User Guide



Lenovo Chromebook 500e 2-in-1 Gen 5

Read this first

Before using this documentation and the product it supports, ensure that you read and understand the following:

- *Safety and Warranty Guide*
- *Setup Guide*
- *Generic Safety and Compliance Notices*

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Discover your Chromebook

Thank you for choosing a Lenovo® Chromebook™! We are dedicated to delivering the best solution to you.

Before starting your tour, please read the following information:

- This guide applies to Lenovo product model(s) listed below. Illustrations in this guide may look slightly different from your product model.

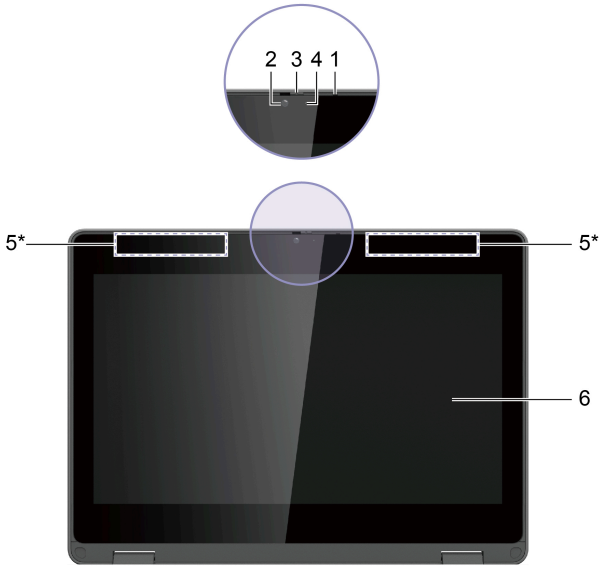
Model name	Machine type (MT)
Lenovo Chrome 500e 2in1 G5 ITN (11-inch)	83T8, 83T9
Lenovo Chrome 500e 2in1 G5 ITN (12-inch)	
Lenovo Chrome 500e 2in1 G5 M89 (11-inch)	83TA, 83TB
Lenovo Chrome 500e 2in1 G5 M89 (12-inch)	

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at https://pcsupport.lenovo.com/docs/generic_notices.
- Depending on the model, some optional accessories, features, software programs, and user interface instructions might not be applicable to your Chromebook.
- Documentation content is subject to change without notice. To get the latest documentation, go to https://pcsupport.lenovo.com.

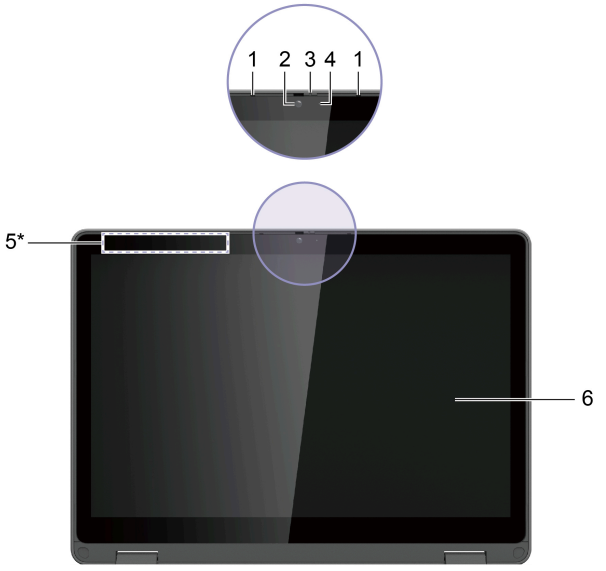
Chapter 1 Meet your Chromebook

Front

For 11-inch models



For 12-inch models



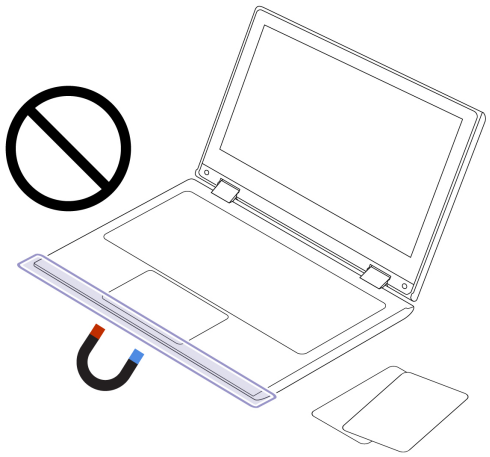
No.	Description
1. Microphone(s)	Capture or record sound and voice.

No.	Description
2. Camera	Capture still and moving images for taking photos, recording videos, and video chatting.
3. Camera cover	Cover or uncover the camera lens. **Note:** The camera cover helps you better protect your privacy.
4. Camera light	If the light is on, the camera is in use.
5. Wireless WAN antenna(s)*	Send and receive radio waves for the built-in wireless wide area network (WAN). **Note:** The antennas are not visible from the outside of the Chromebook.
6. Screen	Display text, graphics, and videos. Supports models support multi-touch function.

* for selected models

Important information

Your Chromebook contains magnets. Keep a safe distance away from devices and objects that might be affected by magnets, such as credit cards.



Base

For 11-inch models:



For 12-inch models:

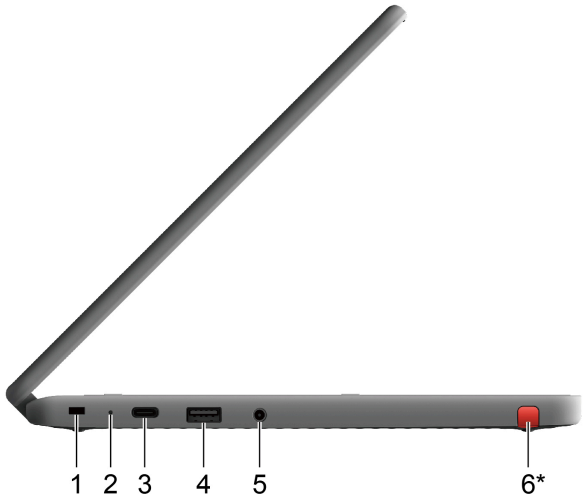


No.	Description
1. Wireless LAN antennas	Send and receive radio waves for the built-in wireless local area network (LAN) and Bluetooth module. **Note:** The antennas are not visible from the outside of the Chromebook.
2. Microphone*	Capture or record sound and voice.

No.	Description
3. Camera*	Capture still and moving images for taking photos, recording videos, and video chatting.
4. Keyboard	Enter characters and interact with programs. **Note:** The keyboard also includes function keys and key combinations for changing settings and performing tasks quickly.
5. Touchpad	Perform finger touch and all the functions of a traditional mouse. **Note:** The touchpad also supports multi-touch function.
6. Wireless WAN antenna*	Send and receive radio waves for the built-in wireless wide area network (WAN). **Note:** The antennas are not visible from the outside of the Chromebook.

* for selected models

Left



No.	Description
1. Nano security-lock slot	Lock your Chromebook to a desk, table, or other fixtures through a compatible security cable lock. See Lock your Chromebook on page 15.
2. Charging light	Indicate the ac power status and the battery status. See Charge your Chromebook on page 14.
3. Multi-purpose USB Type-C® connector	This USB Type-C connector is the PC's power input connector. Use the included power adapter and this connector to supply power to the PC. This multi-purpose USB Type-C connector complies with the USB Power Delivery specification. If your PC is sold without an included ac power adapter, you can reuse an existing USB Power Delivery–capable charger or purchase one separately. Refer to the specifications section in this publication for the minimum and maximum negotiable power levels supported by this connector. When this connector is not used by the included power adapter, it can also be used to connect: • Storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection • Display devices **Note:** When connecting display devices, you need to use appropriate cables and adapters (if needed)

No.	Description
	according to the connection capabilities of the display device.
4. USB (3.2 Gen 1) Type-A connector	Connect a USB-compatible device, such as a USB keyboard, a USB mouse, a USB storage device, or a USB printer.
5. Combo audio jack	Connect headphones or headsets with a 3.5 mm (0.14 inch), 4-pole plug. **Note:** This jack does not support standalone external microphones. If you use headsets, choose one with a single plug.
6. Electronic pen*	Write or draw on the screen.

* for selected models

Tips for selecting a certified charger

When selecting or reusing a third-party USB Type-C charger for this PC, choose a product that is safety-approved or certified.

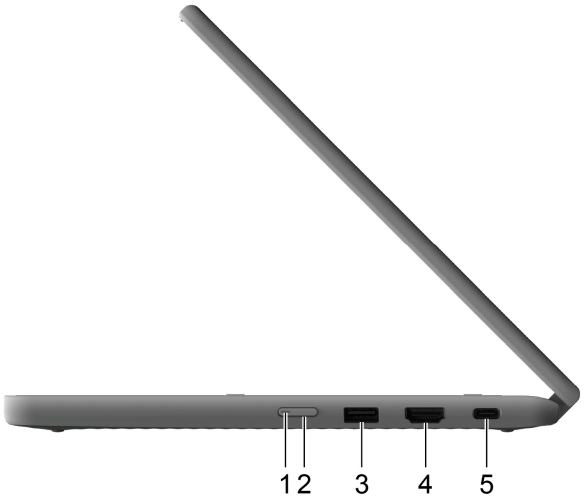
Attention:

An uncertified charger may damage your PC or pose an electrical hazard.

