User Guide

SUMMARY

This guide provides information about components, power management, security, backing up, and more.

Product notice

This guide describes features that are common to most models. Some features may not be available on your Chromebox.

Safety warning notice

Reduce the possibility of heat-related injuries or of overheating the Chromebox by following the practices described.

⚠ **WARNING!**   To reduce the possibility of heat-related injuries or of overheating the device, do not place the Chromebox directly on your lap or obstruct the Chromebox air vents. Use the Chromebox only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to come into contact with the skin or a soft surface, such as pillows or rugs or clothing, during operation. The device and the AC adapter comply with the user-accessible surface temperature limits defined by applicable safety standards.

Table of contents

1 Getting to know your Chromebox

Your Chromebox features top-rated components. This chapter provides details about your components, where they are located, and how they work.

Right

Use the illustration and table to identify the components on the right side of the Chromebox.
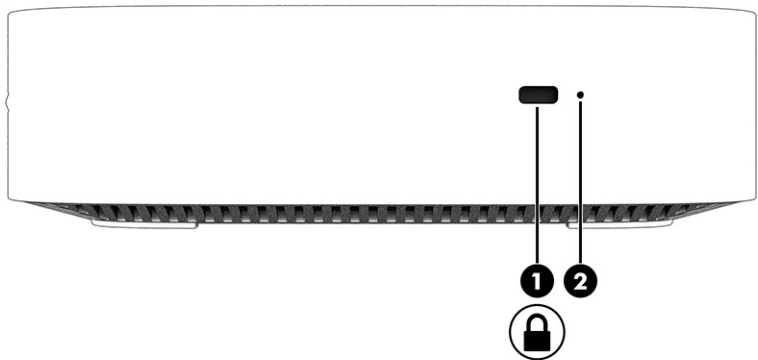
Table 1-1 Right-side components and their descriptions

Component		Description
(1)	Security cable lock	Attaches an optional security cable to the Chromebox.
		NOTE: The security cable is designed to act as a deterrent, but it might not prevent the Chromebox from being mishandled or stolen.
(2)	Reset/recovery button	To reset or recover the device, insert a paper clip (or pushpin) into the reset/recovery button hole, and then press the button.
		NOTE: Pressing this button with the power button deletes all account information and data stored on your device, such as photos, downloaded files, and saved networks. HP recommends that you save files to an external hard drive, USB flash drive, or cloud storage for this reason. You can save your files to the cloud at any time by selecting the Google Drive™ location as your file-save location.

Front

Use the illustration and table to identify the components on the front of the Chromebox.

Table 1-2 Front-side components and their descriptions

Component			Description
(1)	🎧	Audio-out (headphone)/Audio-in (microphone) combo jack	Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional standalone microphones.
			WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety, and Environmental Notices*.
			NOTE: When a device is connected to the jack, the Chromebox speakers are disabled.
(2)	SS⚡	USB SuperSpeed charging port	Connects a USB device, provides data transfer, and (for select products) charges small devices when the Chromebox is on or in Sleep mode.
(3)	microSD	microSD™ memory card reader	Reads optional memory cards that store, manage, share, or access information.
			To insert a card:
			1. Hold the card label-side up, with the connectors facing the Chromebox.
			2. Insert the card into the memory card reader, and then press in on the card until it is firmly seated.
			To remove a card:
			▲ Press in on the card, and then remove it from the memory card reader.
(4)	⏻	Power button	• When the Chromebox is off, press the button briefly to turn on the Chromebox.
			• When the Chromebox is on, press the button briefly to initiate Sleep.
			• When the Chromebox is in the Sleep state, press the button briefly to exit Sleep (select products only).
			• When the Chromebox is in Hibernation, press the button briefly to exit Hibernation.
			IMPORTANT: Pressing and holding down the power button results in the loss of unsaved information.

Rear

Use the illustration and table to identify the components on the rear of the Chromebox.

