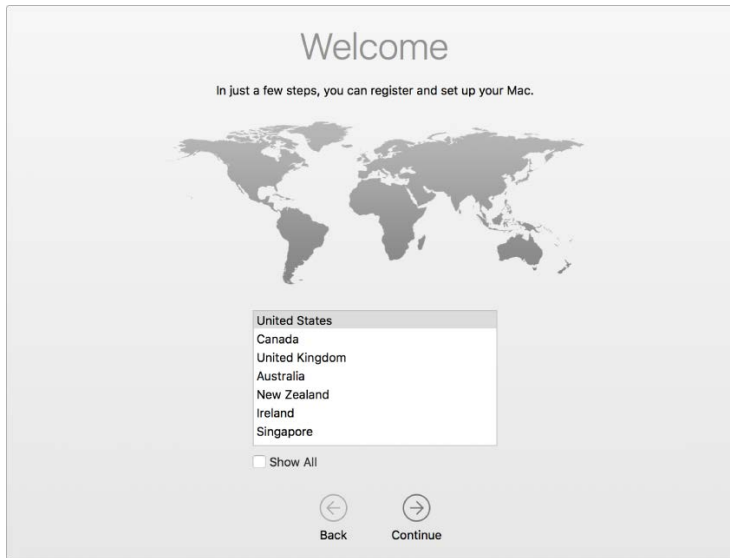
Be sure to connect your Mac Pro to Ethernet or Wi-Fi, turn on Bluetooth® wireless technology, get an Apple ID, then sign in to your device.

Sign in with your Apple ID. Your Apple ID is the account you use for everything you do with Apple—including using the App Store, the iTunes Store, iCloud, Messages, and more. Your Apple ID consists of an email address and a password. You need only one Apple ID to use any Apple service, on any device—whether it's your computer, iOS device, iPadOS device, or Apple Watch. It's best to have your own Apple ID and not share it.

If you don't already have an Apple ID, you can create one during setup (it's free). To manage your Apple ID, go to the Apple ID account website.

If other family members use Apple devices, make sure that each family member has their own Apple ID. You can create Apple ID accounts for your kids and share purchases and subscriptions with Family Sharing. See Apple Account on MacApple Account.

Important: If you forget your Apple ID password, you don't need to create a new Apple ID. Just click the "Forgot Apple ID or password?" link in the sign in window to retrieve your password.

You can do the setup tasks quickly and easily with Setup Assistant—but if you want to do them later, here's how:

Choose light or dark appearance. If you want to change the choice you made when you set up your Mac, click the System Preferences icon in the Dock, or choose Apple menu > System Preferences. Click General, then select Light, Dark, or Auto for your appearance. You can also set other appearance preferences here.

Connect to Wi-Fi. Click the Wi-Fi status icon in the menu bar, then choose a Wi-Fi network and enter the password, if necessary.

Turn Wi-Fi on or off. Click the Wi-Fi status icon in the menu bar, then choose Turn Wi-Fi On or Turn Wi-Fi Off.

Turn Bluetooth on or off. Click the Bluetooth icon in the menu bar, then choose Turn Bluetooth On or Turn Bluetooth Off.

Tip: If you don't see the Wi-Fi status icon 🛜 or Bluetooth icon ✳ in the menu bar, you can add them. For Wi-Fi, choose Apple menu > System Preferences, then click Network. Click Wi-Fi in the list on the left, then select "Show Wi-Fi status in menu bar." For Bluetooth, choose Apple menu > System Preferences, click Bluetooth, then select "Show Bluetooth in menu bar."

Set up iCloud on your Mac Pro. With iCloud, you can store all of your content—documents, movies, music, photos, and more—in the cloud, and access it anywhere you go.

To set up iCloud, choose Apple menu > System Preferences. Sign in with your Apple ID if you haven't already. Click Apple ID > iCloud, then select the features you want to use. To find out more, see Access your iCloud content on your MacAccess your iCloud content.

Important: Be sure to sign in with the same Apple ID on all your devices.

Find your way around

The first thing you see on your Mac Pro is the *desktop*, where you can quickly open apps, search for anything on your Mac Pro and the web, organize your files, and more.

Apple menu   The desktop   Finder window   Siri

Help menu   Menu bar   🛜 Wi-Fi icon

Finder icon   System Preferences icon   Dock
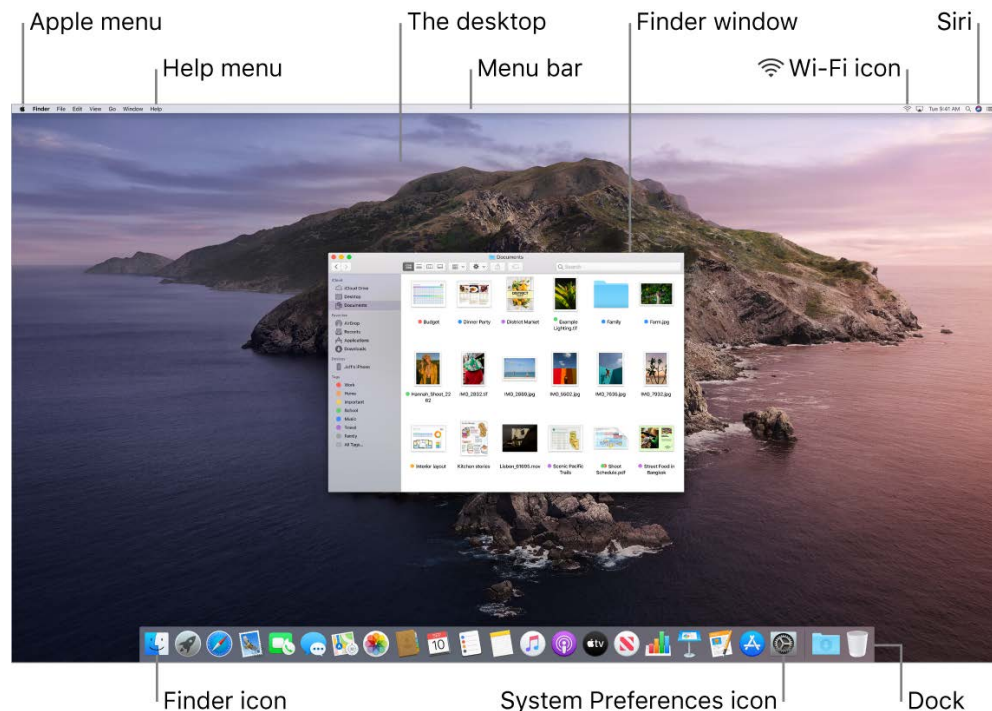
Tip: Can't find the pointer? To magnify it temporarily, slide the mouse back and forth quickly.

Menu bar. Use the menus and icons along the top of the screen to open new windows, connect to a Wi-Fi network, check your Wi-Fi status 🛜, change the volume 🔊, query Siri, and more. The

menu items change, depending on which app you're using.

Apple menu . The Apple menu in the upper-left corner of the screen contains frequently used items. To open it, click the Apple icon .

Help menu. Help for your Mac Pro and apps is always available from the Finder. To get help, click the Help menu and choose macOS Help to open the macOS User Guide. Or type in the search field and choose a suggestion.
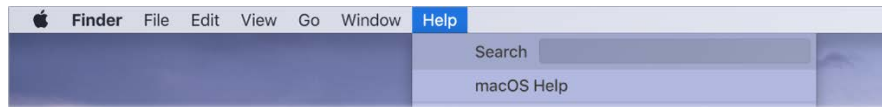
To learn more, see macOS User Guide.

Use a Dynamic Desktop. When you use a Dynamic Desktop picture, you can watch your desktop picture automatically change to match the time of day in your current location. Choose Desktop & Screen Saver in System Preferences, then select the Dynamic setting. To have your screen move from day to night based on your current time zone, enable Location Services. If Location Services is turned off, the picture changes based on the time zone specified in Date & Time preferences.

Stay organized with stacks. To create stacks on your desktop, go to Finder and choose View, then select Use Stacks. To see options for your stacks, go to View > Group Stacks By. Then any new files you add to the desktop are automatically sorted into the appropriate stack. To view what's inside a stack, click the stack to expand its contents. You can also place your cursor over a stack to view file thumbnails. To learn more, see Organize files in stacks on Mac in the macOS User Guide.

Stay focused with Dark Mode. Use a dark color scheme for the Desktop, menu bar, Dock, and all the built-in apps on macOS. Your content stands out front and center while darkened controls and windows recede into the background. See white text on a black background in apps such as Mail, Contacts, Calendar, and Messages, so it's easier on your eyes when you're working in dark environments.

Dark Mode is finely tuned for professionals who edit photos and images—colors and fine details pop against the dark app backgrounds. But it's also great for anyone who just wants to focus on their content.

Keep reading to learn about The Finder on your MacThe Finder and other features of the desktop.

NAV TITLE: The Finder

Use the Finder to organize and locate your files. To open a Finder window, click the Finder icon in the Dock at the bottom of the screen.
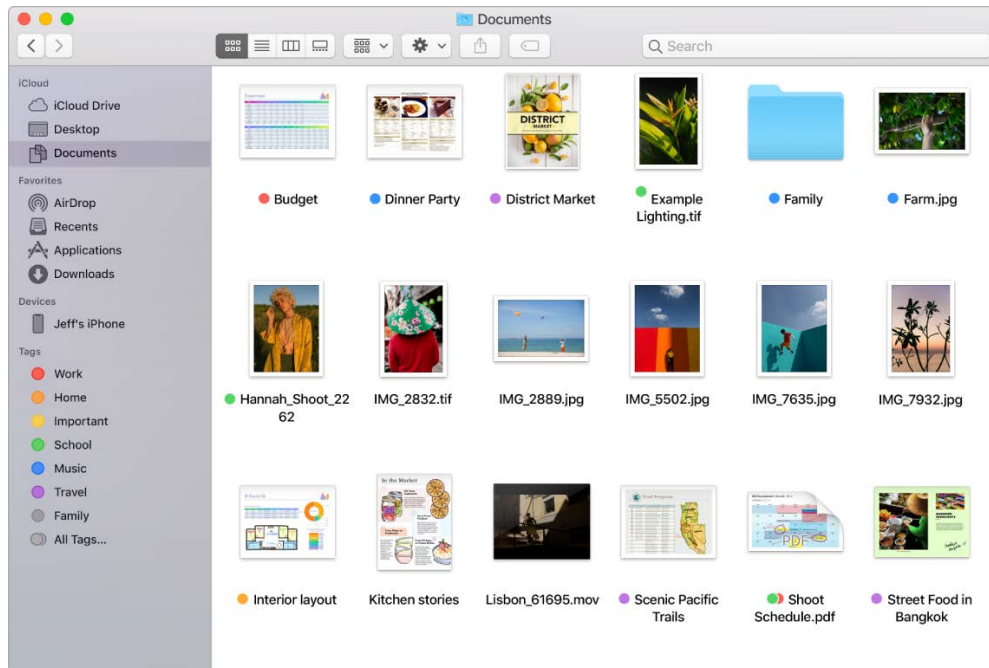
Sync devices. When you connect a device like an iPhone or iPad, you can see it in the Finder sidebar. From there you can back up, update, and restore your device.

Gallery View. With Gallery View, you can see a large preview of your selected file, so you can visually identify your images, video clips, and other documents. The Preview pane shows information to help you identify the file you want. Use the scrubber bar at the bottom to quickly locate what you're looking for. To close or open the Preview pane, press Shift-Command-P.
Tip: To show filenames in Gallery View, press Command-J and select "Show filename."