In many countries and regions, manufacturers or importers of electric chargers can submit their products to certification authorities or approved and recognized testing laboratories. These products typically bear a mark indicating that they meet the relevant quality and safety standards. In some countries and regions, this certification process is mandatory.

If you live in mainland China, choose a charger with the "CCC" mark. For users in many European countries, select one with the "CE" mark. For users in the United States and Canada, choose a charger listed by one of the Nationally Recognized Testing Laboratories (for example, the "UL Listed" mark). For people living in other countries or regions, consult a qualified electrical engineer to learn how to select a safety-approved electric charger.

Right



No.	Description
1. Power light	• On: the Chromebook is turned on. • Off: the Chromebook is turned off or in hibernation mode. • Blinking: the Chromebook is in sleep mode.
2. Power button	Press the button to turn on the Chromebook or put the Chromebook into sleep mode. **Note:** When you finish working with your Chromebook, shut it down to save power. • Click ⏻ in the system tray. • Press the power button.
3. USB (3.2 Gen 1) Type-A connector	Connect a USB-compatible device, such as a USB keyboard, a USB mouse, a USB storage device, or a USB printer.
4. HDMI™ connector	Connect to a compatible digital audio device or video monitor, such as an HDTV.
5. Multi-purpose USB Type-C connector	This multi-purpose USB Type-C connector is used to connect: • Storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection

No.	Description
	• Display devices **Note:** When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device. This multi-purpose USB Type-C connector complies with the USB Power Delivery specification. If your PC is sold without an included ac power adapter, you can reuse an existing USB Power Delivery–capable charger or purchase one separately. Refer to the specifications section in this publication for the minimum and maximum negotiable power levels supported by this connector.

Bottom



No.	Description
1. Keyboard drainage hole	Drain out liquid from your Chromebook if you accidentally spill liquid on the keyboard.
2. Speakers	Produce sound.

Specifications

Dimensions

Item	Value or specification
Width	289.7 mm (11.4 inches)
Depth	212 mm (8.3 inches)
Thickness	20.33 mm (0.8 inches)

ac power adapter

Item	Value or specification
Input	100 V ac–240 V ac, 50 Hz–60 Hz
Output voltage	20 V
Maximum current	3.25 A
Maximum power	65 W

Note:

The PC is available in certain countries or regions without an included ac power adapter.

Rechargeable battery pack

Item	Value or specification
Capacity	• 50 Wh, or • 33.33 Wh
Cell type	Rechargeable Li-ion Battery
Number of cells	2 (for 50 Wh) or 3 (for 33.33 Wh)
Power output (2 cells)	5 V, 1.5 A **Note:** • Due to the power limitation of the type-C connector, external devices rated above 7.5W may not function properly on a computer with a 2-cell battery configuratio-n. • The battery capacity is the typical or average capacity as measured in a specific test environment. Capacities

Item	Value or specification
	measured in other environments may differ but are no lower than the rated capacity (see product label).

Memory

Item	Value or specification
Type	On-board lower double data rate 5 (LPDDR5) | LPDDR5X
Installation	On-board
Slot quantity	0

Mass storage device

Item	Value or specification
Type	Universal flash storage
Slot interface	UFS

Display

Item	Value or specification
Size	• For 11-inch models: 294.6 mm (11.6 inches) • For 12-inch models: 309.9 mm (12.2 inches)
Resolution	• 1366 × 768 pixels • 1920 × 1200 pixels
Maximum refresh rate	60 Hz
Screen type	LCD

Connectors and slots

Item	Value or specification

USB Standard-A connector	• Quantity: 2
	• Power level (output)
	  - Voltage: 5 V
	  - Maximum current: 0.9 A
	• Data protocol
	  - USB 2.0 480 Mbps

Item	Value or specification
	- SuperSpeed USB 5 Gbps
Multi-purpose USB Type-C connector	• Quantity: 2 • Power level - Output - Voltage: 5 V - Maximum current: 1.5 A • 1.5 A, or • 3 A - Input (USB Power Delivery) - Minimum: 45 W (15 V, 3 A) - Maximum: 65 W (20 V, 3.25 A) **Note:** The minimum power is the lowest acceptable power level required to keep the PC operational and initiate charging of the internal battery, while the maximum power is the highest acceptable power level that enables the fastest charging speed. Both power levels are negotiated according to the protocols specified in the *USB Power Delivery Specification* . • Data protocol - SuperSpeed USB 5 Gbps - SuperSpeed USB 10 Gbps (for Lenovo Chrome 500e 2in1 G5 ITN) - DisplayPort 1.4 - Maximum data rate: 5.4 Gbps - Maximum output resolution: 2560× 1440 (60 Hz)
HDMI connector	• Data protocol - Transition minimized differential signaling (TMDS) • Maximum output resolution: 3840 × 2160 (30 Hz)
Audio jack	• Diameter: 3.5 mm • Supported plug: - 3-pole, TRS - 4-pole, TRRS (CTIA and OMTP)

Note:

Data transmission rates are presented as maximum theoretical values in compliance with applicable specifications. The actual data transmission rates depend on various factors,

including the performance of the connected devices and the quality of the cables being used. These rates are typically slower than the maximum theoretical values listed.

Networking

Item	Value or specification
Wi-Fi	• 802.11a/b/g • 802.11n • 802.11ac • 802.11ax (Wi-Fi 6, Wi-Fi 6E) • 802.11be (Wi-Fi 7) **Note:** Different Wi-Fi standards may operate on different frequency bands. In some countries or regions, certain frequency bands may be prohibited for unlicensed use or may require specific conditions. Wi-Fi 6E and Wi-Fi 7 on this PC are disabled in some countries or regions in accordance with local regulations.
Wireless WAN*	• 4G LTE, or • 5G RedCap
Bluetooth	Bluetooth 5.4

* for selected models

Statement on USB transfer rate

Depending on many factors such as the processing capability of the host and peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and will be slower than the data rate listed below for each corresponding device.

USB device	Data rate (Gbit/s)
2.0	0.48
USB 3.2 Gen 1	5
USB 3.2 Gen 2 (Lenovo Chrome 500e 2in1 G5 ITN)	10

Operating environment

Maximum altitude (without pressurization)

3048 m (10 000 ft)

Temperature

- Operating: 5°C to 35°C (41°F to 95°F)
- Storage: 5°C to 43°C (41°F to 109°F)

> **Note:**
>
> When you charge the battery, its temperature must be no lower than 10°C (50°F).

Relative humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 5% to 95% at wet-bulb temperature 27°C (81°F)

Chapter 2 Get started with your Chromebook

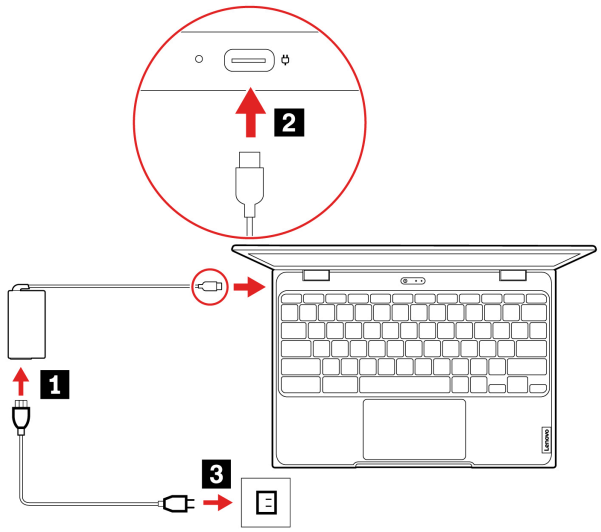
Charge your Chromebook

The USB Type-C connector on your Chromebook works as the power connector. Plug in the ac power adapter to charge the built-in battery pack and provide power to the Chromebook.

Connect to ac power

CAUTION:

All plugs must be firmly and securely inserted into receptacles.



1. Connect the power cord to the ac power adapter.
2. Plug the power adapter into the USB Type-C connector of the Chromebook.
3. Plug the power cord into an electrical outlet.

AC power status indicator behavior

The ac power status indicator is next to the USB Type-C connector. The following table shows the indicator behaviors and the indicated power and battery status.