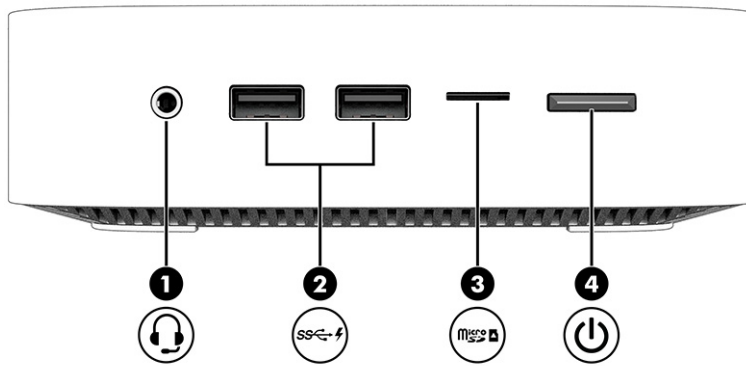**Table 1-3 Rear-side components and their descriptions**

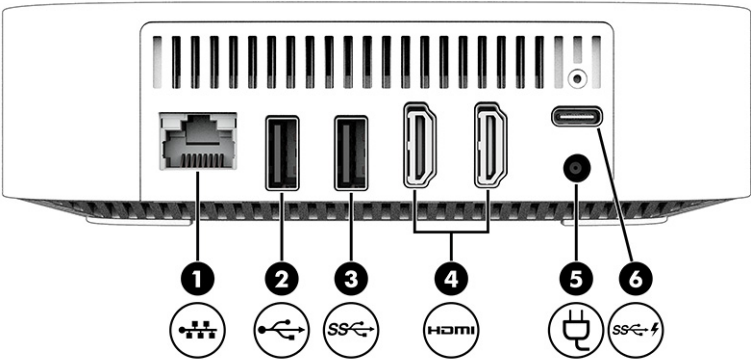| Component		Description
(1)		RJ-45 (network) jack	Connects a network cable.
(2)	⊷	USB port	Connects a USB device, provides data transfer, and (for select products) charges small devices when the Chromebox is on or in Sleep mode.
			NOTE: Cables, adapters, or both (purchased separately) might be required.
(3)	SS⊷	USB Type-A SuperSpeed port	Connects a USB device, provides data transfer, and (for select products) charges small devices when the Chromebox is on or in Sleep mode.
			NOTE: Cables, adapters, or both (purchased separately) might be required.
(4)	HDMI	HDMI ports (2)	Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed High Definition Multimedia Interface (HDMI) device.
(5)	⟱	AC adapter and battery light	• White: The AC adapter is connected and the battery is fully charged. • Amber: The AC adapter is connected and the battery is charging. • Blinking amber: The battery has an error.

Table 1-3 Rear-side components and their descriptions (continued)

Component			Description
			● Off: The battery is not charging.
(6)	$SS\!\leftrightarrow\!\cdot \lightning$	USB Type-C SuperSpeed charging port	Connects a USB device, provides data transfer, and (for select products) charges small devices when the Chromebox is on or in Sleep mode.

Bottom

Use the illustration and table to identify the bottom components.

Table 1-4 Bottom component and description

Components	Description
Vent	Enables airflow to cool internal components.
	NOTE: The fan starts automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.

Labels

The labels affixed to the Chromebox provide information that you might need when you troubleshoot system problems or travel internationally with the device. Labels can be in paper form or imprinted on the product.

IMPORTANT: Check the bottom of the Chromebox for the correct label.

● Service label—Provides important information to identify your device. When contacting support, you might be asked for the serial number, the product number, or the model number. Locate this information before you contact support.

Your service label might vary from the illustration.
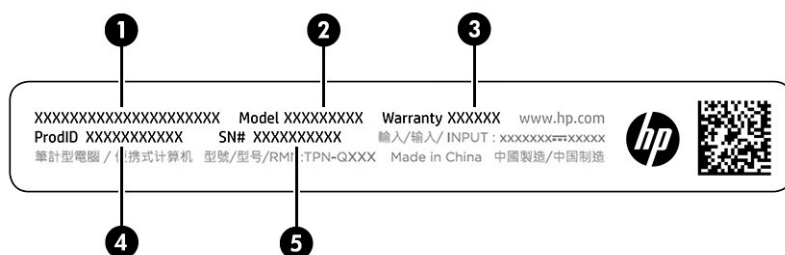
Table 1-5 Service label components

Component	
(1)	HP product name
(2)	Model number
(3)	Warranty period
(4)	Product ID
(5)	Serial number
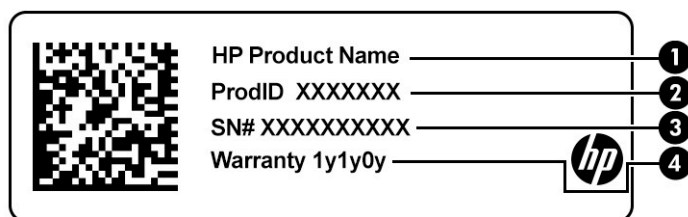
Table 1-6 Service label components

Component	
(1)	HP product name
(2)	Product ID
(3)	Serial number
(4)	Warranty period

● Regulatory labels—Provide regulatory information about the device.