Gallery View

Scrubber bar
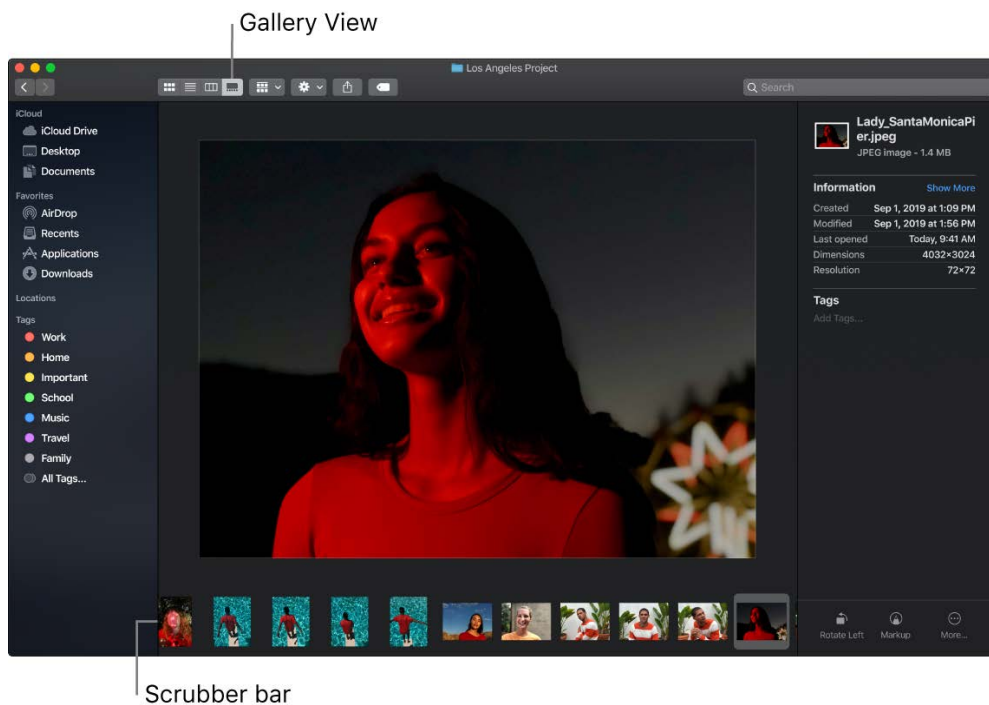
Quick Actions. At the bottom right of the Preview pane are shortcuts that let you manage and edit files directly in the Finder. You can rotate an image, annotate or crop an image in Markup, combine images and PDFs into a single file, trim audio and video files, or create custom actions through Automator workflows (for example, watermarking a file). To learn more, see Perform quick actions in the Finder on Mac in the macOS User Guide.

To show the Preview pane options in the Finder, choose View > Show Preview. To customize what's shown, choose View > Show Preview Options, then select the options for your file type.

Tip: Select a file and press the Space bar to open Quick Look. You can sign PDFs; trim audio and video files; and mark up, rotate, and crop images without opening a separate app. To learn more about Quick Look and markup features, see View and edit files with Quick Look on Mac and Mark up files on Mac in the macOS User Guide.

NAV TITLE: The Dock

The Dock, at the bottom of the screen, is a convenient place to keep the apps and documents you use frequently.

Go to the Finder.   Open System Preferences.

Apps in your Dock   Recently opened apps

Files, folders, and Trash
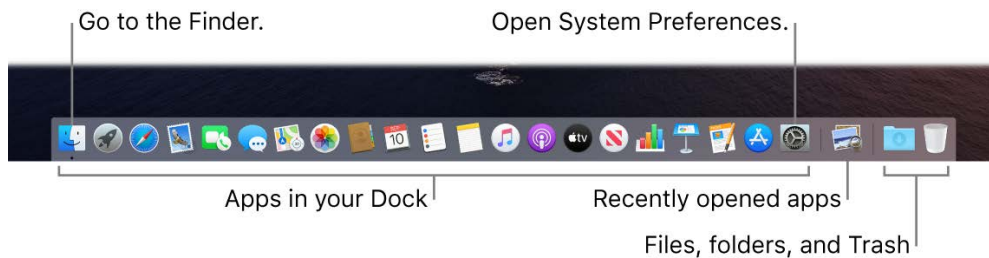
Open an app or file. Click its icon in the Dock. Recently opened apps appear in the center section of the Dock.

Add an item to the Dock. Drag the item and drop it where you want it. Place apps in the left section of the Dock, and files or folders in the right section.

Remove an item from the Dock. Drag it out of the Dock. The item isn't removed from your Mac Pro—just from the Dock.

Tip: You can make the Dock larger or smaller, add or remove items, move it to the left or right side of the screen, and even set it to hide when you're not using it. To change how the Dock looks, click the System Preferences icon 🖥️ in the Dock, or choose Apple menu > System Preferences. Then click Dock.

Learn more. See the Apple Support article Use the Dock on Mac.

Your Mac Pro comes with apps for all the things you love to do—browse the web, check email, share photos, enjoy movies, and more.

Folder containing apps

Launchpad arranges your apps in a grid. Click an app icon to open it.

Launchpad icon

App Store icon
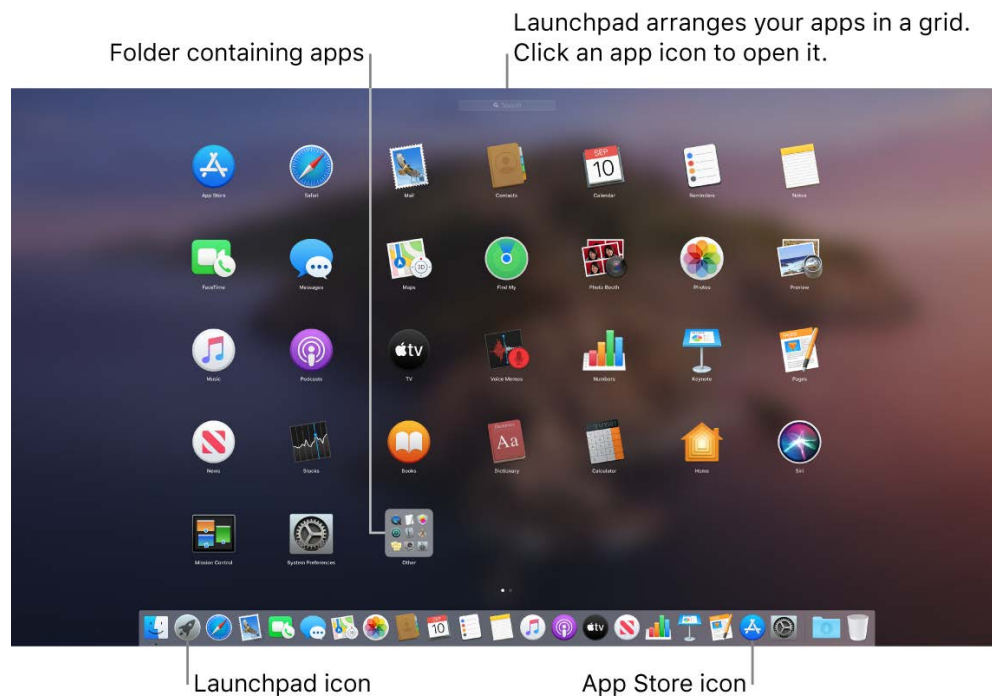
Open an app. Click an app icon in the Dock, or click the Launchpad icon 🚀 in the Dock, then click the app you want. You can also search for an app using Spotlight, then open the app directly from your Spotlight search results.

Organize apps in Launchpad. Launchpad organizes your apps in a grid. Drag an app to a new location to rearrange apps. Drag an app onto another app to create a folder. Drag more apps to the new folder to add them. To remove an app from a folder, drag it out.

Get more apps. Click the App Store icon 🅰 in the Dock and search for apps you want. Apps you download from the App Store appear automatically in Launchpad. To quickly get updates for apps, click Updates in the App Store.

Learn more. See the Apple Support article Use Launchpad on your Mac.

Use Notification Center to view details about your day (calendar, stocks, weather, and more) and catch up on notifications you might have missed (email, reminders, app notifications, and more).
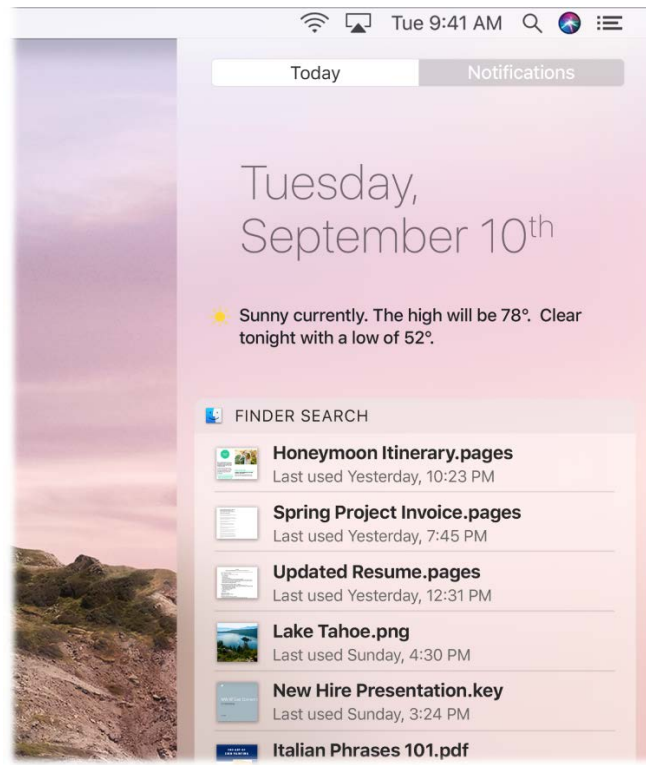
Open Notification Center. Click the Notification Center icon ☰ at the top right of the screen. Click Today to see what's coming up or Notifications to review what's come in.

Silence notifications. Open Notification Center, scroll up, then turn on Do Not Disturb. You won't see or hear notifications as they arrive, but you can view them later in Notification Center.

Learn more. See the Apple Support article Use Notifications on your Mac.

System Preferences is where you personalize your Mac Pro settings. For example, use Energy Saver preferences to change sleep settings. Or use Desktop & Screen Saver preferences to add a desktop background or choose a screen saver.

Customize your Mac Pro. Choose Apple menu > System Preferences, or click the System Preferences icon in the Dock. Then click the preference you want to set. To learn more, see Customize your Mac with System Preferences in the macOS User Guide.
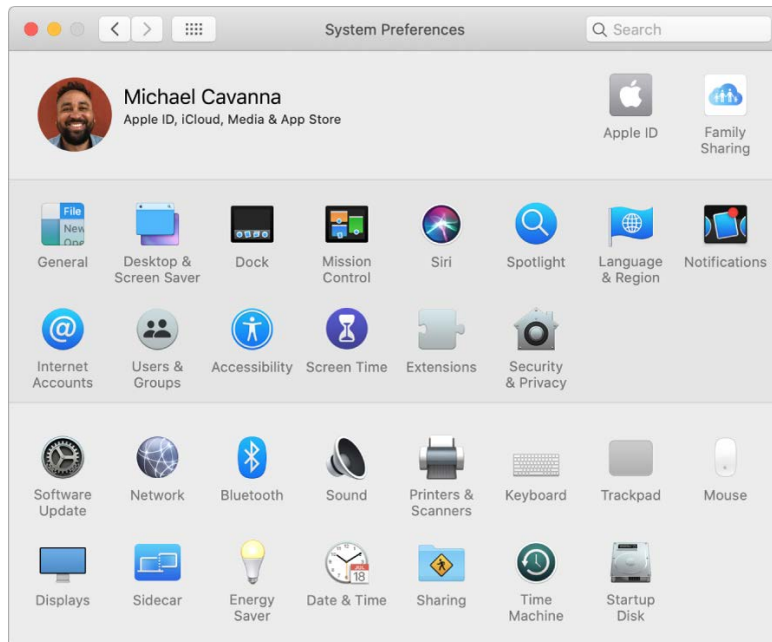
Update macOS. Click the System Preferences icon in the Dock, then click Software Update to see if your Mac is running the latest version of macOS software. You can specify options for automatic software updates.

Spotlight is an easy way to find anything on your Mac Pro, such as documents, contacts, calendar events, and email messages. Spotlight Suggestions offer info from Wikipedia articles, web search results, news, sports, weather, stocks, movies, and other sources.

When you search with Spotlight, the preview area on the right provides search results you can interact with—make a call, send an email message, play a song, get directions, even convert currencies. Spotlight can provide answers to math questions or define words, all on your desktop.

Search for anything. Click at the top right of the screen, then start typing.

Tip: Type Command–Space bar to show or hide the Spotlight search field.

Get weather, stocks, sports, transit info, and more.

Interact with the preview in Spotlight.
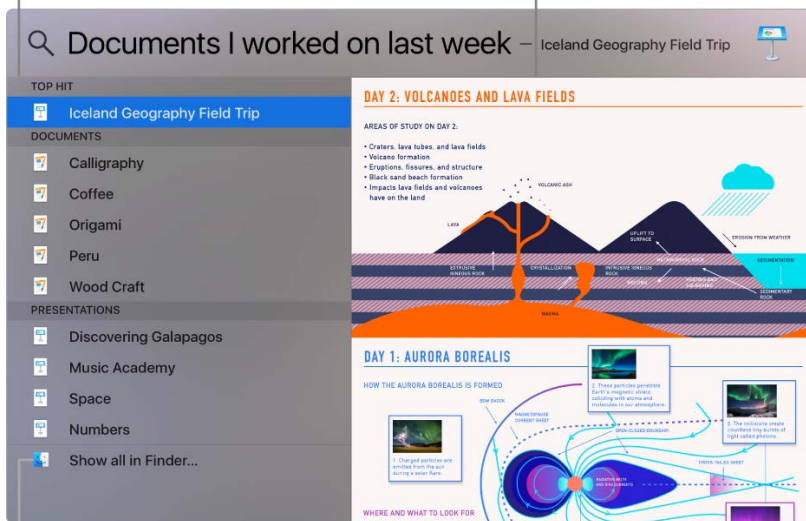
Find your files quickly.