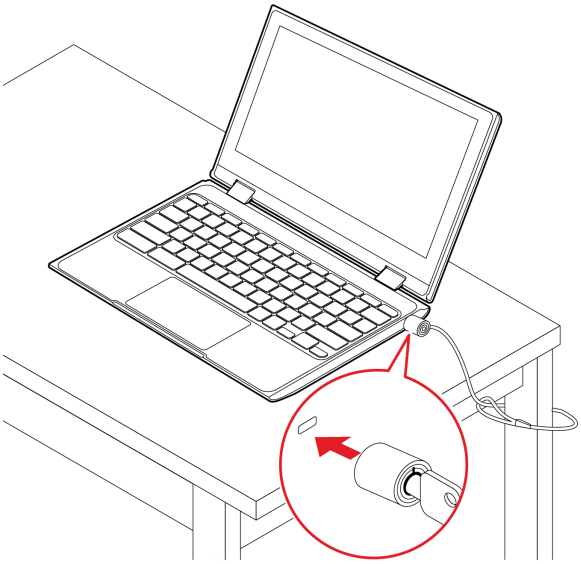
AC power status indicator	Power status	Battery status
on (red)	plugged in	being charged, remaining power is less than 5%
on (amber)	plugged in	being charged, remaining power is between 5% and 97%
on (green)	plugged in	fully charged (97% to 100%)
off	unplugged	discharging

Lock your Chromebook

Lock your Chromebook to a desk, table, or other fixtures through a compatible security cable lock.

Note:

The slot supports cable locks that conform to the Kensington NanoSaver® lock standards using Cleat™ locking technology. Do not attempt to use other types of cable locks that use a rotating T-bar™ locking mechanism. You are responsible for evaluating, selecting, and implementing the locking device and security feature. Lenovo makes no comments, judgments, or warranties about the function, quality, or performance of the locking device and security feature. Cable locks for your product are available from Lenovo at https://www.lenovoquickpick.com/.



Connect to a cellular network (for selected models)

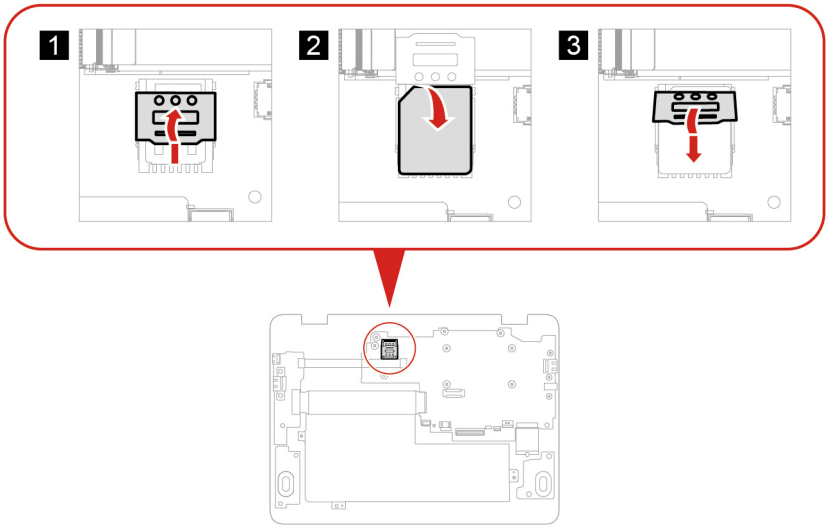
If your Chromebook has a wireless wide area network (WAN) card and a nano-SIM card installed, you can connect to a cellular data network and get online everywhere.

Note:

The cellular service is provided by authorized mobile service carriers in some countries or regions. You must have a cellular plan from a service carrier to connect to the cellular network.

To establish a cellular connection:

1. Turn off the Chromebook.
2. Locate the nano-SIM card slot and insert the nano-SIM card as shown. Note the orientation of the card and ensure that it is seated correctly.



3. Turn on the Chromebook.
4. Click the network icon in the system tray, and then turn on **Mobile data**. Provide required information, if needed.

Connect to Wi-Fi

To connect your Chromebook to Wi-Fi:

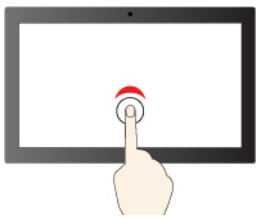
1. Click your system tray.
2. Click the network icon and turn on the wireless feature.
3. Select an available network to connect. Provide required information if needed.

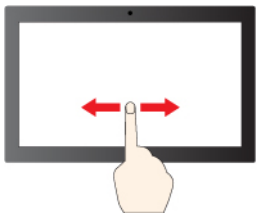
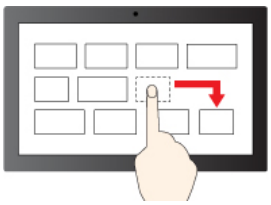
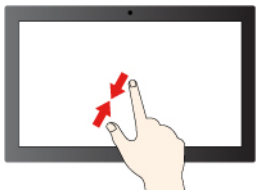
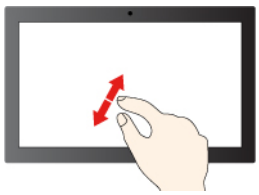
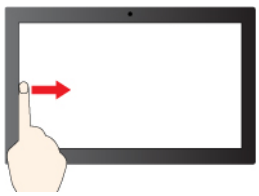
Use the touch screen

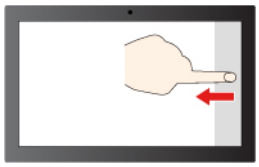
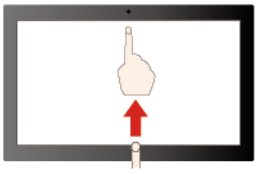
If your Chromebook display supports the multi-touch function, you can navigate the screen with simple touch gestures.

Note:

Some gestures might not be available depending on the app you use.

Touch operation	Used for
	Tap once to single click

Touch operation	Used for
	Tap and hold to right-click
	Slide to scroll through items
	Drag
	Zoom out
	Zoom in
	Swipe from the left: view all open windows

Touch operation	Used for
	Swipe from the right: open action center
	Tap with two fingers to open a shortcut menu
	Swipe upwards to unfold the app Launcher

Maintenance tips:

- Turn off the Chromebook before cleaning the multi-touch screen.
- Use a dry, soft, and lint-free cloth or a piece of absorbent cotton to remove fingerprints or dust from the multi-touch screen. Do not apply solvents to the cloth.
- The multi-touch screen is a glass panel covered with a plastic film. Do not apply pressure or place any metallic object on the screen, which might damage the touch panel or cause it to malfunction.
- Do not use fingernails, gloved fingers, or inanimate objects for input on the screen.
- Regularly calibrate the accuracy of the finger input to avoid a discrepancy.

Use the keyboard shortcuts

The function keys on the keyboard help you work more easily and effectively.

Shortcut	Action
←	Go to the previous page
↻	Reload your current page
→	Go to the next page
⛶	Hide the tabs and the App Launcher in full-screen mode
▣	Show all windows in overview mode

Shortcut	Action
	Take full screenshot or screen recording
	Decrease the brightness of the Chromebook screen
	Increase the brightness of the Chromebook screen
	Turn on/off the keyboard backlight
	Mute/Unmute the microphones
	Mute/Unmute the speakers
	Decrease the volume
	Increase the volume
	Open the Accessibility panel
	Turn on dictation
	Lock the Chromebook screen
	Quickly insert links and files to your context
	Open the App Launcher

Your Chromebook also supports some key combinations.

Shortcut	Action
ctrl + shift + 	Take a screenshot
fn + 	Switch the Caps Lock function
 + l	Lock your Chromebook screen
 + ctrl +s	View all keyboard shortcuts
*alt + 	Turn off the keyboard backlight and decrease the brightness
*alt + 	Turn on the keyboard backlight and increase the brightness

* for selected models

To change the keyboard settings:

1. Click the setting icon in the system tray, and then click **Device** > **Keyboard and inputs**.
2. Follow the on-screen instructions to change the settings as you prefer.

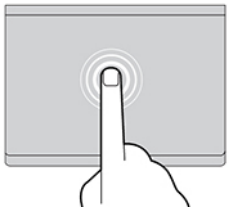
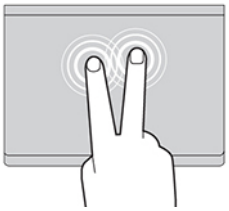
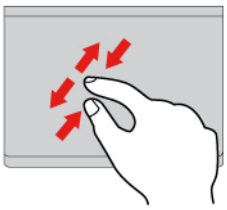
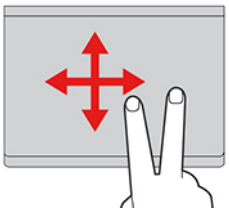
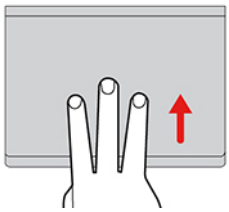
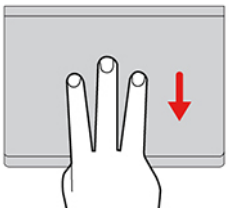
Use the touchpad

The entire touchpad surface is sensitive to finger touch and movement. You can use the touchpad to perform all the pointing, clicking, and scrolling functions of a traditional mouse.