● Wireless certification labels—Provide information about optional wireless devices and the approval markings for the countries or regions in which the devices have been approved for use.

2 Using your Chromebox

Use your Chromebox as an entertainment hub to manage music, download movies, and more. In addition, you can connect external devices like a monitor, projector, TV, speakers, and headphones to your Chromebox to make it an even more powerful entertainment center.

Using audio

On your device you can download and listen to music, stream audio content from the web (including radio), record audio, or mix audio and video to create multimedia. To enhance your listening enjoyment, attach external audio devices such as speakers or headphones.

Connecting speakers

You can attach wired speakers to your device by connecting them to a USB port or to the audio-out (headphone)/audio-in (microphone) combo jack on your device or on a docking station.

To connect wireless speakers to your device, follow the device manufacturer's instructions. To connect high-definition speakers to the device, see Connecting an HDMI device on page 6. Before connecting speakers, lower the volume setting.

Connecting headphones

You can connect wired headphones to the headphone jack or to the audio-out (headphone)/audio-in (microphone) combo jack on your Chromebox.

⚠ WARNING! To reduce the risk of personal injury, lower the volume setting before putting on headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety, and Environmental Notices*.

To access this document:

To connect wireless headphones to your Chromebox, follow the device manufacturer's instructions.

Using video

Your Chromebox is a powerful video device that enables you to watch streaming video from your favorite websites and download video and movies to watch later without needing to connect to a network.

To use one of the video ports on the device to connect an external monitor, projector, or TV. Your device has both a high-definition multimedia interface (HDMI) port, which allows you to connect a high-definition monitor or TV, and a DisplayPort™ interface, for connecting a DisplayPort-compatible device.

📝 IMPORTANT: Be sure that the external device is connected to the correct port on the Chromebox, using the correct cable. Follow the device manufacturer's instructions.

Connecting an HDMI device

To see the video image on a high-definition TV or monitor, connect the high-definition device according to the following instructions:

📝 NOTE: To connect an HDMI device to your Chromebox, you need an HDMI cable, sold separately.

1. Connect one end of the HDMI cable to the HDMI port on the Chromebox.

2. Connect the other end of the cable to the high-definition TV or monitor. You now see the Chrome desktop on your display device.

Connect to a wireless network

Enabling and disabling Wake on LAN (WOL) function
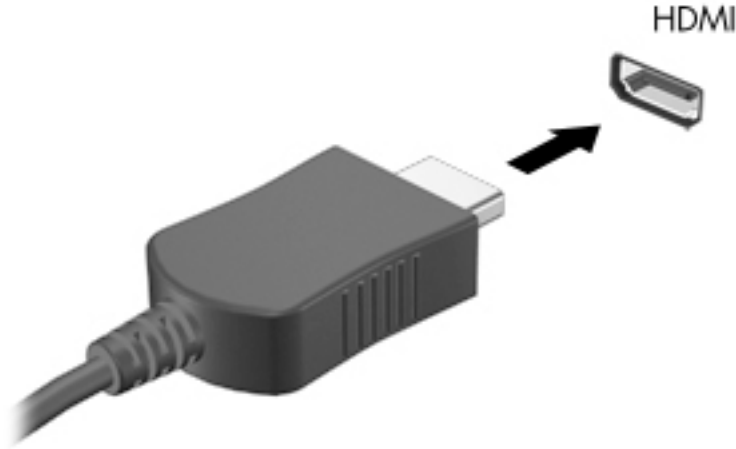
Wake on LAN (WOL) is a function that allows your device to be turned on by a message sent across your local area network, or LAN.

NOTE: Wake on LAN only functions when a LAN cable is attached. WOL resets to its default setting (WOL-enabled) after a system restart.

Accessing the WOL function requires initiating a recovery and entering developer mode. Be sure that all of your files are saved to the cloud or to an external drive before proceeding.