Get flight info. Enter the airline and flight number in Spotlight to see your flight status and a map, without having to open Safari.
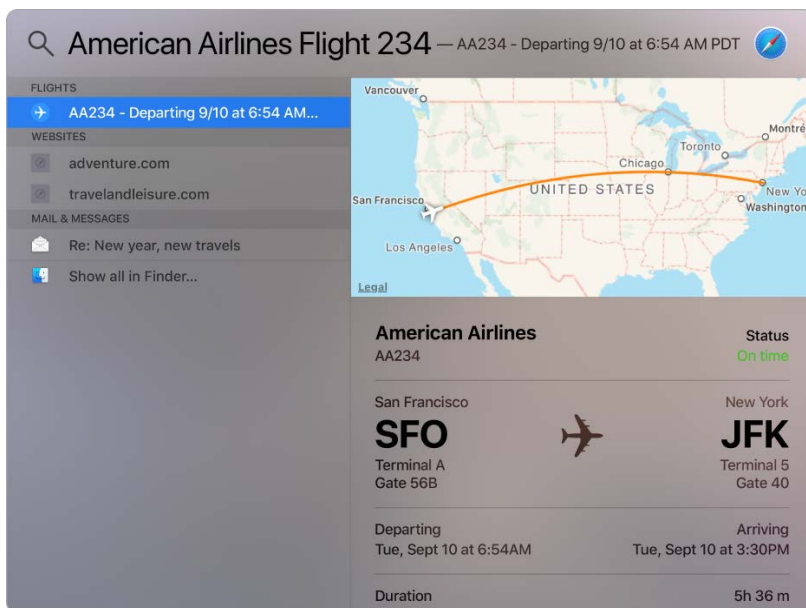
Preview your results. Click a search result and view it in the preview on the right. Sometimes that's all you need to do—click items or links directly in the preview. You can also double-click a result to open it.

Open an app. Type the app name in Spotlight, then press Return.

Turn off Spotlight Suggestions. If you want Spotlight to search only for items on your Mac Pro,

you can turn off Spotlight Suggestions in Spotlight preferences. Click the System Preferences icon 🔍 in the Dock, click Spotlight, then click to deselect "Allow Spotlight Suggestions in Look up." You can also make other changes to the list of categories Spotlight searches.

Learn more. See the Apple Support article Use Spotlight on your Mac.

You can talk to Siri on your Mac Pro and use your voice for many tasks. For example, you can find files, schedule meetings, change preferences, get answers, send messages, place calls, and add items to your calendar. Siri can give you directions ("How do I get home from here?"), provide information ("How high is Mount Whitney?"), perform basic tasks ("Create a new grocery list"), and much more.

Important: Mac Pro doesn't have a built-in microphone, so you must connect an external microphone (sold separately) in order to use Siri. After attaching your microphone, select it in Sound preferences (click the System Preferences icon 🔍 in the Dock, click Sound, click Input, then select your microphone).

Enable Siri. Click the Siri icon 🌀 in the menu bar, then click Enable when prompted. Or click the System Preferences icon 🔍 in the Dock, click Siri, then select Enable Ask Siri. You can also set other options, such as Language.
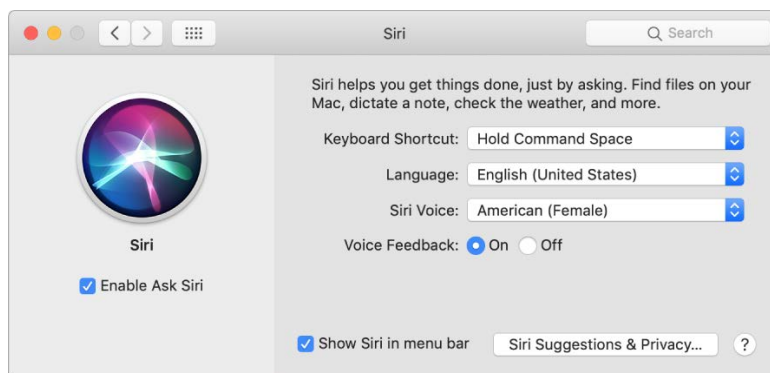
Note: To use Siri, your Mac Pro must be connected to the internet and to a microphone. Siri may not be available in all languages or in all areas, and features may vary by area.

Speak to Siri. Click Siri 🌀 in the menu bar and start speaking. Or press and hold the Command key and the Space bar, and speak to Siri.

Tip: To learn about more ways you can use Siri, ask "What can you do" at any time, or click the Help button ❓.

Some things you can ask me:

Finder	"Show my Downloads folder"	>
System Preferences	"Make the screen brighter"	>
About this Mac	"How fast is my Mac?"	>
Apps	"Launch Photos"	>
FaceTime	"FaceTime Lisa"	>
Messages	"Tell Susan I'll be right there"	>
Calendar	"Set up a meeting at 9"	>
Sports	"Did the Giants win?"	>
Photos		>
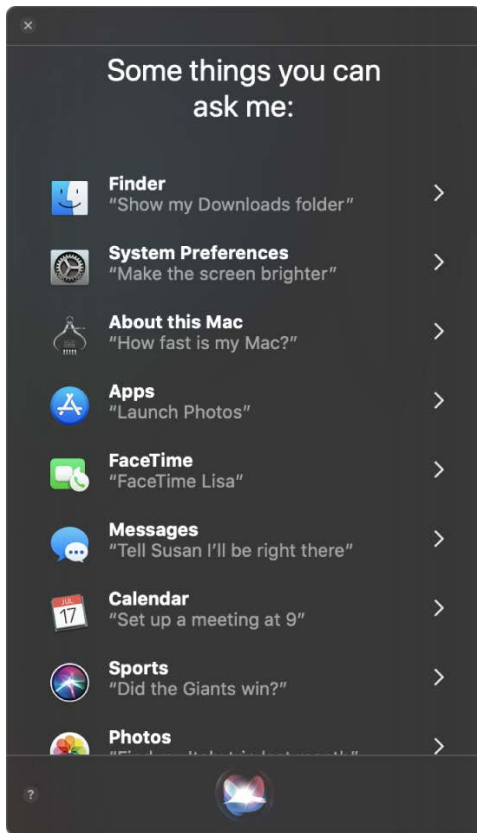
Play some music. Just say, "Play some music," and Siri does the rest. You can even tell Siri, "Play the top song from March 1991."

Find and open files. Ask Siri to find files and open them right from the Siri window. You can ask by filename or by description. For example, "Show me files Ursula sent," or "Open the spreadsheet I created last night."

Drag and drop. Drag and drop images and locations from the Siri window into an email, text message, or document. You can also copy and paste text.

Pin a result. Save Siri results from Sports, Reminders, Clock, Stocks, Notes, Finder, and general knowledge (Wikipedia, for example) to the Today view in Notifications. Click the plus sign ⊕ in the top right of a Siri result to pin it to the Today View. To see it later, click the Notification Center icon ☰, then click Today. If you're checking a sports score, for example, results stay up to date.

Change the voice. Click the System Preferences icon ⚙ in the Dock, click Siri, then choose an option from the Siri Voice menu.

Learn more. See the Apple Support article How to use Siri on your Mac.

What's new

New macOS features

macOS Catalina organizes your media from iTunes into three new apps:

- *Music:* Listen to your favorite songs in the new Apple Music app. Your library contains all your music, and For You offers personalized playlists and suggestions. See Music.

- *TV:* Watch movies and TV shows in the Apple TV app. See personalized recommendations in Watch Now, or pick up watching where you left off on another device. See TV.

- *Podcasts:* Browse, subscribe, and listen to podcasts on your Mac. Find your favorite episodes in Listen Now, or discover new ones by searching for host, guest, or topic. See Podcasts.

macOS Catalina also offers many exciting new features, including:

- *Find My:* Locate a lost device, even if it isn't connected to Wi-Fi. You can also share your location and keep track of those who have shared their location with you. See Find My.

- *Activation Lock:* When Find My Mac is on, you have to enter your Apple ID password to erase and reactivate your Mac. So if your Mac is ever lost or stolen, you can make sure that no one else uses it. See the Apple Support article About Activation Lock on your Mac.

- *Sidecar:* Turn your iPad into a secondary display for your Mac. Spread out your work, draw with Apple Pencil, and more. See Sidecar on your MacSidecar.

- *Accessibility:* Voice Control lets you control your Mac entirely with your voice, thanks to new numbered grids and text editing commands. Know exactly what's on the screen with improvements to VoiceOver, zoom, and new color filters. See Accessibility.

- *Apple Account:* View everything connected to your Apple ID in one place. Your family can also see shared subscriptions, enabled services, and Ask To Buy settings. See Apple Account on MacApple Account.

- *Screen Time:* Keep track of your activity with detailed reports and custom notifications. You can also control how much time you or your kids spend on apps. See Screen Time on MacScreen Time.

- *Photos:* Larger previews and hidden duplicates make your best shots stand out. Choose from curated albums and videos in Memories, then use new editing tools to make them your own. See Photos.

- *Reminders:* Create reminders with times, dates, locations, flags, and attachments. Smart lists automatically sort your upcoming reminders, so you can easily stay organized. See Reminders.

- *Notes:* Gallery view and improved search make finding your notes even easier. You can also rearrange checklists and collaborate in shared folders. See Notes.

- *Mail:* Take control of your inbox. Quickly mute threads, block senders, and unsubscribe from mailing lists. See Mail.

- *Safari:* A redesigned start page lets you pick up where you left off or choose from relevant websites. See Safari.

- *Security:* Your Mac asks for permission before letting an app access your data or capture what's happening on screen. All new apps are checked for security issues before you run them. Security improvements also make it harder for problems in one area to impact the rest of your Mac.

Secure storage and secure boot on your Mac Pro

Your Mac Pro includes the Apple T2 Security Chip, which provides the following security features to protect what's on your computer and prevent unauthorized software apps from loading during startup:

- *Secure storage:* Your Mac Pro solid state drive is encrypted with hardware keys to provide advanced levels of security. In the event of a catastrophic failure, data recovery may not be possible, so you need to back up your system to an external source. You can set up Time Machine or another backup plan to regularly back up the contents of your computer. See Back up your files with Time Machine on Mac in the macOS User Guide and the Apple Support article Back up your Mac with Time Machine.

- *Secure boot and Startup Security Utility:* Support for secure boot is turned on automatically. It helps ensure that only legitimate operating system software is loaded on your computer at startup. See the Apple Support article About Secure Boot.

  If your Mac Pro doesn't start up because it detects an untrusted component, it will start up from a secure recovery partition and automatically correct issues if possible. To learn more about Startup Security Utility or to find out how to set other options, such as starting up from an external device, see the Apple Support article About Startup Security Utility.

Note: In rare circumstances, such as a power failure during a macOS upgrade, Mac Pro may become unresponsive; the firmware on the chip may need to be revived. See the Apple Support article Revive firmware in Mac computers in Apple Configurator.

Learn more. See the Apple Support article About the Apple T2 Security Chip.

It's easy to move your files and settings from another Mac or PC to your Mac Pro. To transfer the data when you first set up your Mac Pro, use Setup Assistant. To transfer data later, you can use Migration Assistant. If both computers are connected to the same Wi-Fi network, you can transfer the data wirelessly.

Tip: For best results, make sure your Mac Pro is running the latest version of macOS. To check for software updates, click the System Preferences icon 🛞 in the Dock, then click Software Update.

If you used Time Machine to back up your files from another Mac to a storage device (such as an external disk), you can copy the files from the device to your Mac Pro.

Use Migration Assistant. Open a Finder window, go to Applications > Utilities, then double-click Migration Assistant. Follow the onscreen instructions. See the Apple Support article How to move your content to a new Mac.

Tip: For fastest migration, connect your old computer to your Mac Pro with a cable, such as a Thunderbolt 3 (USB-C) cable. If you migrate wirelessly, you'll get best results if you keep both computers near each other throughout the migration process.

Copy files from a storage device. Connect the device to a Thunderbolt 3 (USB-C) port ⚡ or a USB 3 (Type A) port on your Mac Pro, then drag files from the storage device to your Mac Pro.

Use Target Disk Mode. Depending on the type of Thunderbolt port on your old computer, you need different cables and/or adapters:

- *Thunderbolt 3 (USB-C) port:* You need a Thunderbolt 3 (USB-C) cable. Plug one end into a Thunderbolt 3 (USB-C) port on your old computer and one end into a Thunderbolt 3 (USB-C) port on your Mac Pro.