Use the touch gestures

Note:

- When using two or more fingers, ensure that you position your fingers slightly apart.
- Some gestures are only available when you are using certain apps.
- If the touchpad surface is stained with oil, turn off the Chromebook first. Then, gently wipe the touchpad surface with a soft and lint-free cloth moistened with lukewarm water or Chromebook cleaner.

Gesture and function	Gesture and function
 Tap once to select or open an item.	 Tap twice quickly to display a shortcut menu.
 Two-finger zoom in or zoom out.	 Scroll through items.
 Open the task view.	 Show the current window.

To change the settings:

1. Click the setting icon in the system tray, and then click **Device** > **Touchpad**.
2. Follow the on-screen instructions to change the settings as you prefer.

If **Tap to click** is turned on, you can tap or press the touchpad. Otherwise, you can only press the touchpad to achieve the clicking function of a traditional mouse.

Use the camera

The built-in camera can be used for video calling or video conferencing. The indicator next to the camera turns on when the camera is activated.

To take photos with the camera:

1. Click the Launcher button.
2. Click **Camera** and take photos.

Use audio

You can connect headphones or a headset with a 3.5-mm (0.14-inch), 4-pole plug to the audio connector to listen to the sound from your Chromebook.

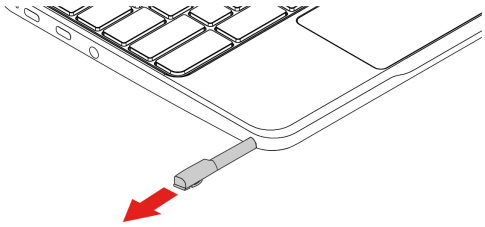
To play a saved audio or video:

1. Click the Launcher button, and then select **Files**.
2. Double-click a file to open it in the media player.

To adjust the volume, click the system tray, and then adjust the volume as you prefer.

Use the electronic pen (for selected models)

Selected models are shipped with the electronic pen. To use the pen, slide it out of the pen slot. When not in use, put it back into its slot.



Note:

- You might need to install additional apps such as Google Keep for better use of the pen.
- For Chromebook models come with a pen dummy, you can purchase an electronic pen to use. To purchase the pen, go to https://www.lenovo.com/accessories.

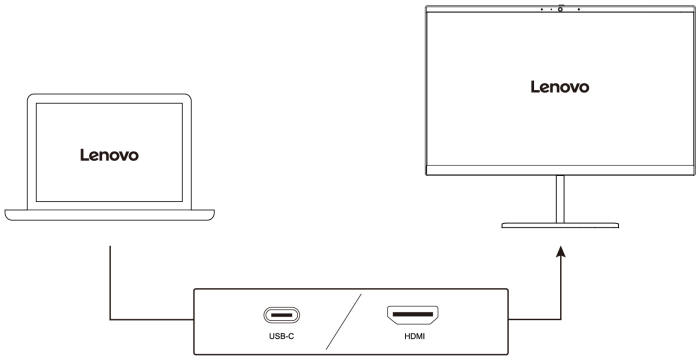
Use the electronic pen

You can perform the following operations with the pen:

- To open an app or a Web page, tap the display once.
- To display the shortcut menu or make a selection, tap the display and hold the pen there for one second.

Connect to an external display

Connect your Chromebook to a projector or a monitor to give presentations or expand your workspace.



Supported resolution

The following table lists the supported maximum resolution of the external display.

Connect the external display to	Supported resolution
Multi-purpose USB Type-C connector	Up to 2560 x 1440 pixels @ 60 Hz
HDMI connector	Up to 3840 x 2160 pixels @ 30 Hz

To change display settings:

1. Click the setting icon in the system tray, and then click **Device** > **Display**.
2. Follow the on-screen instructions to change the display settings as you prefer.

Connect to Bluetooth devices

Your Chromebook supports Bluetooth feature. You can connect your Chromebook to a Bluetooth keyboard, mouse, speakers, or other Bluetooth devices.

> **Note:**
>
> The Bluetooth devices must be within a short distance, usually 10 meters (33 feet), from the Chromebook.

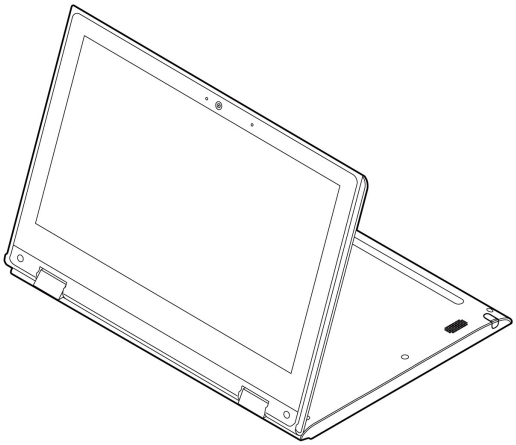
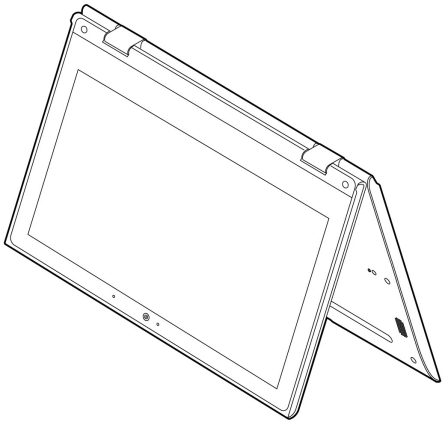
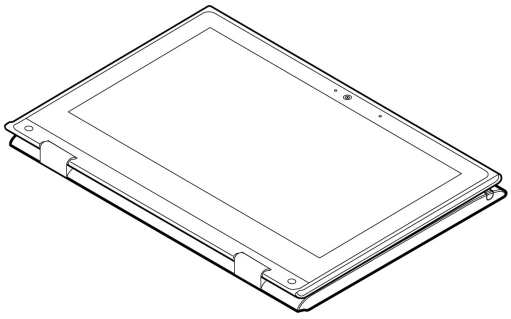
1. Click your system tray, and then click the Bluetooth icon.
2. Turn on **Bluetooth**.
3. Select the device you want to pair and follow the on-screen instructions.

Get to know your Chromebook modes

Rotate the display to switch among different modes according to your preference. The keyboard is automatically disabled in the stand mode, tent mode, and tablet mode. Use the touch screen to control your Chromebook instead.

Attention:

Do not rotate the Chromebook display with too much force, or apply too much force to the upper-right or upper-left corner of the Chromebook display. Otherwise, the display or hinges might get damaged.

Modes	Modes
 **Laptop mode**	 **Stand mode**
 **Tent mode**	 **Tablet mode**

Warning: When operating in the tablet mode with any external device connected, the upper case (keyboard's side) of the Chromebook may become hot. Avoid keeping your hands, lap, or any part of the body in contact with the upper case for over one minute.

Set the power plan

For ENERGY STAR® compliant Chromebooks, the following power plan takes effect when your Chromebooks have been idle for a specified duration:

Table 1: Default power plan (when plugged into ac power)

Power plan description
• Turn off the display: After seven minutes and 30 seconds • Put the Chromebook into sleep: After eight minutes and 30 seconds

To reset the power plan to achieve the best balance between performance and power saving:

1. Click the setting icon in the system tray, and then click **System preferences** > **Power**.
2. Follow the on-screen instructions to change the settings as you prefer.

Data erasure for reusing or recycling a Chromebook

It is advisable to reuse or recycle your Chromebook when it is no longer needed. Options include selling, donating, or using a reputable recycling service. Proper reuse and recycling of a Chromebook can help minimize its environmental impact.

When reusing or recycling a Chromebook, data security is a major concern due to the potential storage of personal and sensitive information. Before selling, donating, or recycling your Chromebook, it is essential to erase all personal data from its storage device to protect your privacy and prevent security breaches.

Data may be stored in the following media:

- Solid-state drive
- Hard disk drive
- eMMC
- nano-SIM card
- UFS (Universal flash storage)
- NAND Flash
- Trusted Platform Module (TPM)
- Wireless WAN card

You can erase data stored in the media via the ChromeOS or use the Powerwash reset.

Erase data via ChromeOS

If your Chromebook has a wireless wide area network (WAN) card and a nano-SIM card installed, you need to erase the nano-SIM card profile via the ChromeOS.

Erase the Wi-Fi network data

1. Navigate to **Settings** > **Network**.

2. Select **Wi-Fi** from the network option list to display all the Wi-Fi networks that your Chromebook has connected to.
3. Select the network that you want to remove, and click **Forget** to remove the network data. Repeat this step until all the Wi-Fi networks are removed.

Remove the nano-SIM card profile

1. Navigate to **Settings** > **Network**.
2. Select **Mobile data** from the network option list.
3. Select **eSIM** to display the SIM-card list.
4. Select the SIM-card that you want to remove, and click **Remove Profile** to erase the card profile. Repeat this step until all the profiles are removed.