Turn WOL on or off

To turn this function on or off:

NOTE: Changes to Wake on LAN functions may be applied only when a LAN cable is attached. WOL will be reset to its default setting (WOL-enabled) after a system reboot. For further information and updates, go to http://www.hp.com/support, and select your country. Follow the on-screen instructions to find documentation relevant to your device.

1. You must enter development mode to alter WOL settings. See http://www.chromium.org/chromium-os/developer-information-for-chrome-os-devices for directions about accessing developer mode on your device. The process for enabling and disabling WOL may change as the operating system is updated.

2. After initiating developer mode, the system restarts automatically, and you are prompted to set up your language and keyboard again and sign into your user account.

3. After you sign in, you see the Chrome desktop. From here, press ctrl + alt + f2 or ctrl + alt + → to enter console mode.

4. On the console screen, type `root` and press enter.

5. At the next prompt, type `ethtool -s eth0 wol d` and press enter to disable the WOL function. To enable WOL function, type `ethtool -s eth0 wol g` and press enter.

6. Press ctrl + alt + f1 or ctrl + alt + → to return to the Chrome desktop.

Managing apps

You can expand the productivity and entertainment capabilities of your Chromebox with free or purchased apps that you can download directly to your device.

To find and install apps, go to the Chrome webstore. Using the store requires a Google® account, but the store will maintain a list of every app you have ever installed, even if you've uninstalled them. This way, you'll never lose an app when you reformat the operating system. Apps update automatically, ensuring that you always have the most recent version installed.

● To open an app you've installed, select the Launcher icon and select the app from the list, or select the icon for the app you want from the apps pinned to the shelf at the bottom of the screen.

● To pin or unpin an app to the shelf on the main screen, select the Launcher icon, and select the app. Right-click the app, and then select **Pin to shelf**. To unpin an app, right-click it and select **Unpin**.

● To uninstall an app, select the Launcher icon, and select the app. Right-click the app, and then select **Remove from Chrome**.

For more information about managing apps, go to https://support.google.com/chrome_webstore/answer/1053346?hl=en.

3 Securing your Chromebox and information

Device security is essential for protecting the confidentiality, integrity, and availability of your information. Standard security solutions and third-party software can help protect your device from a variety of risks, such as viruses, worms, and other types of malicious code.

When you sign in to Chrome and enable sync, Chrome keeps your information secure by using your Google account credentials to encrypt your synced passwords. Alternatively, you can encrypt all of your synced data with a sync passphrase. This sync passphrase is stored on your device and isn't sent to Google. For more information about syncing your data, go to https://support.google.com/chrome/answer/1181035?hl=en.

IMPORTANT: Some security features listed in this chapter might not be available on your device.

Table 3-1 Chromebox security options

Device risk	Security feature
Unauthorized use of the device	Power-on password
Viruses	Antivirus software
Ongoing or future threats to the device	Software updates
Unauthorized removal of the device	Security cable lock

Securing your wireless network

When you set up your wireless network, always enable security features.

Backing up your software applications and information

All apps update automatically, and a record of your downloads and purchases is kept on the Chrome Store. Google also saves your last synced settings automatically. If you must perform a recovery on your device, you can log in with your Google account and automatically retrieve all of your settings, favorites, and apps.

HP recommends that you save important documents and files either to a USB flash drive, memory card, external hard drive, or to Google Cloud™ storage. You can save your files to the cloud at any time by selecting the Google Drive as your file-save location.

Recovering your Chromebox

If you want to give your Chromebox to someone else, reset owner permissions, or solve problems with your account profile, you can clear all local user data by resetting your device.

NOTE: Performing a factory reset deletes all information stored on your device, including permissions, settings, and user-owned files for all accounts. Resetting your device does not affect your accounts or any information synced to those accounts.

1. Select the status area in the lower-right corner.

2. Select **Settings**, and then select **Show advanced settings**.

3. Find the Powerwash section and click **Powerwash**.

4. After the dialog box opens, select **Restart**.

 For more detailed information about resetting your Chromebox, see https://support.google.com/chromebook/answer/183084.

Using an optional security cable

A security cable lock, which is purchased separately, is designed to act as a deterrent, but it might not prevent the device from being mishandled or stolen. Security cables are only one of several methods that you should use as part of a complete security system to help maximize theft prevention.

The security cable slot on your Chromebox might look slightly different from the illustration in this section. For the location of the security cable slot on your device, see Getting to know your Chromebox on page 1.