- *Thunderbolt 2 port:* You need a Thunderbolt 3 (USB-C) to Thunderbolt 2 Adapter and a Thunderbolt 2 cable. Plug the adapter into a Thunderbolt 3 (USB-C) port on your Mac Pro. Then connect one end of the Thunderbolt 2 cable to the adapter, and the other end to the Thunderbolt 2 port on your old computer.

Put the Mac you want to migrate data from in Target Disk Mode by restarting it while holding down the T key. Then connect the two computers using one of the options described above, and open Migration Assistant on your Mac Pro. Select "From a Mac, Time Machine backup, or startup disk" when asked how you want to transfer your information, click Continue, then select the disk you want to transfer information from.

Note: If FileVault is enabled on your old Mac, you're asked to enter an administrator password before you can use Target Disk Mode.

NAV TITLE: Save space

Save space on your Mac Pro

With Optimize Storage, you can automatically free up space on your Mac Pro by making files available on demand. Your oldest files will be stored in iCloud and on your email IMAP or Exchange server, so you can download them at any time. There are also tools to identify and delete big files.

Optimize storage. To see storage recommendations, go to Apple menu > About This Mac, click Storage, then click Manage. You'll see different recommendations based on how you configured your Mac. If your Mac is low on storage, you'll see an alert with a link to the Storage pane.
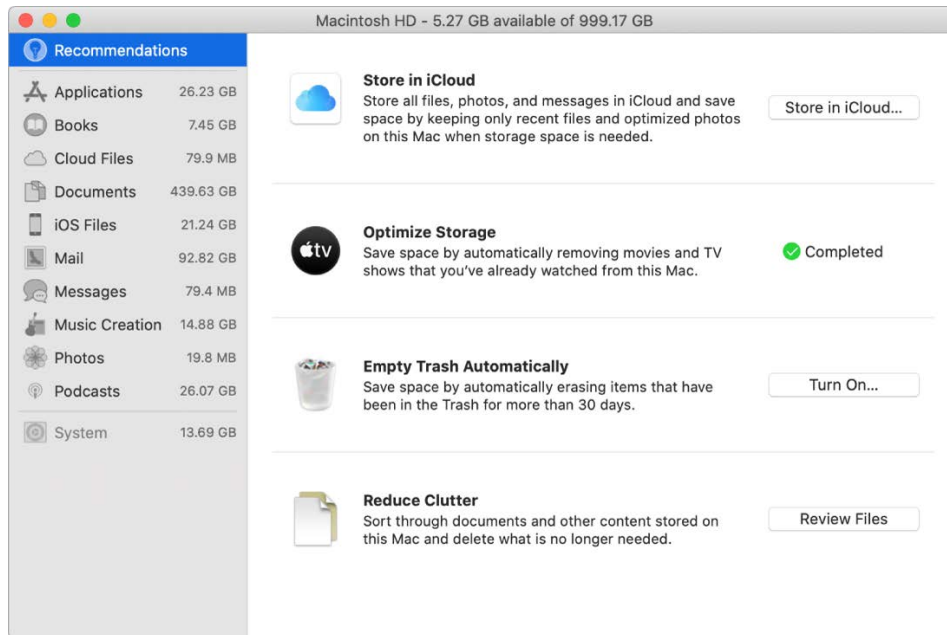
Set options to:

- *Store in iCloud:* Store all files, photos, and messages in iCloud and save space on your Mac.

  - *Desktop and Documents:* Store all the files from your Desktop and Documents folders in iCloud Drive. When storage space is needed, iCloud Drive keeps recently opened files on your Mac and makes your oldest files available on demand.

  - *Photos:* Store photos and videos in iCloud Photos. When storage spaces is needed, iCloud Photos uses optimized versions of photos and video on your Mac and makes the originals available on demand.

  - *Messages:* Store all messages and attachments in iCloud. When storage space is needed, iCloud keeps recent attachments on your Mac and makes your oldest files available on demand.

  Even though your files are stored in the cloud, you can access them right where you left them on your Mac Pro. See Access your iCloud content on your MacAccess your iCloud content.

- *Optimize Storage:* Save space on your Mac by optimizing the storage of movies and TV shows in the Apple TV app. You can choose to automatically remove movies or TV shows from your Mac Pro after you watch them. You can download them again at any time.

- *Empty Trash Automatically:* Automatically erase items that have been in the Trash for more than 30 days.

- *Reduce Clutter:* Easily identify large files, and delete the files you no longer need. To browse large files, click through the categories in the sidebar—Documents, Applications, Mail, Messages, Books, iCloud Drive, and more.

To help you save space as you work, macOS also:

- Prevents you from downloading the same file twice from Safari

- Alerts you to remove installer software when you finish installing a new app

- Clears logs and caches that are safe to remove when you're low on storage

To keep your files safe, it's important to back up your Mac Pro regularly. The easiest way to back up is to use Time Machine—which is built into your Mac Pro—with a storage device. Time Machine can also back up your Mac contents to supported network volumes. For a list of devices supported by Time Machine, see the Apple Support article Backup disks you can use with Time Machine.

Files in iCloud Drive and photos in iCloud Photos are automatically stored in iCloud and don't need to be part of your backup. However, if you'd like them to be, do the following:

- *iCloud Drive:* Go to Apple menu > System Preferences. Click Apple ID, then click iCloud. Uncheck Optimize Mac Storage. The full contents of your iCloud Drive will be stored on your Mac and included in your backup.

- *iCloud Photos:* Open Photos, then choose Photos > Preferences. In the iCloud pane, select "Download Originals to this Mac." Full-resolution versions of your entire photo library will be stored on your Mac and included in your backup.

Tip: You can use a shared Mac that's on the same network as your Mac Pro as a backup destination. On the other Mac, go to System Preferences > Sharing, then turn on File Sharing. Add a shared folder, secondary click (that is, right-click) the folder, choose Advanced Options, then click "Share as Time Machine backup destination."

Set up Time Machine. Make sure your Mac Pro is on the same Wi-Fi network as your external storage device, or connect your storage device to your Mac Pro. Click the System Preferences icon in the Dock, click Time Machine, then select Back Up Automatically. Select the drive you want to use for backup, and you're all set.
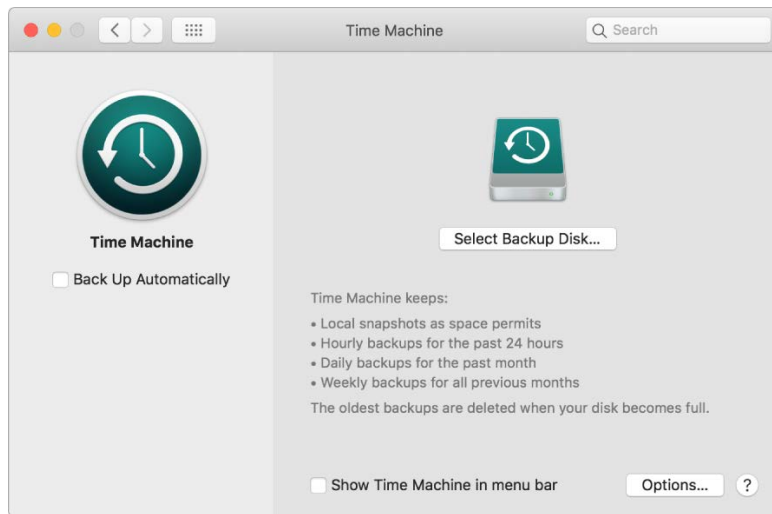
Time Machine:

- Automatically backs up your entire Mac Pro, including system files, apps, accounts, preferences, music, photos, movies, and documents.

- Remembers how your computer looked on any given day, so you can revisit your Mac Pro as it appeared in the past or retrieve an older version of a document.

- Lets you restore your entire system from a Time Machine backup. So if anything happens to your Mac Pro, your files and settings are safe and sound.

Important: Back up to an external location frequently, so you can restore your information if necessary. The advanced encryption features of Mac Pro make it difficult to recover information from a damaged hard drive. See the Apple Support article Back up your Mac with Time Machine.

Learn more. See Back up your files with Time Machine in the macOS User Guide.

Use Mac Pro with other devices

NAV TITLE: Apple Account

Your Apple ID is an account that lets you access all Apple services. Use your Apple ID to download apps from the App Store; access media in Apple Music, Apple Podcasts, Apple TV, and Apple Books; keep your content up-to-date across devices using iCloud; set up a Family Sharing group; and more. You can also use your Apple ID to access other apps and websites with Sign in with Apple (see Use Sign in with Apple on your Mac in the macOS User Guide).

Turn iCloud on and off.

Update account information.

Manage media accounts.

See all devices signed in with your Apple ID.

All in one place. Manage everything related to your Apple ID in the same place. Choose Apple menu > System Preferences on your Mac Pro—your Apple ID and Family Sharing settings are at the top.

Update account, security, and payment information. In System Preferences, click Apple ID, then select an item in the sidebar to review and update the information associated with your account.

- *Overview:* The Overview pane lets you know if your account is set up and working properly—if not, you see tips and notifications here.

- *Name, Phone, Email:* Update the name and contact information associated with your Apple ID. You can also manage Apple email newsletter subscriptions.

- *Password & Security:* Change your Apple ID password, turn on two-factor authentication, add or remove trusted phone numbers, and generate verification codes to sign in to another device or iCloud.com. You can also manage which apps and websites use Sign in with Apple.

- *Payment & Shipping:* Manage the payment methods affiliated with your Apple ID, and your shipping address for purchases from the Apple Store.

- *iCloud:* Select the checkbox next to any iCloud feature to turn it on. When you turn on an iCloud feature, your content is stored in iCloud and not locally on your Mac, so you can access it on any device with iCloud turned on.

- *Media & Purchases:* Manage the accounts linked to Apple Music, Apple Podcasts, Apple TV, and Apple Books; select purchasing settings; and manage your subscriptions.

See all your devices. At the bottom of the Apple ID sidebar, see all the devices linked to your Apple ID. You can verify that Find My [*device*] is turned on for each one (see Find My), see the status of iCloud Backup for an iOS or iPadOS device, or remove a device from your account if you no longer own it.

Family Sharing. With Family Sharing, you can set up a family group and create Apple ID accounts for your kids. To manage your family sharing settings, click Family Sharing in System Preferences and select an icon in the sidebar to review and update your information. You can add or remove family members; share media purchases, payment methods, iCloud storage, and your locations; and set Screen Time limits for your children (see Screen Time on MacScreen Time).

Learn more. To learn more about iCloud and Family Sharing, see Access your iCloud content on your MacAccess your iCloud content.

## Use your Mac Pro with iCloud and Continuity

There are many ways to use your Mac Pro with your other devices, such as iPhone, iPad, iPod touch, or Apple Watch. You can transfer files, share and edit documents, unlock your Mac Pro with your Apple Watch, turn your iPhone or iPad into an internet hotspot, and more.

Access your content across devices. With iCloud, you can securely store, edit, and share your documents, photos, and videos across devices to make sure you're always up to date. To get started, see Access your iCloud content on your MacAccess your iCloud content.

To turn on iCloud if you didn't when you first set up your Mac, click the System Preferences icon ⚙ in the Dock, click Sign In, then sign in with your Apple ID, or create a new one if you don't have one. Click iCloud to turn iCloud features on or off. To learn more, see Set up iCloud in the macOS User Guide.

Use your Mac Pro with other devices. You can seamlessly move between your Mac Pro and other devices using Continuity. Just sign in to each device with your Apple ID, and whenever your Mac Pro and devices are near each other, they work together in convenient ways. With Continuity features, you can do things like start a task on one device and finish it on another (see Use Handoff on your MacHandoff), copy and paste between devices (see Use Universal Clipboard on your MacUniversal Clipboard), answer calls or send texts from your Mac Pro (see Phone calls and text messages on your MacPhone calls and text messages), transfer files with AirDrop (see AirDrop on your MacAirDrop), and more.

For a list of system requirements for devices that support Continuity, see the Apple Support article System requirements for Continuity. To learn more about using Continuity with your Mac Pro, see the Apple Support article Use Continuity to connect your Mac, iPhone, iPad, iPod touch, and Apple Watch or go to All your devices.
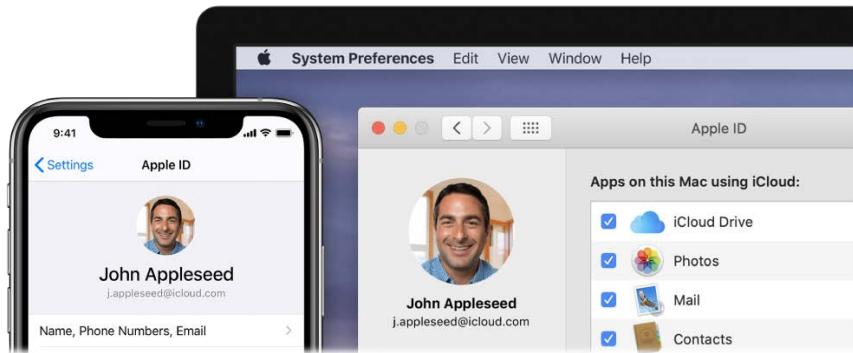
iCloud is the easiest way to make sure all your important content is everywhere you are. iCloud stores your documents, photos, music, apps, contacts, and calendars, so you can access them anytime you're connected to the web.