Erase data via Powerwash

The Powerwash reset is provided on every Chromebook to reset the ChromeOS and erase personal files from the local storage device. For data stored in the solid-state drive, hard disk drive, eMMC, UFS, NAND Flash and TPM, use Powerwash to erase them.

How data is erased by Powerwash

The data stored on a Chromebook's local storage device is encrypted using encryption keys. When you reset a Chromebook using Powerwash, the encryption keys stored on the local storage device are deleted, leaving only the ciphertext on the storage device. As a result, the data becomes inaccessible and is effectively erased. The cryptographic data erasure provided by a Chromebook complies with the “purge” method of data sanitization as defined by *IEEE Standard for Sanitizing Storage* .

Reset a Chromebook using Powerwash

When you reset a Chromebook using Powerwash, all personal settings of ChromeOS and data stored on its local storage device are erased.

1. Sign out of the ChromeOS.
2. Press ctrl + alt + shift + r.
3. Select **Powerwash**.
4. On the **Confirm Powerwash** page, select **Continue**.

> **Note:**
>
> Before selecting **Continue**, ensure that you have backed up personal files you wish to keep to Google Drive or an external storage device.

You can also reset a Chromebook by navigating to **Settings** > **System preference** > **Reset** > **Powerwash** and follow the on-screen instructions.

> **Note:**
>
> If you're using your Chromebook at work or school, you can't reset it. Ask your administrator to wipe the data on your Chromebook and re-enroll the device on your work or school network.

Chapter 3 CRU replacement

Customer Replaceable Units (CRUs) are parts that can be replaced by the customer. The Chromebooks contain the following types of CRUs:

- **Self-service CRUs**: Refer to parts that can be replaced easily by customer themselves or by trained service technicians at an additional cost.
- **Optional-service CRUs**: Refer to parts that can be replaced by customers with a greater skill level. Trained service technicians can also provide service to replace the parts under the type of warranty designated for the customer's machine.

If you intend on installing a CRU, Lenovo will ship the CRU to you. CRU information and replacement instructions are shipped with your product and are available from Lenovo at any time upon request. You might be required to return the defective part that is replaced by the CRU. When return is required: (1) return instructions, a prepaid shipping label, and a container will be included with the replacement CRU; and (2) you might be charged for the replacement CRU if Lenovo does not receive the defective CRU within thirty (30) days of your receipt of the replacement CRU. For full details, see the Lenovo Limited Warranty documentation at https://www.lenovo.com/warranty/llw_02.

What are CRUs

Refer to the following CRU list for your Chromebook.

Self-service CRUs

- ac power adapter
- Battery cover assembly
- Electronic pen*
- Keyboard
- Pen dummy*
- Power cord

Optional-service CRUs

- Battery
- Type-C module
- Type-C module bracket

* for selected models

Note:

Replacement of any parts not listed above, including the built-in rechargeable battery, must be done by a Lenovo-authorized repair facility or technician. Go to https://support.lenovo.com/partnerlocation for more information.

Replace a CRU

Follow the replacement procedure to replace a CRU.

Pen dummy (for selected models)

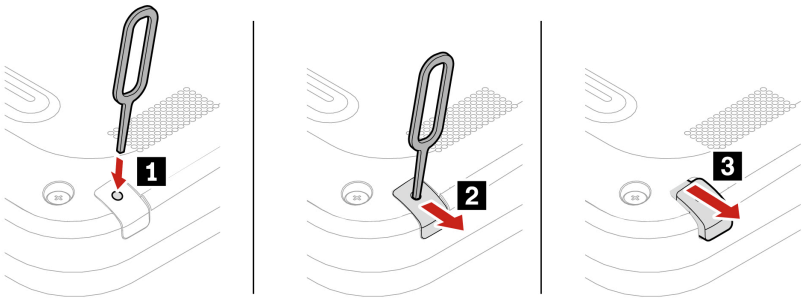
Prerequisite

Before you start, read *Generic Safety and Compliance Notices* and print the following instructions.

For access, do the following:

1. Ensure that your Chromebook is off or in sleep mode. Disconnect the Chromebook from ac power and all connected cables.
2. Close the Chromebook display and turn the Chromebook over.

Removal procedures



Keyboard

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* and print the following instructions.

> **Note:**
>
> Do not remove the keyboard when your Chromebook is connected to ac power.

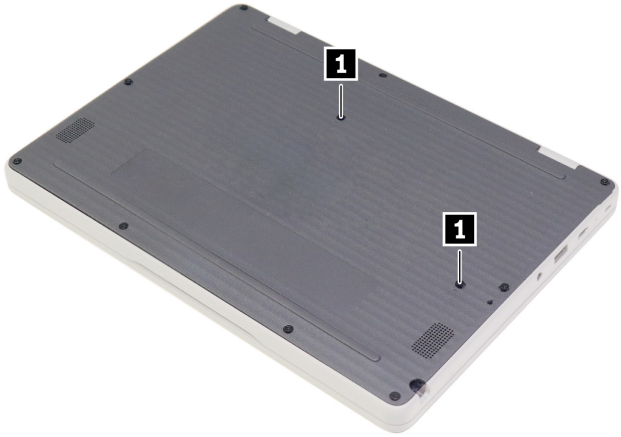
For access, do the following:

1. Disable the built-in battery. Press ↻ together with the power button for about five seconds, and at the same time detach the ac power adapter from the Chromebook.

   > **Note:**
   >
   > Power supply from the built-in battery will resume after you reconnect the Chromebook to the ac power adapter.

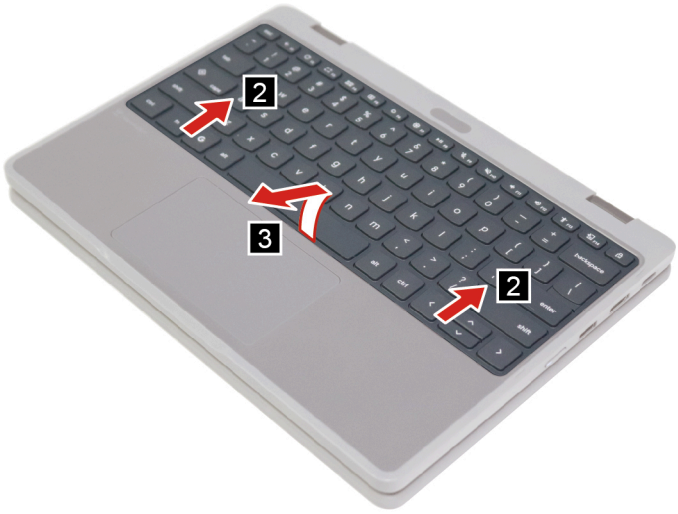
2. Close the Chromebook display and turn over the Chromebook.

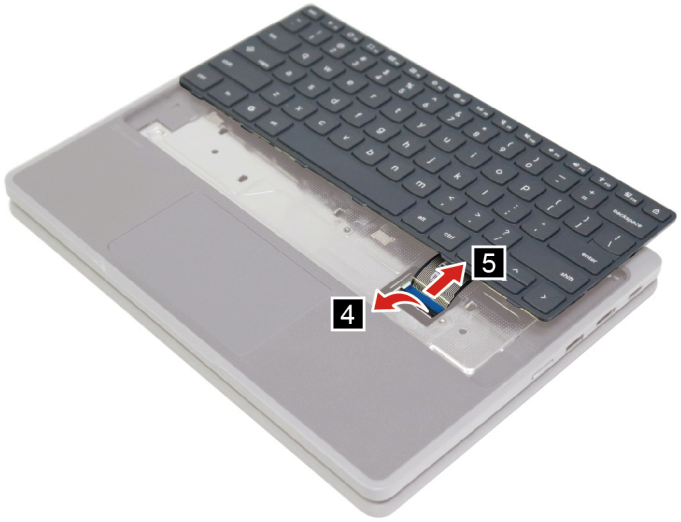
Removal procedures



Note:

When sliding the keyboard, use both hands to lift the Chromebook or put the Chromebook on a higher platform to ensure that the loosened screws do not get stuck.





Attention:

Before you install the keyboard, ensure that no objects are left in your Chromebook.

Troubleshooting

If the Chromebook does not start up after you reinstall the keyboard, disconnect the ac power adapter and then reconnect it to the Chromebook.

Base cover assembly

Prerequisite

Before you start, read *Generic Safety and Compliance Notices* and print the following instructions.

Note:

Do not remove the base cover assembly when your Chromebook is connected to ac power.