1. Loop the security cable lock around a secured object.

2. Insert the key **(1)** into the security cable lock **(2)**.

3. Insert the security cable lock into the security cable slot on the device **(3),** and then lock the security cable lock with the key.
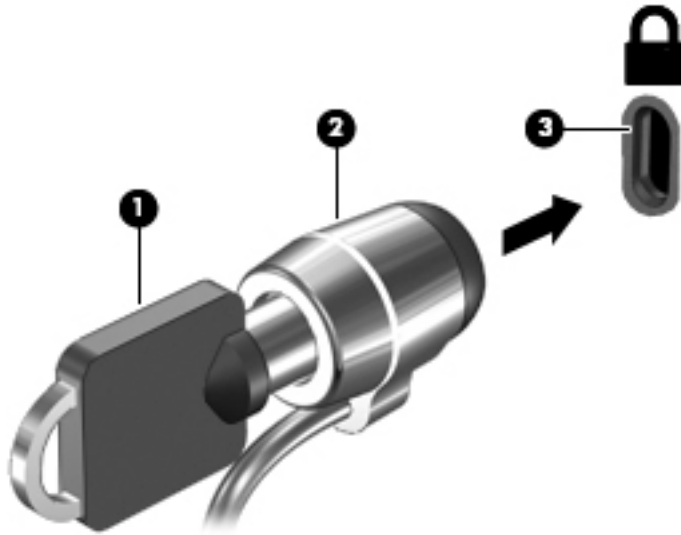
4. Remove the key and keep it in a safe place.

4   Printing

You have several ways to print from your device.

- Print with Google® Chrome™ inOS printing solution.
- Print from Google Chrome using the HP Print for Chrome app.

NOTE: If you use HP Print for Chrome, you cannot register the printer with the Google Chrome inOS printing solution.

Printing with Google Chrome inOS printing solution

The Google Chrome inOS printing solution is a built-in printing solution for Chromeboxes. HP printers produced in 2017 and later are supported automatically. For more information, see the Google Chrome website.

1. Go to https://support.google.com/chrome.

2. Select the search icon, type `set up printer`, and then select **Set up printer**.

   NOTE: Do not press enter.

3. Follow the on-screen instructions.

Printing from Google Chrome

For an alternate method to print from Google Chrome, use the HP Print for Chrome app. You can install the HP Print for Chrome app from the Chrome Web Store. For more information, see the HP website.

1. Go to http://www.hp.com/support.

2. Select the search icon at the upper right of the page, type `Printing with the HP Print for Chrome App`, and then press enter.

3. Follow the on-screen instructions.

5 More HP resources

To locate resources that provide product details, how-to information, and more, use this table.

Table 5-1 Additional information

Resource	Contents
Setup Instructions	● How to set up the Chromebox
	● Help to identify device components
HP website To access the latest user guide, go to http://www.hp.com/support, and follow the instructions to find your product. Then select **Manuals**.	● Support information ● Ordering parts and finding additional help ● Accessories available for the device
Worldwide support To get support in your language, go to http://www.hp.com/support, and select your country.	● Online chat with an HP technician ● Support telephone numbers ● HP service center locations
Safety & Comfort Guide Go to http://www.hp.com/ergo.	● Proper workstation setup ● Guidelines for posture and work habits that increase comfort and decrease risk of injury ● Electrical and mechanical safety information
Regulatory, Safety, and Environmental Notices This guide is provided in the box.	● Regulatory and safety information ● Battery disposal information
Limited Warranty* Go to http://www.hp.com/go/orderdocuments.	● Warranty information

*You can find your HP Limited Warranty located with the user guides on your product and/or on the CD or DVD provided in the box. In some countries or regions, HP may provide a printed warranty in the box. For countries or regions where the warranty is not provided in printed format, you can request a copy from http://www.hp.com/go/orderdocuments. For products purchased in Asia Pacific, you can write to HP at POD, PO Box 161, Kitchener Road Post Office, Singapore 912006. Include your product name, and your name, phone number, and postal address.

6 Electrostatic discharge

Electrostatic discharge is the release of static electricity when two objects come into contact—for example, the shock you receive when you walk across the carpet and touch a metal door knob.

A discharge of static electricity from fingers or other electrostatic conductors may damage electronic components.

IMPORTANT: To prevent damage to the Chromebox, damage to a drive, or loss of information, observe these precautions:

- If removal or installation instructions direct you to unplug the Chromebox, first be sure that it is properly grounded.