You can use your Apple ID to set up a free iCloud account, which comes with 5 GB of free storage space. Purchases you make from the iTunes Store, App Store, Apple TV app, or Book Store don't count toward your available space.

iCloud keeps everything up to date on your devices. So if you have an iPhone, iPad, or iPod touch, just sign in to each device using the same Apple ID, turn on iCloud, and you'll have everything you need.

For system requirements about devices that support iCloud, see the Apple Support article System requirements for iCloud.
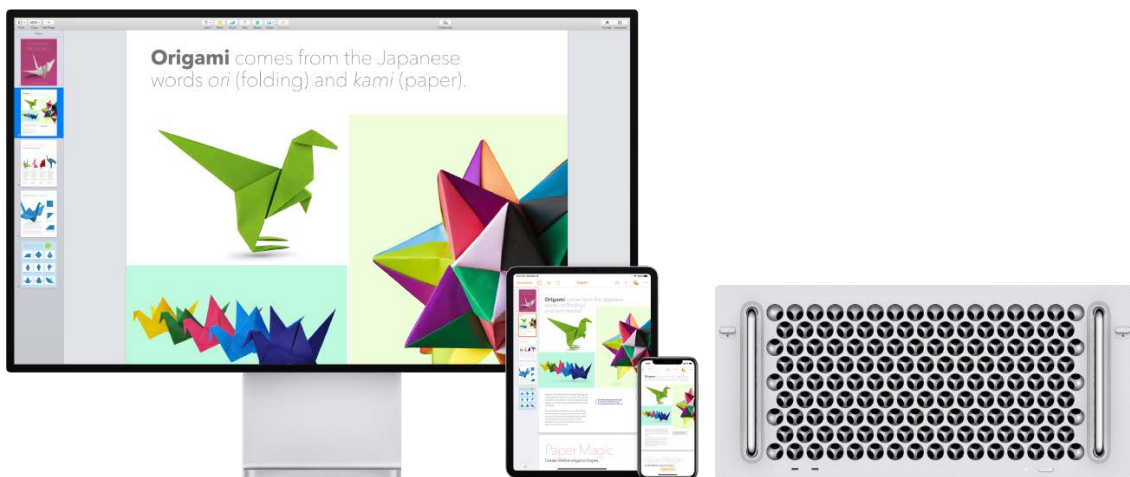
Here are some of the things you can do with iCloud.

Automatically store your desktop and Documents folder in iCloud Drive. You can save files in your Documents folder or on your desktop, and they're automatically available on iCloud Drive and accessible wherever you are. When working with iCloud Drive, you have access to files on

your Mac Pro, on your iPhone or iPad in the Files app, on the web at iCloud.com, or on a Windows PC in the iCloud app. When you make changes to a file on a device or on iCloud Drive, you'll see your edits wherever you view the file.

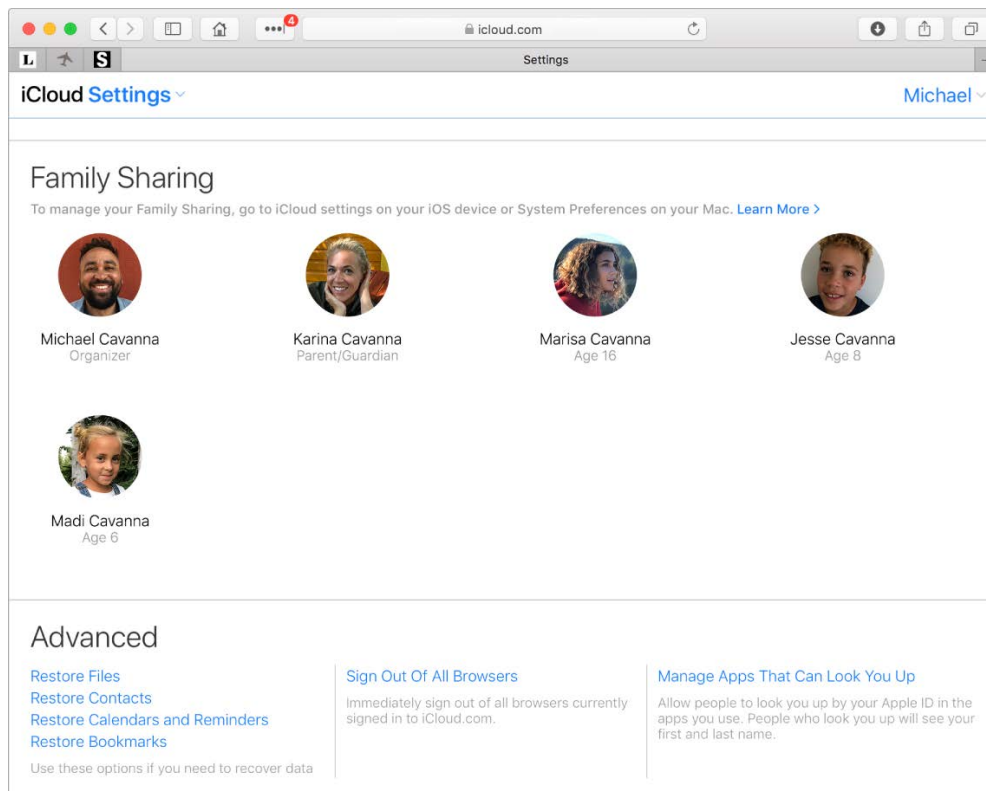To get started, click the System Preferences icon ⚙ in the Dock, click Apple ID > iCloud, select iCloud Drive, click Options, then select "Desktop & Documents Folders." To learn more, see the Apple Support article Add your Desktop and Documents files to iCloud Drive.

Share purchases and storage with Family Sharing. Up to six members of your family can share their purchases from the iTunes Store, App Store, Apple TV app, and Book Store and share the same storage plan—even if they each use their own iCloud account. Pay for family purchases with one credit card, and approve your kids' spending right from your Mac Pro, iOS device, or iPadOS device. Also share photos, a family calendar, reminders, and locations. To set up Family Sharing if you didn't when you set up your Mac, click the System Preferences icon ⚙ in the Dock, click Family Sharing, then click Next. To learn more, see the Apple Support article Set up Family Sharing.

Store and share photos using iCloud Photos and Shared Albums. Store your photo library in iCloud and see your photos and videos, as well as the edits you make to them, on all your devices. Share photos and videos with only the people you choose, and let them add their own photos, videos, and comments. To get started, click the System Preferences icon ⚙ in the Dock, click Apple ID > iCloud, select Photos, then click Options. To learn more, see the Apple Support article Set up and use iCloud Photos.

Enjoy your purchases anywhere. When you're signed in to your devices with the same

Apple ID, purchases you've made on the iTunes Store, App Store, Apple TV app, and Book Store are available at any time, no matter which computer or device you used to purchase them. So all your music, movies, books, and more are available wherever you go.

Locate your Mac Pro with Find My Mac. If your Mac Pro is missing, you can use Find My to locate it on a map, lock its screen, and even erase its data remotely if you have Find My Mac turned on. To turn on Find My Mac, click the System Preferences icon ⚙ in the Dock, click Apple ID > iCloud, then select Find My Mac. See the Apple Support article If your Mac is lost or stolen.

Note: If your Mac Pro has multiple user accounts, only one can have Find My Mac turned on.

Learn more. See What is iCloud? in the macOS User Guide.

Screen Time shows you how you spend time in apps and on websites. It also lets you monitor what your kids are doing on their Apple devices.

Set your limits. Set limits to control how much time you spend with specific apps, categories of apps, and websites. You can also view reports to see how much time you're spending with apps and websites, and schedule downtime away from your Mac.

Family sharing. Parents can configure Screen Time on their Mac—or iPhone or iPad—and everything is set up for their kids on their devices.

One-tap media ratings. While setting up Screen Time for your kids, you can set age-based media ratings for the Music and Books apps.

Learn more. See What is Screen Time on Mac? in the macOS User Guide.

With Handoff, you can continue on one device where you left off on another. Work on a presentation on your Mac Pro, then continue on your iPad. Or start an email message on your iPhone, then finish it on your Mac Pro. View a message on your Apple Watch, and respond to it on your Mac Pro. You don't have to worry about transferring files. When your Mac Pro and devices are near each other, an icon appears in the Dock whenever an activity can be handed off; to continue, just click the icon.

Note: To use Handoff, you need an iPhone, iPad, or iPod touch with the Lightning or USB-C connector and iOS 8 (or later) or iPadOS installed. Make sure your Mac Pro, iOS device, or iPadOS device have Wi-Fi and Bluetooth turned on and are signed in with the same Apple ID.

Click to continue what you were doing on your iPhone.

Turn on Handoff on your Mac Pro. Click the System Preferences icon in the Dock, click General, then select "Allow Handoff between this Mac and your iCloud devices."

Turn on Handoff on your iOS or iPadOS device. Go to Settings > General > Handoff, then tap to turn on Handoff. If you don't see the option, your device doesn't support Handoff.

Turn on Handoff on your Apple Watch. In the Apple Watch app on iPhone, go to Settings > General, then tap to turn on Enable Handoff.

Handoff works with Safari, Mail, Calendar, Contacts, Maps, Messages, Notes, Reminders, Keynote, Numbers, and Pages.

Learn more. See Pick up where you left off with Handoff in the macOS User Guide.

Copy content from one device, and paste it to another nearby device within a short period of time. The contents of your clipboard are sent over Wi-Fi and made available to all Mac, iPhone, iPad, and iPod touch devices that are signed in with the same Apple ID and have Handoff, Wi-Fi, and Bluetooth turned on. See Use Handoff on your MacHandoff.

Note: To use Universal Clipboard, you need an iPhone, iPad, or iPod touch with the Lightning or USB-C connector and iOS 10 (or later) or iPadOS installed.
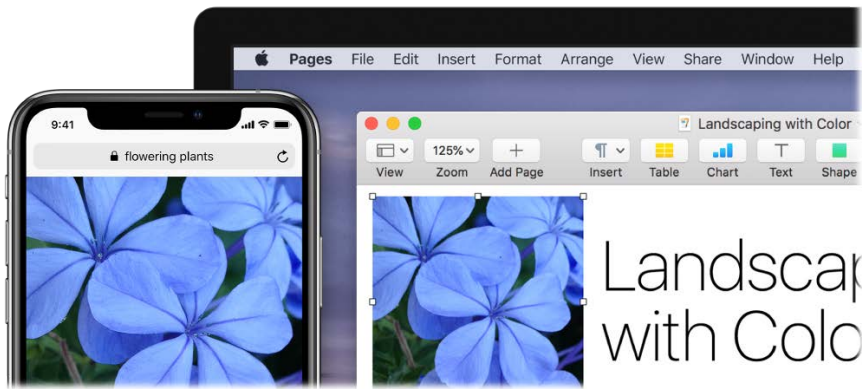
Use across apps. You can copy and paste images, text, photos, and video between any apps that support copy and paste on your Mac, iPhone, iPad, and iPod touch.

Copy and paste files. You can quickly move files from one Mac to another using Universal Clipboard. Copy a file on your Mac Pro and paste it to a Finder window, Mail message, or any app that supports copy and paste on a nearby Mac. You must be signed in with the same Apple ID on both Macs.

Learn more. See Copy and paste across devices from your Mac in the macOS User Guide.

NAV TITLE: Sidecar

With Sidecar, you can turn your iPad into a second display for your Mac. Give yourself extra space to work, draw with Apple Pencil, mark up PDFs and screenshots, and more.

Note: You can use Sidecar with iPad models that support Apple Pencil and run iPadOS 13. For more information, see the Apple Support articles Use Apple Pencil with your iPad or iPad Pro and Use your iPad as a second display for your Mac with Sidecar.

Connect your iPad. Click the AirPlay menu 🖵 in the menu bar on your Mac, then choose your iPad. When Sidecar is on, the AirPlay icon turns into a blue iPad 🖵. To disconnect your iPad from your Mac, open the AirPlay menu and choose Disconnect. You can also disconnect by tapping ⬚ in the sidebar of your iPad.

Tip: If you don't see your iPad in the AirPlay menu, make sure it has Wi-Fi or Bluetooth turned on. You also need to be signed in with the same Apple ID on both devices.