For access, do the following:

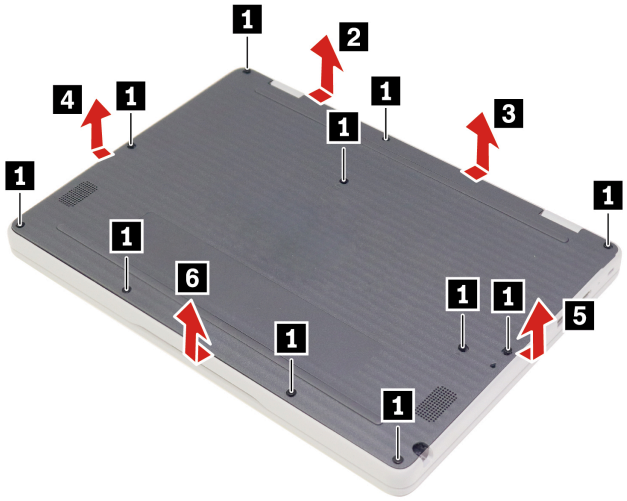
1. Disable the built-in battery. Press ↻ together with the power button for about five seconds, and at the same time detach the ac power adapter from the Chromebook.

   Note:

   Power supply from the built-in battery will resume after you reconnect the Chromebook to the ac power adapter.

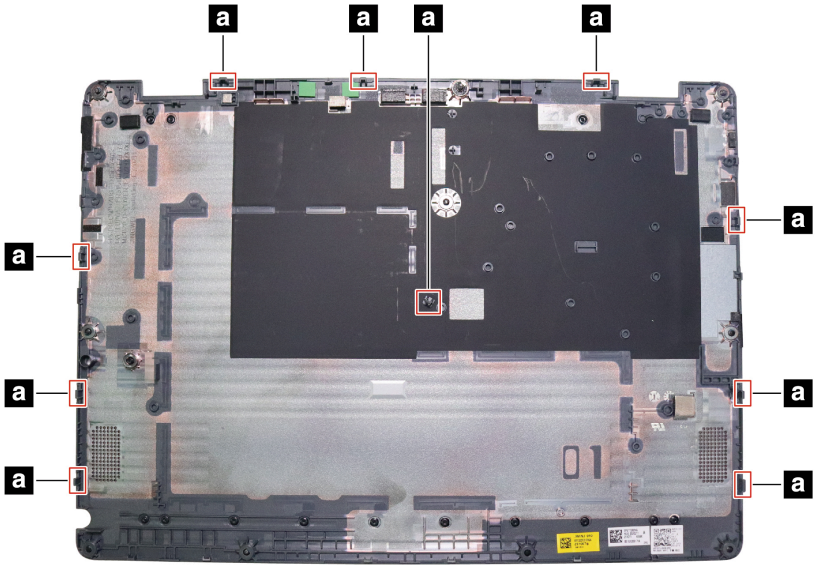
2. Close the Chromebook display and turn over the Chromebook.

Removal procedures



Note:

When prying up the base cover assembly, release it from the hooks marked as a first.



Attention:

Before you install the base cover assembly, ensure that no objects are left in your Chromebook.

Troubleshooting

If the Chromebook does not start up after you reinstall the base cover assembly, disconnect the ac power adapter and then reconnect it to the Chromebook.

Battery

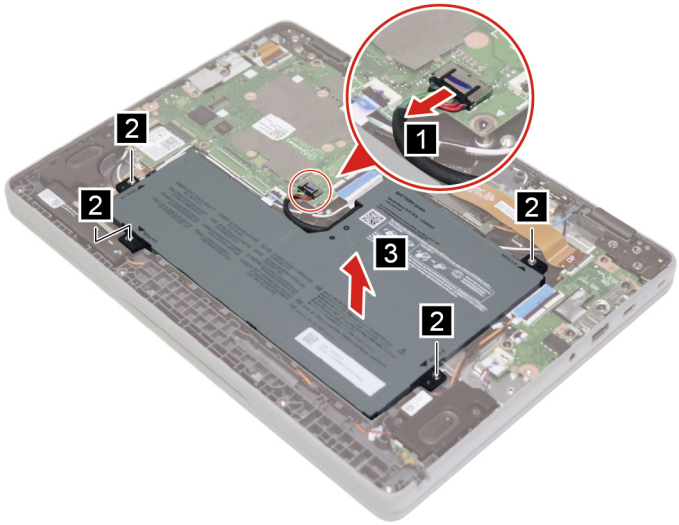
Prerequisite

Before you start, read *Generic Safety and Compliance Notices* and print the following instructions.

For access, do the following:

- Base cover assembly on page 29

Removal procedure

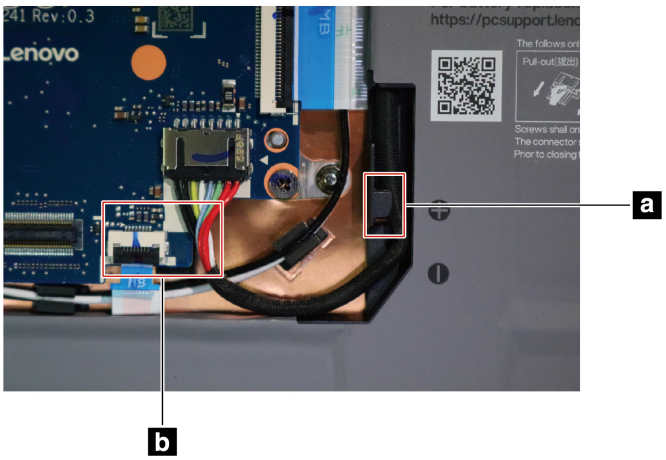


Attention:

Before you install the battery pack, ensure that no objects are left in your Chromebook.

Note:

When installing the battery pack, ensure that the battery pack cable fits into the guide marked as a and the battery pack is connected to the correct connector marked as b. Handle the battery pack cable carefully and keep it away from the touchpad connector.



Troubleshooting

If the Chromebook does not start up after you reinstall the battery, disconnect the ac power adapter and then reconnect it to the Chromebook.

Type-C module and bracket

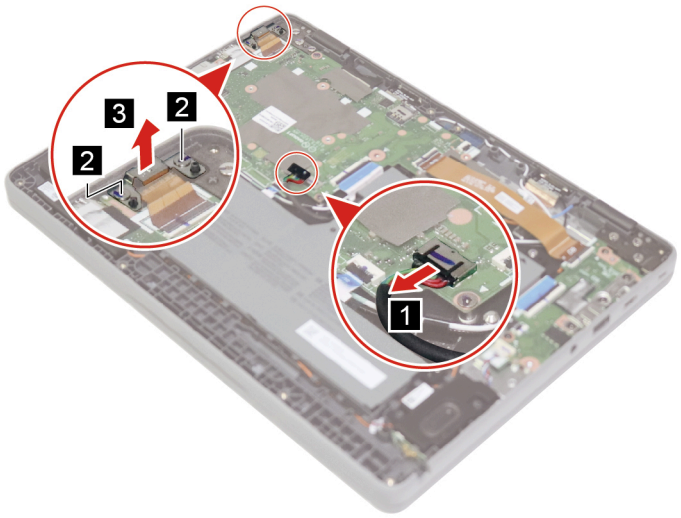
Prerequisite

Before you start, read *Generic Safety and Compliance Notices* and print the following instructions.

For access, do the following:

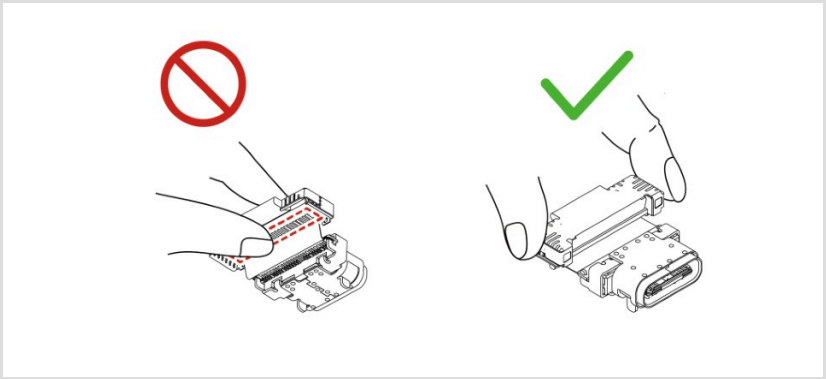
- Base cover assembly on page 29

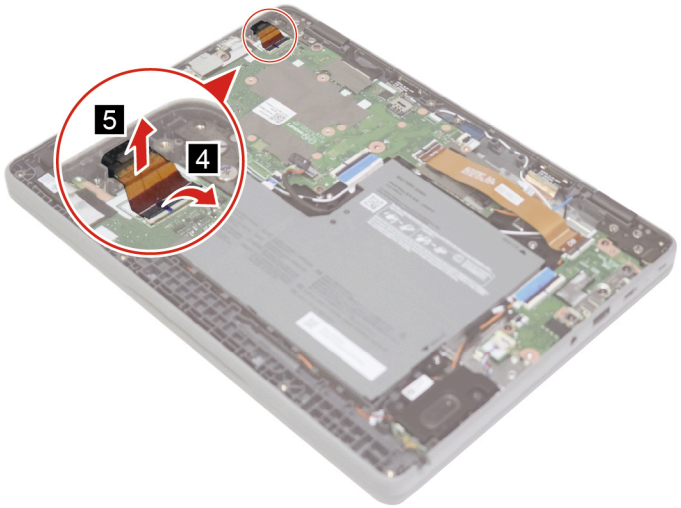
Removal procedures



Attention:

Do not touch the contact edge of the replaceable type-C module. Otherwise, the replaceable type-C module might get damaged.