- Keep components in their electrostatic-safe containers until you are ready to install them.

- Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

- Use nonmagnetic tools.

- Before handling components, discharge static electricity by touching an unpainted metal surface.

- If you remove a component, place it in an electrostatic-safe container.

7 Accessibility

HP's goal is to design, produce, and market products, services, and information that everyone everywhere can use, either on a stand-alone basis or with appropriate third-party assistive technology (AT) devices or applications.

HP and accessibility

Because HP works to weave diversity, inclusion, and work/life into the fabric of the company, it is reflected in everything HP does. HP strives to create an inclusive environment focused on connecting people to the power of technology throughout the world.

Finding the technology tools you need

Technology can unleash your human potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology helps increase, maintain, and improve the functional capabilities of electronic and information technology.

For more information, see Finding the best assistive technology on page 15.

The HP commitment

HP is committed to providing products and services that are accessible for people with disabilities. This commitment supports the company's diversity objectives and helps ensure that the benefits of technology are available to all.

The HP accessibility goal is to design, produce, and market products and services that can be effectively used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

To achieve that goal, this Accessibility Policy establishes seven key objectives to guide HP actions. All HP managers and employees are expected to support these objectives and their implementation in accordance with their roles and responsibilities:

- Raise the level of awareness of accessibility issues within HP, and provide employees with the training they need to design, produce, market, and deliver accessible products and services.

- Develop accessibility guidelines for products and services, and hold product development groups accountable for implementing these guidelines where competitively, technically, and economically feasible.

- Involve people with disabilities in the development of accessibility guidelines and in the design and testing of products and services.

- Document accessibility features, and make information about HP products and services publicly available in an accessible form.

- Establish relationships with leading assistive technology and solution providers.

- Support internal and external research and development that improves assistive technology relevant to HP products and services.

- Support and contribute to industry standards and guidelines for accessibility.

International Association of Accessibility Professionals (IAAP)

IAAP is a not-for-profit association focused on advancing the accessibility profession through networking, education, and certification. The objective is to help accessibility professionals develop and advance their careers and to better enable organizations to integrate accessibility into their products and infrastructure.

As a founding member, HP joined to participate with other organizations to advance the field of accessibility. This commitment supports HP's accessibility goal of designing, producing, and marketing products and services that people with disabilities can effectively use.

IAAP will make the profession strong by globally connecting individuals, students, and organizations to learn from one another. If you are interested in learning more, go to http://www.accessibilityassociation.org to join the online community, sign up for newsletters, and learn about membership options.

Finding the best assistive technology

Everyone, including people with disabilities or age-related limitations, should be able to communicate, express themselves, and connect with the world using technology. HP is committed to increasing accessibility awareness within HP and with our customers and partners.

Whether it's large fonts that are easy on the eyes, voice recognition that lets you give your hands a rest, or any other assistive technology to help with your specific situation—a variety of assistive technologies make HP products easier to use. How do you choose?

Assessing your needs

Technology can unleash your potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology (AT) helps increase, maintain, and improve the functional capabilities of electronic and information technology.

You can choose from many AT products. Your AT assessment should allow you to evaluate several products, answer your questions, and facilitate your selection of the best solution for your situation. You will find that professionals qualified to do AT assessments come from many fields, including those licensed or certified in physical therapy, occupational therapy, speech/language pathology, and other areas of expertise. Others, while not certified or licensed, can also provide evaluation information. You will want to ask about the individual's experience, expertise, and fees to determine if they are appropriate for your needs.

Accessibility for HP products

These links provide information about accessibility features and assistive technology, if applicable, included in various HP products. These resources will help you select the specific assistive technology features and products most appropriate for your situation.

- HP Elite x3–Accessibility Options (Windows 10 Mobile)
- HP PCs–Windows 7 Accessibility Options
- HP PCs–Windows 8 Accessibility Options
- HP PC's–Windows 10 Accessibility Options
- HP Slate 7 Tablets–Enabling Accessibility Features on Your HP Tablet (Android 4.1/Jelly Bean)
- HP SlateBook PCs–Enabling Accessibility Features (Android 4.3,4.2/Jelly Bean)
- HP Chromebook PCs–Enabling Accessibility Features on Your HP Chromebook or Chromebox (Chrome OS)
- HP Shopping–peripherals for HP products

If you need additional support with the accessibility features on your HP product, see Contacting support on page 18.