Wired or wireless. Connect your iPad with a cable and keep it charged, or use it wirelessly within 33 feet (ten meters) of your Mac.

Extend your desktop. When you connect your iPad, it automatically becomes an extension of your Mac desktop. To get started, just drag your apps and documents onto your iPad.
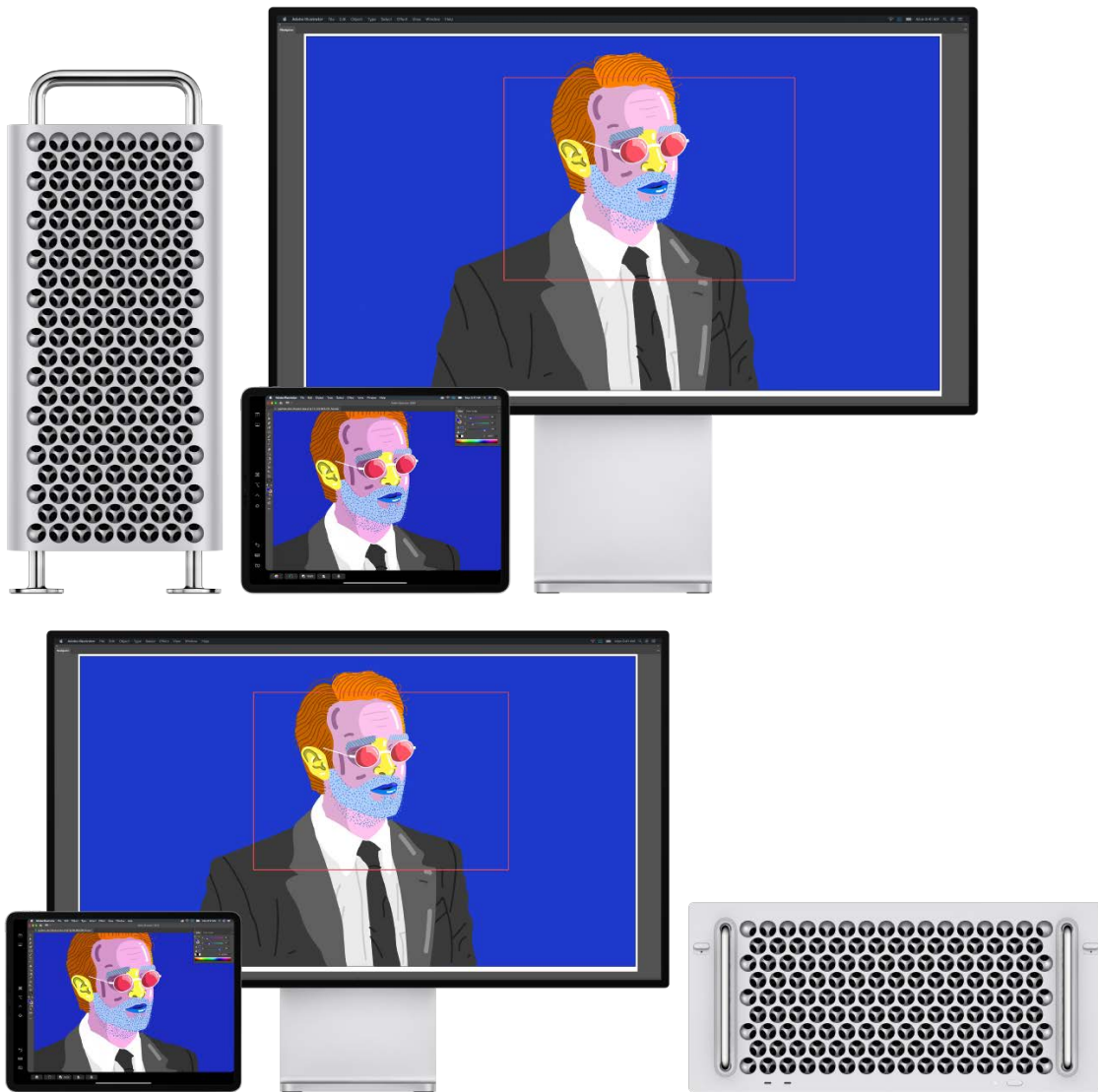
Mirror your desktop. To show the same thing on both screens, open the AirPlay menu and select Mirror Built-In Retina Display. To extend your desktop again, open the AirPlay menu and choose Use as Separate Display.

Use Apple Pencil. Precisely draw and create in your favorite pro apps. Just drag the window from your Mac to your iPad and start using Apple Pencil.

Or use Apple Pencil to mark up PDFs, screenshots, and images. To learn more, see Continuity Sketch and Continuity Markup on your MacContinuity Sketch and Continuity Markup.

Note: Pressure and tilt for Apple Pencil only work in apps with advanced stylus support.

Take advantage of sidebar shortcuts. Use the sidebar to quickly reach commonly used buttons and controls. Tap the icons to undo actions, use keyboard shortcuts, and display or hide the menu bar, Dock, and keyboard.

Use Touch Bar controls—with or without a Touch Bar. For apps that have Touch Bar support,

the controls appear at the bottom of the iPad display, whether or not your Mac has a Touch Bar.

Learn more. See Use your iPad as a second display for your Mac in the macOS User Guide.

Use your iPhone, iPad, or iPod touch to scan documents or take a picture of something nearby, and it appears instantly on your Mac. Continuity Camera is supported in many apps, including Finder, Mail, Messages, and more.

Note: To use Continuity Camera, you need an iPhone, iPad, or iPod touch with iOS 12 (or later) or iPadOS installed. Make sure your Mac Pro and iOS or iPadOS device have Wi-Fi and Bluetooth turned on and are signed in with the same Apple ID.

Insert an image or scan. In an app like Mail, Notes, or Messages, select where you want the image to go, choose File (or Insert) > Import From iPhone or iPad, choose "Take Photo" or "Scan Documents," then take the photo or scan the image on your iOS or iPadOS device. You might need to select your iOS or iPadOS device before taking the photo. Tap Use Photo or Keep Scan. You can also tap Retake if you want to try again.

In an app such as Pages, select where you want the image to be inserted, then secondary click (that is, right-click), choose "Import image," and take the photo. You might need to select your device before taking the photo.

Note: To take a scan on your iOS or iPadOS device, drag the frame until what you want to show is in the frame, tap Keep Scan, then tap Save. Tap Retake to rescan the content.

The photo or scan appears where you want it in your document.
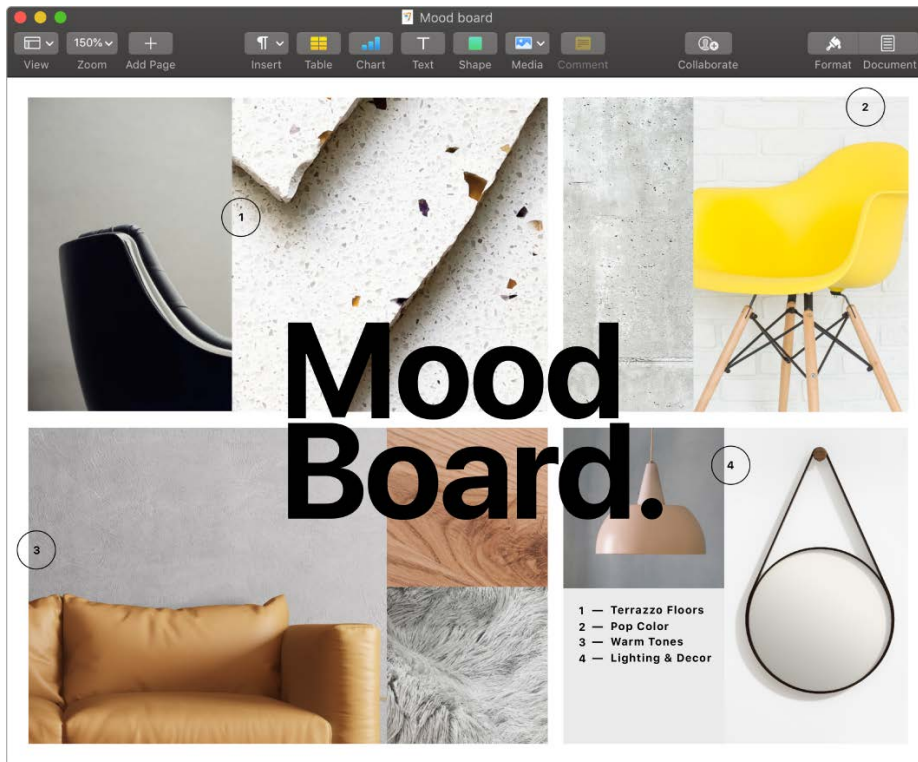
Learn more. See Insert photos and scans with Continuity Camera on Mac in the macOS User Guide.

With Continuity Sketch, you can use your nearby iPhone or iPad to draw a sketch and instantly insert it into a document on your Mac—for example, in an email, a message, a document, or a note. Or use Continuity Markup to edit a document using your finger on an iOS device or with Apple Pencil on an iPad, and see those markups on your Mac.

Note: To use Continuity Sketch and Continuity Markup, you need an iPhone or iPod touch with iOS 13 or an iPad with iPadOS installed. Make sure your Mac Pro and iOS or iPadOS device have Wi-Fi and Bluetooth turned on and are signed in with the same Apple ID. Pressure and tilt for Apple Pencil only work in apps with advanced stylus support.

Insert a sketch. In an app like Mail, Notes, or Messages, position the cursor where you want to insert a sketch. Choose File (or Insert) > Import from iPhone or iPad, then choose Add Sketch. On your iOS device or iPad, draw a sketch using your finger or Apple Pencil (on an iPad that supports it), then tap Done. On your Mac, the sketch appears where you positioned the cursor. Depending on where the sketch is inserted, you can mark it up or adjust other aspects, such as enlarge the size.

Mark up a document. With Continuity Markup, you can use a nearby iPad, iPhone, or

iPod touch to mark up PDFs, screenshots, and images, and see the results on your Mac. Press and hold the Space bar to view the document in Quick Look, then click the iPad Markup icon 📝. Start writing, drawing, or adding shapes with your finger or Apple Pencil (on an iPad that supports it). See the updates live on your Mac as you make them on your iPhone, iPod touch, or iPad.

Learn more. See Insert sketches with Continuity Sketch in the macOS User Guide and the Apple Support article Use Markup on your iPhone, iPad, or iPod touch.

NAV TITLE: AirDrop

AirDrop makes it easy to share files between your Mac Pro and other nearby Mac, iPhone, iPad, and iPod touch devices. The devices don't need to share the same Apple ID.

Note: AirDrop for iOS or iPadOS requires devices that have the Lightning or USB-C connector and iOS 7 (or later) or iPadOS. Not all older Macs support AirDrop (for a list of supported Macs, see the Apple Support article Use AirDrop on your Mac).
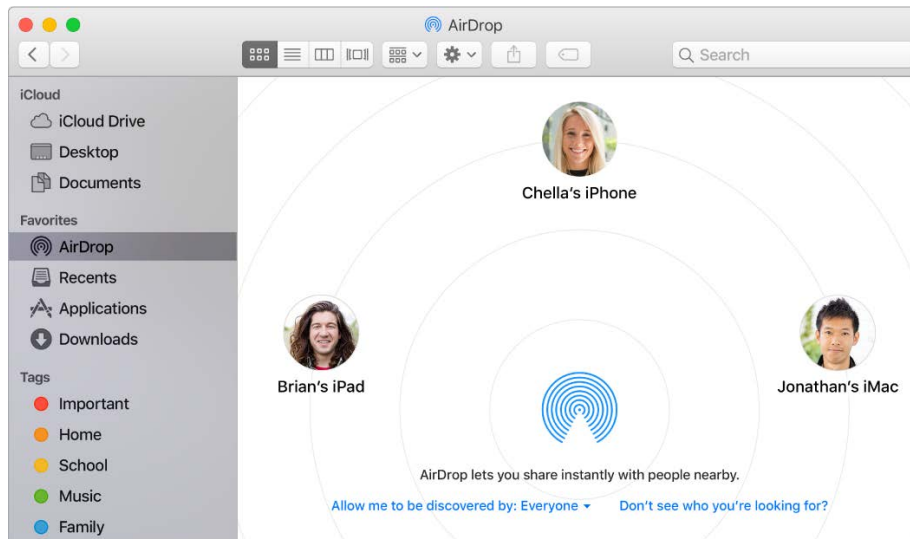
Send a file from the Finder. Click the Finder icon 🔵 in the Dock, then click AirDrop in the sidebar on the left. When the person you want to send a file to appears in the window, drag the file to him or her.

Send a file from an app. While using an app like Pages or Preview, click the Share button ⬆ and choose AirDrop.