Note:

The type-C connector may exhibit abnormal behaviors due to damage. Refer to the Chromebook *Hardware Maintenance Manual* for troubleshooting.

Troubleshooting

If the Chromebook does not start up after you reinstall the type-C module and bracket, disconnect the ac power adapter and then reconnect it to the Chromebook.

Chapter 4 Help and support

Frequently asked questions

Question	Solution
What do I do if my Chromebook stops responding?	**1.** Press and hold the power button until the Chromebook turns off. Then, restart the Chromebook. **2.** If step 1 does not work: • For models with an emergency reset hole: Insert a straightened paper clip into the emergency reset hole to cut off power supply temporarily. Then, restart the Chromebook with ac power connected. • For models without an emergency reset hole: - For models with the removable battery, remove the removable battery and disconnect all power sources. Then, reconnect to ac power and restart the Chromebook. - For models with the built-in battery, disconnect all power sources. Press and hold the power button for about seven seconds. Then, reconnect to ac power and restart the Chromebook.
What do I do if I spill liquid on the Chromebook?	**1.** Carefully unplug the ac power adapter and turn off the Chromebook immediately. The more quickly you stop the current from passing through the Chromebook the more likely you will reduce damage from short circuits. ⚠ **Attention:** Although you might lose some data or work by turning off the Chromebook immediately, leaving the Chromebook on might make your Chromebook unusable. **2.** Do not try to drain out the liquid by turning over the Chromebook. If your Chromebook has keyboard drainage holes on the bottom, the liquid will be drained out through the holes. **3.** Wait until you are certain that all the liquid is dry before turning on your Chromebook.
How do I disinfect my Chromebook?	**1.** Squeeze out excess liquid from wipe or disinfecting cloth before using. Recommended wipes are hydrogen peroxide wipes and alcohol based wipes. Do not use wipes containing sodium hypochlorite (bleach). **2.** Gently wipe the Chromebook thoroughly, being careful to ensure no liquid drips into the Chromebook. Do not wipe on connector pins.

Question	Solution
	3. After disinfecting, follow the cleaning procedure from the wipe supplier to minimize chemical buildup of disinfectant residue. **4.** Always allow the Chromebook to completely dry prior to any use. For more information about cleaning and disinfecting, go to https://support.lenovo.com/in/en/solutions/ht035676.
How do I find accessibility information?	https://www.lenovo.com/accessibility

Lenovo Customer Support Center

If you have tried to correct the problem yourself and still need help, you can call Lenovo Customer Support Center.

Before you contact Lenovo

Record product information and problem details before you contact Lenovo.

Product information	Problem symptoms and details
• Product name • Machine type and serial number	• What is the problem? Is it continuous or intermittent? • Any error message or error code? • What operating system are you using? Which version? • Which software applications were running at the time of the problem? • Can the problem be reproduced? If so, how?

Note:

The product name and serial number can usually be found on the bottom of the Chromebook, either printed on a label or etched on the cover.

Telephone numbers

For a list of the Lenovo Support phone numbers for your country or region, go to https://pcsupport.lenovo.com/supportphonelist for the latest phone numbers.

Note:

Phone numbers are subject to change without notice. If the number for your country or region is not provided, contact your Lenovo reseller or Lenovo marketing representative.

Services available during the warranty period

- Problem determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.
- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) that apply to your hardware available.

Services not covered

- Replacement or use of parts not manufactured for or by Lenovo or nonwarranted parts
- Identification of software problem sources
- Configuration of UEFI BIOS as part of an installation or upgrade
- Changes, modifications, or upgrades to device drivers
- Installation and maintenance of network operating systems (NOS)
- Installation and maintenance of programs

For the terms and conditions of the Lenovo Limited Warranty that apply to your Lenovo hardware product, go to:

- https://www.lenovo.com/warranty/llw_02
- https://pcsupport.lenovo.com/warrantylookup

Get help from Google

After signing in to your Chromebook, start Get Help from the app Launcher. The Get Help app provides comprehensive instructions on using your Chromebook.

In addition, if you are interested in visiting the Chromebook Help Center and Community, go to http://support.google.com/chromebook.

Chapter 5 Chromebook and accessibility

Chromebooks are a new type of computer that run ChromeOS, a proprietary operating system developed by Google. With a Chromebook, you can access information, connect with friends, pursue education, conduct research, and complete work tasks. This reliance extends to individuals with vision, hearing, cognitive, or mobility impairments, as well as to those whose abilities may decline due to illness or aging.

This chapter explores the accessibility features available on your Lenovo Chromebook, including both hardware components and those offered by the pre-installed operating system. By gaining a comprehensive understanding of the available accessibility features and how to activate and configure them, you can enhance your Chromebook's usability for individuals with disabilities.

Accessibility features of the Chromebook hardware

Lenovo Chromebooks are designed with accessibility in mind. Throughout the design process, special considerations are prioritized for individuals with disabilities and best industry practices are implemented in hardware design.

USB connectors for connecting assistive technology devices

Several types of assistive technology devices are available on the market that can be connected to a Chromebook to enhance its accessibility. For example, a refreshable braille display is an assistive technology device that enables individuals who are both deaf and blind to use a Chromebook. When connected to a Chromebook, a refreshable braille display can work in conjunction with a compatible screen reader to provide tactile output in braille characters. Blind individuals who have been trained to read braille can run their fingers over the display to comprehend the information presented on the Chromebook.

Many assistive technology devices utilize USB technology for connectivity. Most Lenovo Chromebooks are equipped with at least one USB connector that adheres to the relevant USB specifications and is backward compatible. A Lenovo Chromebook may feature a USB Standard-A connector, a USB Type-C connector, or both. If the plug type of the assistive technology device does not match the USB connector on your Chromebook, you can easily purchase and use a USB adapter to resolve the issue.

Keyboard accessibility

The keyboard serves as the primary input device for many Chromebook users. Chromebook keyboards are designed and manufactured with accessibility in mind. This section highlights the accessibility features of the keyboards that benefit all users, including those with disabilities.

Keyboard layout

The alphabetic keys on a Chromebook keyboard are arranged in a qwerty layout, which is standard for input devices featuring alphabetic keys. The f and j keys have bumps that make them tactilely distinguishable from other keys. This feature serves as an orientation aid for skilled typists, allowing them to rest their index fingers without looking at the keys. Some Chromebook keyboards include a separate numeric keypad. The numeric keys are organized in four rows and three columns, arranging in ascending order from left to right and bottom to top. Additionally, the 5 key features a bump to make it tactilely distinguishable.

Standard modifier keys

Chromebook keyboards are equipped with standard modifier keys, including:

the alt key
the ctrl key
the shift key
the Launcher key

These keys are extensively used as the modifier key for shortcuts by the operating system and other applications.

The tab key

The tab key is located in the leftmost column of the keyboard. For operating systems, applications, and web documents that are designed with accessibility in mind, users can press tab and alt + tab (in reverse order) to cycle through the interactive elements.

Hotkeys

Many Lenovo Chromebook keyboards feature hotkeys in the top row, offering convenient access to frequently used settings.

The fn key

The fn key, short form for function, is a modifier key. It can be used with the top-row dual-function keys to switch their functionalities. It can also be used with several other keys to access defined settings.

Keyboard backlight

Many Chromebook keyboards are equipped with backlights to help you use the keyboard in dark lighting conditions. The backlights can be controlled by pressing the backlight key on the top row of the keyboard.

Biometric devices

Some Lenovo Chromebooks are equipped with biometric devices that facilitate easy and secure identity authentication. If your Chromebook includes a fingerprint sensor, you can use your fingerprint for authentication. Biometric identity authentication can be particularly beneficial for users who find it difficult typing passwords.

Note:

When biometric devices are used for device authentication, they are not the only available method for this purpose. If biometric authentication fails, you can use a password or PIN to sign in to ChromeOS.

Accessibility features of ChromeOS

An operating system is a crucial piece of software installed on a Chromebook. It plays a vital role in the Chromebook's basic functionality by providing a user interface, various tools for system management, and a foundation upon which additional specialized applications can be installed.

ChromeOS is a Google–built operating system that comes preinstalled on many Lenovo Chromebooks. It offers a rich set of accessibility features designed for individuals with diverse disabilities. This section outlines the accessibility features available in ChromeOS, explains how to activate them, and discusses the benefits they provide.

For the latest and comprehensive information on ChromeOS accessibility, go to Chromebook Help Center at https://google.com/support/chromebook/ or Chromebook Accessibility website at https://www.google.com/chromebook/accessibility/.