Additional links to external partners and suppliers that may provide additional assistance:

- Microsoft Accessibility information (Windows 7, Windows 8, Windows 10, Microsoft Office)

- Google Products accessibility information (Android, Chrome, Google Apps)

- Assistive Technologies sorted by impairment type

- Assistive Technology Industry Association (ATIA)

Standards and legislation

Countries worldwide are enacting regulations to improve access to products and services for persons with disabilities. These regulations are historically applicable to telecommunications products and services, PCs and printers with certain communications and video playback features, their associated user documentation, and their customer support.

Standards

The US Access Board created Section 508 of the Federal Acquisition Regulation (FAR) standards to address access to information and communication technology (ICT) for people with physical, sensory, or cognitive disabilities.

The standards contain technical criteria specific to various types of technologies, as well as performance-based requirements which focus on functional capabilities of covered products. Specific criteria cover software applications and operating systems, web-based information and applications, computers, telecommunications products, video and multimedia, and self-contained closed products.

Mandate 376 – EN 301 549

The European Union created the EN 301 549 standard within Mandate 376 as an online toolkit for public procurement of ICT products. The standard specifies the accessibility requirements applicable to ICT products and services, with a description of the test procedures and evaluation methodology for each requirement.

Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) from the W3C's Web Accessibility Initiative (WAI) helps web designers and developers create sites that better meet the needs of people with disabilities or age-related limitations.

WCAG advances accessibility across the full range of web content (text, images, audio, and video) and web applications. WCAG can be precisely tested, is easy to understand and use, and allows web developers flexibility for innovation. WCAG 2.0 has also been approved as ISO/IEC 40500:2012.

WCAG specifically addresses barriers to accessing the web experienced by people with visual, auditory, physical, cognitive, and neurological disabilities, and by older web users with accessibility needs. WCAG 2.0 provides characteristics of accessible content:

- **Perceivable** (for instance, by addressing text alternatives for images, captions for audio, adaptability of presentation, and color contrast)

- **Operable** (by addressing keyboard access, color contrast, timing of input, seizure avoidance, and navigability)

- **Understandable** (by addressing readability, predictability, and input assistance)
- **Robust** (for instance, by addressing compatibility with assistive technologies)

Legislation and regulations

Accessibility of IT and information has become an area of increasing legislative importance. These links provide information about key legislation, regulations, and standards.

- United States
- Canada
- Europe
- Australia
- Worldwide

Useful accessibility resources and links

These organizations, institutions, and resources might be good sources of information about disabilities and age-related limitations.

NOTE: This is not an exhaustive list. These organizations are provided for informational purposes only. HP assumes no responsibility for information or contacts you encounter on the Internet. Listing on this page does not imply endorsement by HP.

Organizations

These organizations are a few of the many that provide information about disabilities and age-related limitations.

- American Association of People with Disabilities (AAPD)
- The Association of Assistive Technology Act Programs (ATAP)
- Hearing Loss Association of America (HLAA)
- Information Technology Technical Assistance and Training Center (ITTATC)
- Lighthouse International
- National Association of the Deaf
- National Federation of the Blind
- Rehabilitation Engineering & Assistive Technology Society of North America (RESNA)
- Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
- W3C Web Accessibility Initiative (WAI)

Educational institutions

Many educational institutions, including these examples, provide information about disabilities and age-related limitations.

- California State University, Northridge, Center on Disabilities (CSUN)
- University of Wisconsin - Madison, Trace Center
- University of Minnesota computer accommodations program

Other disability resources

Many resources, including these examples, provide information about disabilities and age-related limitations.

- ADA (Americans with Disabilities Act) Technical Assistance Program
- ILO Global Business and Disability network
- EnableMart
- European Disability Forum
- Job Accommodation Network
- Microsoft Enable

HP links

These HP-specific links provide information that relates to disabilities and age-related limitations.

Our contact webform

HP comfort and safety guide

HP public sector sales

Contacting support

HP offers technical support and assistance with accessibility options for customers with disabilities.

📝 **NOTE:** Support is in English only.

- Customers who are deaf or hard of hearing who have questions about technical support or accessibility of HP products:
  - Use TRS/VRS/WebCapTel to call (877) 656-7058 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
- Customers with other disabilities or age-related limitations who have questions about technical support or accessibility of HP products, choose one of the following options:
  - Call (888) 259-5707 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
  - Complete the Contact form for people with disabilities or age-related limitations.

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