Share passwords stored in iCloud Keychain. In Safari, you can use AirDrop to share an account password with one of your contacts, or with another Mac, iPhone, iPad, or iPod touch. From the Safari menu, open Preferences > Passwords, select the website whose password you want to share, then secondary click (that is, right-click). Choose "Share with AirDrop," then select the person or device in the AirDrop window to share the password.

Control who can send items to you using AirDrop. Click the Finder icon 🔵 in the Dock, click AirDrop in the sidebar, then click "Allow me to be discovered by" and choose an option.

When you send a file to someone, the recipient can choose whether or not to accept the file. When someone sends you a file, you can find it in the Downloads folder on your Mac Pro.

Tip: If you don't see the recipient in the AirDrop window, make sure both devices have AirDrop and Bluetooth turned on and are within 30 feet (9 meters) of each other. If the recipient is using an older Mac, try clicking the "Don't see who you're looking for?" link.

Learn more. See Use AirDrop on your Mac to send files to devices near you in the macOS User Guide.

You can take calls—and make them—right from your Mac Pro. (Requires an external microphone. Accessories are sold separately at apple.com, your local Apple Store, or other resellers.) You can also receive and send text messages.

Note: Internet and Wi-Fi connections are required in order to make or receive phone calls on your Mac Pro.

Take or make a call. When someone calls your iPhone, click the notification that appears on your Mac Pro screen and your Mac Pro becomes a speakerphone. If you want to make a call, click a phone number in a Spotlight search or in an app such as FaceTime, Contacts, Safari, or Calendar. You need a nearby device (iPhone or iPad) with a cellular connection in order to make phone calls.

Send and receive messages. Send and receive SMS and MMS text messages right from your Mac Pro. When friends and family text you, you can respond with whichever device is closest. All messages appear on your Mac Pro, iPhone, iPad, iPod touch, and Apple Watch. (Voice messages require an external microphone. Accessories are sold separately at apple.com, your local Apple Store, or other resellers.) See Messages.
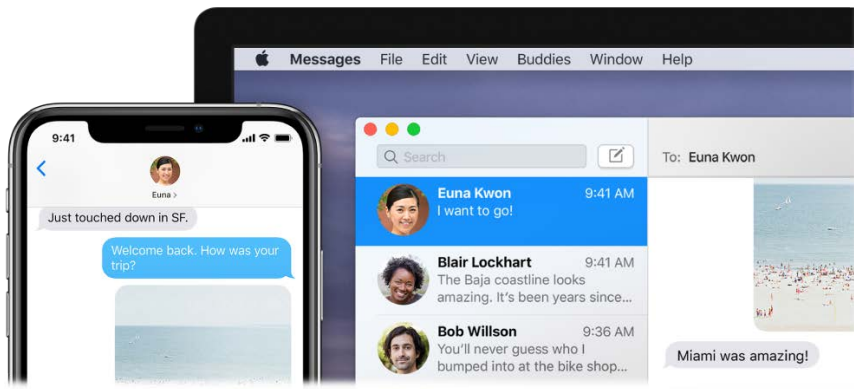
Learn more. See Make and receive phone calls in FaceTime on Mac in the FaceTime User Guide and Set up iPhone to get SMS texts on Mac in the Messages User Guide.

NAV TITLE: Instant Hotspot

Lost your Wi-Fi connection? With Instant Hotspot, you can use the Personal Hotspot on your iPhone or iPad to connect your Mac Pro to the internet instantly—no password required.

Note: Personal Hotspot requires an iPhone or cellular-model iPad, with iOS 8 (or later) or iPadOS installed.
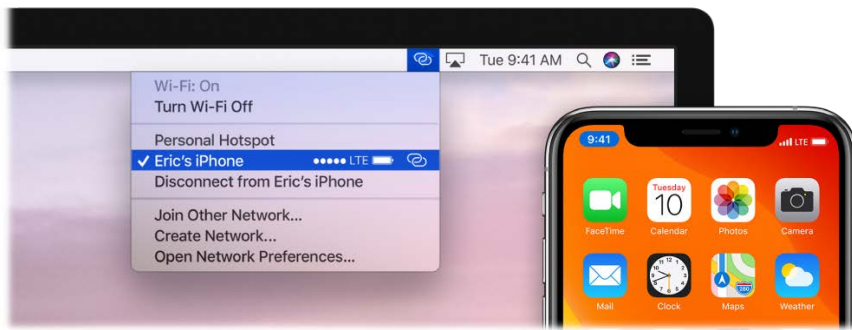
Connect to your device's Personal Hotspot. Click the Wi-Fi status icon 📶 in the menu bar, then choose your iPhone or iPad from the list of devices that appears. The Wi-Fi icon changes to 🔗. (You don't need to do anything on your device—Mac Pro connects automatically.)

Tip: If you're asked for a password, make sure your devices are set up correctly. See the Apple Support article Use Instant Hotspot to connect to your Personal Hotspot without entering a password.

Check the status of your connection. Look in the Wi-Fi status menu to see the strength of the cellular signal.

When you're not using the hotspot, your Mac Pro disconnects to save battery life.

Learn more. See Use an iPhone or iPad to connect to the Internet in the macOS User Guide.

Unlock your Mac and approve tasks with Apple Watch

When you're wearing your Apple Watch, you can use it to automatically unlock your Mac Pro and approve authentication tasks—such as entering passwords, unlocking notes and preferences, and authorizing installations—without having to type a password. These features use strong encryption to provide secure communication between your Apple Watch and Mac Pro.

To use the Auto Unlock and Approve with Apple Watch features:

- Sign in to your Mac and Apple Watch with the same Apple ID.

- Make sure your Apple Watch is unlocked and running watchOS 3 or later to automatically unlock your Mac; approving authentication requests requires watchOS 6.

- Turn on two-factor authentication (see below).

Set up two-factor authentication for your Apple ID. To turn on two-factor authentication, go to Apple menu > System Preferences > Apple ID > Password & Security, then select Set Up Two-Factor Authentication. See the Apple Support article Two-factor authentication for Apple ID.

Make sure "Disable automatic login" is also selected. (You won't see this option if you're using FileVault, but you can still use the Auto Unlock and Approve with Apple Watch features.)

Set up Auto Unlock. Sign in to all your devices with the same Apple ID, then click the System Preferences icon in the Dock, or choose Apple menu > System Preferences. If your Apple Watch has watchOS 6 installed, click Security & Privacy, then select "Use your Apple Watch to unlock apps and your Mac." If your Apple Watch has watchOS 3 to watchOS 5 installed, select "Allow your Apple Watch to unlock your Mac"—you can't approve tasks.

Note: These features work only when your Apple Watch is authenticated with a passcode. You authenticate your Apple Watch each time you put it on, so no extra steps are required after you enter your passcode.

Skip the sign-in. Walk up to your sleeping Mac Pro wearing your authenticated Apple Watch on your wrist, and press a key to wake your Mac. Apple Watch unlocks your Mac so you can get right to work.

Approve with Apple Watch. If you're prompted for a password, double-click the side button on your Apple Watch to authenticate your password on your Mac. You can view your passwords in Safari, approve app installations, unlock a locked note, and more (requires watchOS 6).

Learn more. See Unlock your Mac and approve tasks with Apple Watch in the macOS User Guide.

You can make easy, secure, and private purchases on websites using Apple Pay on your Mac Pro . With Apple Pay, your Apple Card and other credit or debit card information is never stored or shared by Apple with the merchant. When you shop online using Safari, look for an Apple Pay checkout option. Confirm payment using your iPhone or Apple Watch.

Note: Apple Pay and Apple Card aren't available in all countries or regions. For information about Apple Pay, go to Cashless made effortless. For information about current card issuers, see the Apple Support article Apple Pay participating banks. For information about Apple Card, see Apple Card Support.
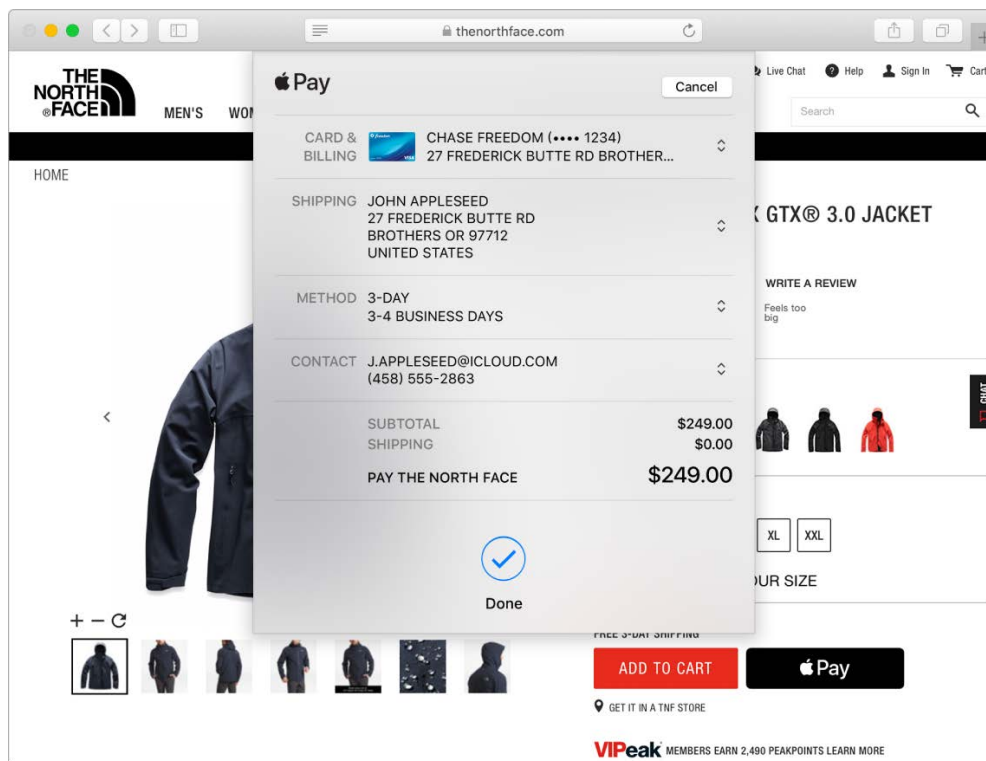
Set up Apple Pay. Apple Pay uses the Apple Card or other credit or debit cards you've already set up on your iPhone or Apple Watch, so no extra setup is required. You must be signed in to an iPhone or Apple Watch that has Apple Pay set up with the same Apple ID you're using on your Mac Pro. The default payment card, shipping, and contact information that's set on your iPhone or Apple Watch will be used for purchases on your Mac.

Make a purchase. Click the Apple Pay button on the website, then to confirm the payment, use Face ID, Touch ID, or the passcode on your iPhone, or double-click the side button on your unlocked Apple Watch.

For more information about Apple Pay, see the Apple Support articles Set up Apple Pay, How to use Apple Pay, and Manage the cards that you use with Apple Pay.

NAV TITLE: AirPlay

Show whatever's on your Mac Pro on the big screen using AirPlay Mirroring. To mirror the Mac Pro screen on your TV screen or to use the HDTV as a second display, connect your HDTV to Apple TV and make sure the Apple TV is on the same Wi-Fi network as your Mac Pro. You can also play some web videos directly on your HDTV without showing what's on your desktop—handy when you want to play a movie but keep your work private.

Mirror your desktop using AirPlay Mirroring. Click the AirPlay icon ⬜ in the menu bar, then choose your Apple TV. When an AirPlay display is active, the icon turns blue.

In some cases, you can use an AirPlay display even if you're not on the same Wi-Fi network as Apple TV (called *peer-to-peer AirPlay*). To use peer-to-peer AirPlay, you need an Apple TV (3rd generation rev A, model A1469 or later) with tvOS 7.0 or later.

Play web videos without showing your desktop. When you find a web video with an AirPlay icon ⬜, click the icon, then select your Apple TV.

Tip: If the image doesn't fit your HDTV screen when you mirror the screen, adjust the desktop size for the best picture. Click the AirPlay icon ⬜, then choose an option under "Match Desktop Size To."

Apple TV is sold separately at apple.com, your local Apple Store, or other resellers.

Learn more. To learn more about AirPlay, see Use AirPlay to stream what's on your Mac to an HDTV in the macOS User Guide. To learn more about using a second display with your Mac Pro, see Connect a display to Mac ProConnect a display.

You can use AirPrint to print wirelessly to:

- An AirPrint-enabled printer on your Wi-Fi network

- A network printer or printer shared by another Mac on your Wi-Fi network

- A printer connected to the USB port of an AirPort base station

Print to an AirPrint printer. When you print from an app, click the Printer pop-up menu in the Print dialog, then choose a printer in the Nearby Printers list.