Configuring accessibility features

ChromeOS provides a centralized location within the Settings app for activating and configuring all accessibility features. You can access this section by selecting **Launcher** > **Settings** > **Accessibility**. With **Show accessibility options in Quick Settings** turned on, pressing alt + shift + s, or selecting the time at the bottom right opens a quick setting panel, where accessibility features can be turned on and off. Additionally, you can open the **Accessibility** panel by pressing the accessibility key on the top row of the keyboard.

Text-to-Speech

Text-to-Speech is ChromeOS' built-in text reading and spoken feedback application. It consists of two major functions: ChromeVox and Select-to-speak. ChromeVox provides spoken feedback to user input, and Select-to-speak reads selected text aloud. These functions allow individuals with visual impairments to navigate effectively within ChromeOS, use applications, and browse the web.

Start and stop ChromeVox and Select-to-speak

You can start and stop ChromeVox and Select-to-speak by selecting the toggles in the centralized Accessibility section of the Settings app. Additionally, you can also use the keyboard shortcuts: press ctrl + alt + z to turn on and off ChromeVox, while highlight the text, then press Launcher + s to start the Select-to-speak settings.

Customize the Text-to-Speech voices

Text-to-Speech offers a variety of controls that allow you to customize it to suit your preferences. For example, you can select your preferred voice for the languages you need. You also have the option to preview and adjust the selected voices. All Text-to-Speech settings are conveniently located in the centralized Accessibility section of the Settings app.

Adjusting the Display and magnification

For individuals who find it difficult to see text clearly on the screen, ChromeOS offers the options of adjusting the display settings and text sizes and magnification.

Adjust the Display and text size

If you find the items on the screen are too small, you can scale up the size of the display on your Chromebook.

1. Select **Launcher** > **Settings** > **Accessibility** > **Display and magnification** > **Display settings**.
2. Find **Display and text size** under **Built–in display**, and drag the slider to adjust the size you want.

Apply Color inversion

For individuals with low vision, ChromeOS offers contrast themes that enhance text readability by using a background color that sharply contrasts with the text.

1. Select **Launcher** > **Settings** > **Accessibility** > **Display and magnification**.
2. Find **Color inversion**, select the toggle, or use the keyboard shortcuts, Launcher + ctrl + h or Search + ctrl + h to turn Color inversion on and off.

Enable the magnifier

The magnifier makes the items on the screen easier to see. In ChromeOS, the magnifier consists of **Full-screen magnifier** and **Docked magnifier**, you can enlarge the entire screen by **Full-screen**

magnifier to make the items on the screen bigger, and use split–screen view by **Docked magnifier** to see the magnified area of the screen.

1. Select **Launcher** > **Settings** > **Accessibility** > **Display and magnification**.
2. To enable or disable the magnifier, you can select the toggles or use the keyboard shortcuts, Launcher + ctrl + m or Search + ctrl + m for **Full-screen magnifier**, and Launcher + ctrl + d or Search + ctrl + d for **Docked magnifier** respectively.

When the magnifier is enabled, you can press ctrl + alt + Brightness up to zoom in and ctrl + alt + Brightness down to zoom out.

Sticky keys

ChromeOS offers numerous keyboard shortcuts that require users to hold down a modifier key (such as shift, ctrl, alt, or the Launcher key) before pressing one or more additional keys. While these shortcuts provide significant convenience for many users, they can pose accessibility challenges for individuals who have difficulty holding down multiple keys at the same time.

Sticky keys is an accessibility feature in ChromeOS that, when enabled, allows users to press keys in sequence to activate shortcut functions. For example, instead of holding down the ctrl key and the c key simultaneously, users can press each key individually to copy text to the clipboard.

To enable or disable Sticky keys, press the accessibility key on the top row of the keyboard, or use the keyboard shortcuts alt + shift + s or select the time at the bottom right to open a quick setting panel, select **Accessibility**, and then select the Sticky keys toggle.

Accessible user documentation

Documentation containing instructions for the use of the product, including its accessibility features, is available in accessible formats (such as HTML and PDF) on the Lenovo Support Website. When creating documentation, a series of industry standards and best practices are followed to ensure that the content is useful to as broad an audience as possible. Additionally, automated testing tools are employed to identify issues that may hinder the accessibility of information. These issues are addressed to the extent permitted by commonly available technologies.

Accessibility features of user documentation

By adhering to industry standards and best practices, Lenovo documentation offers numerous features that facilitate the perception and understanding of the content. Additionally, several of these features are specifically designed to ensure that users of assistive technology devices can access information comparable to that available to those who do not rely on such devices.

Perceivable content

Text content is presented using popular and easy-to-read fonts. Text colors are in high contrast with the background. Non-text elements, such as graphics and videos that convey important information, are accompanied by alternative text descriptions. Users with visual impairments can utilize screen readers to access information comparable to that available to sighted users.

Understandable content

The documentation is presented visually in a well-structured and simple layout. It also includes hidden tags or other markup information that store the content's structure, which can be utilized programmatically by assistive technologies to convey this structure to users.

Operable content

Documentation includes industry-standard tags for sectioning and interactive elements, such as titles, headings, various structural components, links, buttons, and input fields. Screen reader users can utilize standard modifier keys on the keyboard to effectively navigate and interact with the documentation.

Testing documentation accessibility

Before being officially released, Lenovo documentation undergoes testing with automated tools to evaluate its accessibility. HTML documents are assessed for compliance with the success criteria outlined in the *Web Content Accessibility Guidelines* (WCAG), a widely accepted set of standards designed to enhance web document accessibility. PDF documents are evaluated for accessibility using the accessibility checker in Adobe Acrobat for the same purpose. Automated testing tools help identify elements within a document that may present challenges when rendered by screen readers and other assistive technology devices. Accessibility issues identified by these automated tools are subsequently analyzed manually and corrected as needed.

Appendix A Safety instructions for teachers, parents and adult supervisors

This Chromebook is intended for use as a child development tool primarily by children, 6 years of age or above. There must be supervision by an adult. It is a must to have a thorough explanation to children on safe and proper handling of the Chromebook, battery pack, and ac power adapter.

DANGER

- For ITE with power supplies not intended to be handled by children: As with all electrical products, precautions should be observed handling and use to prevent electric shock. The ac power adapter should not be handled by children.
- The Chromebook should not be placed on the bare skin (lap) of the child for long periods. The Chromebook should be placed on a flat surface, like desktop, if your child intends to use it for more than a few minutes.
- The Chromebook (including the ac power adapter and the battery pack, as applicable) should not be left in the rain or subjected to exposure to water. If cleaning is necessary do not immerse it in water; wipe clean with damp cloth.
- The Chromebook (including the ac power adapter and the battery pack, as applicable) should not be dropped, crushed (stepped on) or otherwise abused.
- An adult should caution his or her child about the potential trip hazard as posed by the cable between a power source and the Chromebook.
- The power supply (adapter) should not be handled by the children.

Warning:

Chocking Hazard — Small parts. Not suitable for children under age 3.

An adult should inspect the Chromebook (including the ac power adapter and the battery pack, as applicable) periodically for damage. Similarly, if a child notices damaged/broken parts, this should be reported to the teacher/parents/adult supervisors immediately. Damaged parts may be replaced through service provided by Lenovo.

DANGER

Warning:

ELECTRICALLY OPERATED PRODUCT. Not recommended for children under 3 years of age (or other intended age range). As with all electrical products, precautions should be observed during handling and use of electrical products to reduce the risk of electric shock.

Appendix B Open source information

Your Chromebook may include software made publicly available by Google and other third parties, including software licensed under the General Public License and/or the Lesser General Public License (the “open source software”).

You may obtain a copy of the corresponding source code for any such open source software licensed under the General Public License and/or the Lesser General Public License (or any other license requiring us to make a written offer to provide corresponding source code to you) from Lenovo for a period of three years without charge except for the cost of media, shipping, and handling, upon written request to Lenovo. This offer is valid to anyone in receipt of this device. You may send your request in writing to the address below accompanied by a check or money order for $5 to:

Lenovo Legal Department
Attn: Open Source Team / Source Code Requests
8001 Development Dr.
Morrisville, NC 27560

As part of your request, please include a “UNAME” and a “CHROME VERSION” of this device available by typing: “Chrome://system” in a Chrome Browser’s address bar. Be sure to provide a return address.

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Appendix D Country of origin

According to the laws and regulations of the Republic of Iraq, user guides must include information about the country of origin. Your Chromebook is made in China.

Appendix E Important notice for Quebec consumers

In regard to section 79.18 of Quebec's Regulation respecting the application of the Consumer Protection Act, Lenovo in no way guarantees the availability of (a) replacement parts; (b) repair services; and (c) information necessary to maintain or repair the goods. For up-to-date information on the technical support and parts available for your purchase, please consult **https://support.lenovo.com/ca/en**.