Can't find the printer you're looking for? Make sure it's connected to the same Wi-Fi network as your Mac Pro. If it's connected and you still don't see it, try adding it: Click the System Preferences icon ⚙ in the Dock, click Printers & Scanners, then click ＋. (You may have to temporarily connect the printer to your Mac Pro using a USB cable.)

Learn more. See Print wirelessly from your Mac to an AirPrint printer in the macOS User Guide.

For a list of AirPrint-enabled printers and other supported printers, see the Apple Support article About AirPrint.

Expansion

Configure your Mac Pro

You can configure the memory, MPX Modules, and expansion cards in your Mac Pro.

(table aria-label=Configuration matrix)

Component	Configuration options*
Memory	32 GB (4 x 8 GB)
	48 GB (6 x 8 GB)
	96 GB (6 x 16 GB)
	192 GB (6 x 32 GB)
	384 GB (6 x 64 GB)
	768 GB (12 x 64 GB)
	768 GB (6 x 128 GB)
	1.5 TB (12 x 128 GB)
MPX Modules	Radeon Pro 580X
	Radeon Pro W5700X
	Radeon Pro Vega II
	Two Radeon Pro Vega II
	Radeon Pro Vega II Duo
	Two Radeon Pro Vega II Duo

PCI Express expansion cards	8 expansion slots

WARNING: To avoid damaging internal components or the components you want to install, always turn off and then unplug your Mac Pro. Don't attempt to open the computer or install items while it's plugged in.

* Subject to availability.

Install Memory in Mac Pro

Follow these steps to install memory in your Mac Pro.

Memory must be installed according to the diagrams printed on the inside of the DIMM covers—failure to do so may result in your Mac Pro not starting up. For more information, see the Apple Support article Install and replace memory in your Mac Pro.

1. Turn off your Mac Pro by choosing Apple menu > Shut Down.

    Let it cool down for 5 to 10 minutes before you touch the internal components, which may be hot.

2. Disconnect all cables and the power cord from your Mac Pro.

3. Remove Mac Pro from the rack.

4. Touch the metal on the outside of your Mac Pro to discharge any static electricity.

    Note: Always discharge static before you touch parts or install components inside your Mac Pro. To avoid generating static, don't walk around the room until you finish installing the memory.
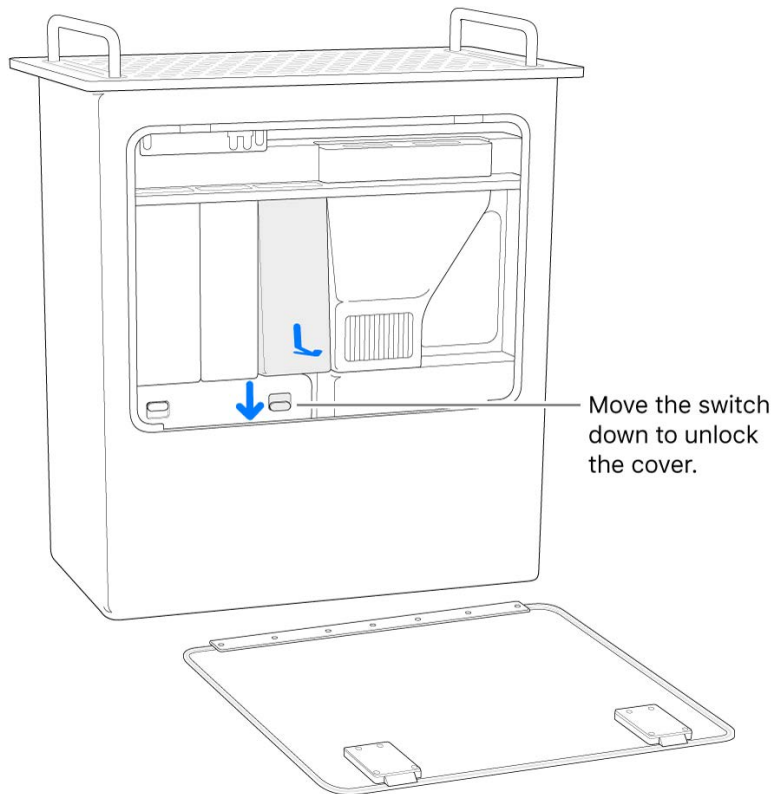
5. Stand the computer on its end.
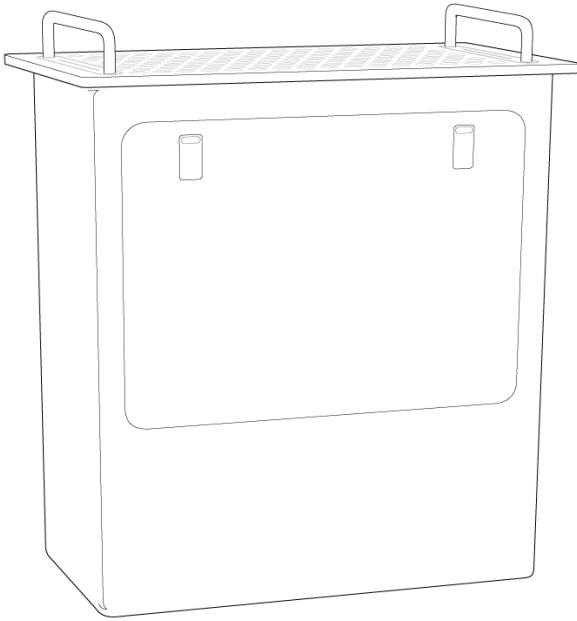
6. Push in the top of the latches, then pull the latches to remove the access door.
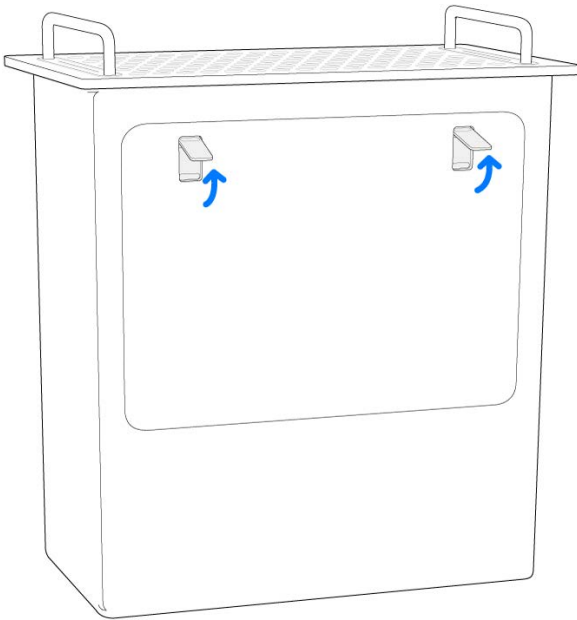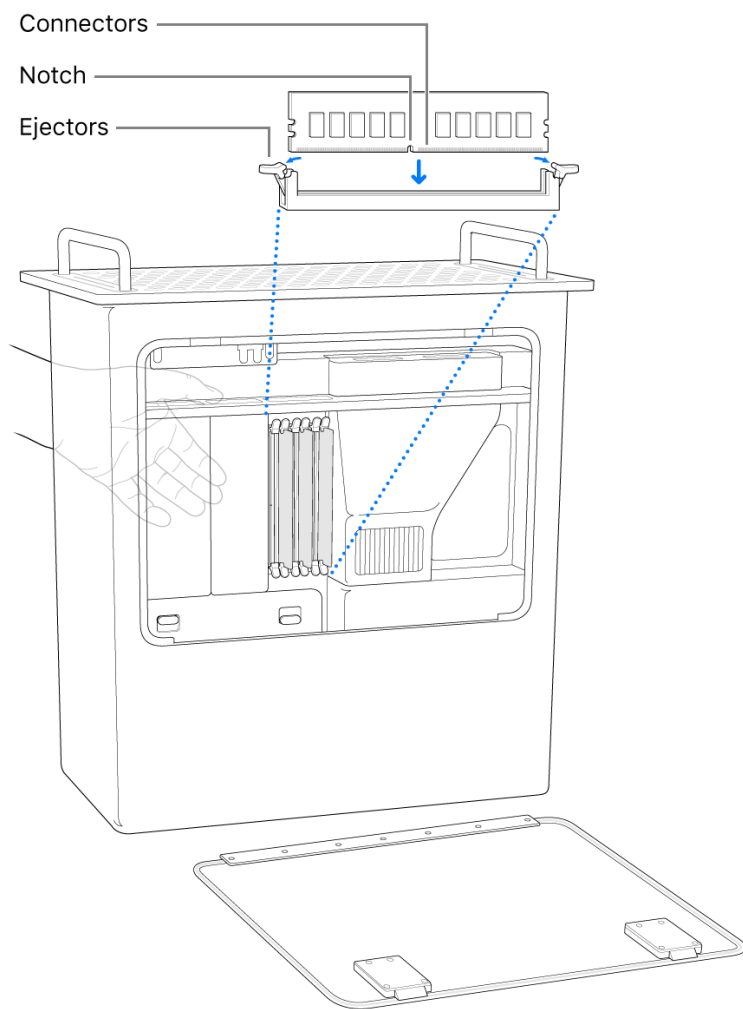

7. Slide the DIMM cover switch.

Move the switch down to unlock the cover.

8. Remove the DIMM covers.

9. Remove the new DIMM from its static-proof bag and hold it by its corners. Don't touch the gold connectors or the components on the DIMM.

10. Push the DIMM into the slot. The DIMM is installed when the ejectors click closed.

   Note: Hold the side of the computer to stabilize it while you're installing the DIMM.

Connectors

Notch

Ejectors

11. Reinstall the DIMM covers; the DIMM cover switch automatically locks.

   Note: It's important to reinstall the DIMM covers in order to maintain the performance of your Mac Pro.

Press down on the cover
and move the switch to
the locked position.
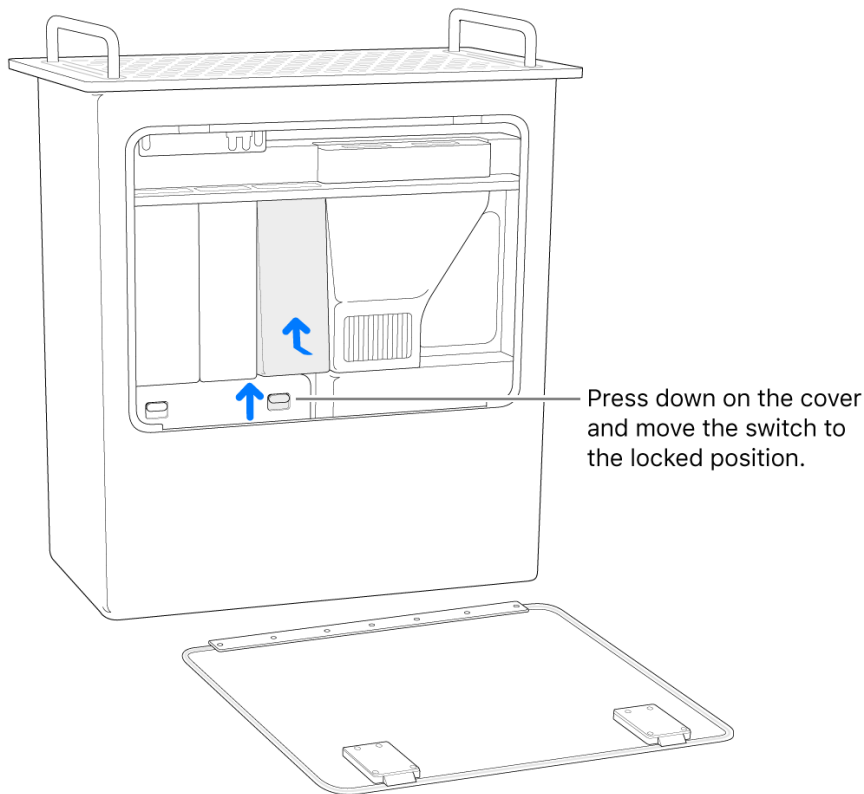
12. Reinstall the side door.

13. Reinstall Mac Pro back into the rack.

14. Reconnect all cables and the power cord to your Mac Pro.

Install MPX Modules in Mac Pro

Follow these steps to install MPX Modules in your Mac Pro. MPX Modules must be installed in PCIe expansion slots 1 and 3.

Important: Each PCIe slot is rated a maximum of 75 W; Each 6-pin auxiliary (AUX) connector is rated 75 W, and each 8-pin AUX connector is rated 150 W. Only install PCIe modules that specifically state that they are compliant with the industry standard PCIe specification. Use of noncompliant modules may not keep different input power sources separated, resulting in a possible burn hazard, and may damage the computer.

1. Turn off your Mac Pro by choosing Apple menu > Shut Down.

   Let your Mac Pro cool down for 5 to 10 minutes before you touch the internal components, which may be hot.

2. Disconnect all cables and the power cord from your Mac Pro.