

# User Guide



Lenovo

Lenovo 100e Chromebook 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\*](#)

**First Edition (December 2025)**

**© Copyright Lenovo 2025.**

LIMITED AND RESTRICTED RIGHTS NOTICE: If data or software is delivered pursuant to a General Services Administration "GSA" contract, use, reproduction, or disclosure is subject to restrictions set forth in Contract No. GS-35F-05925.

---

# Contents

|                                    |    |
|------------------------------------|----|
| Discover your Chromebook . . . . . | ii |
|------------------------------------|----|

## Chapter 1. Meet your Chromebook . . . 1

|                                          |   |
|------------------------------------------|---|
| Front . . . . .                          | 1 |
| Base . . . . .                           | 3 |
| Left . . . . .                           | 4 |
| Right . . . . .                          | 5 |
| Features and specifications . . . . .    | 6 |
| Statement on USB transfer rate . . . . . | 7 |
| Operating environment . . . . .          | 7 |

## Chapter 2. Get started with your Chromebook . . . . . 9

|                                                              |    |
|--------------------------------------------------------------|----|
| Charge your Chromebook . . . . .                             | 9  |
| Lock your Chromebook . . . . .                               | 9  |
| Connect to a cellular network . . . . .                      | 10 |
| Connect to Wi-Fi . . . . .                                   | 11 |
| Use the touch screen (for selected models) . . . . .         | 11 |
| Use the keyboard shortcuts . . . . .                         | 13 |
| Use the touchpad . . . . .                                   | 14 |
| Use the camera . . . . .                                     | 14 |
| Use audio . . . . .                                          | 15 |
| Connect to an external display . . . . .                     | 15 |
| Connect to Bluetooth devices . . . . .                       | 15 |
| Set the power plan . . . . .                                 | 16 |
| Data erasure for reusing or recycling a Chromebook . . . . . | 16 |
| How data is erased by Powerwash . . . . .                    | 16 |
| Reset a Chromebook using Powerwash . . . . .                 | 16 |

## Chapter 3. Help and support . . . . . 18

|                                      |    |
|--------------------------------------|----|
| Frequently asked questions . . . . . | 18 |
|--------------------------------------|----|

|                                          |    |
|------------------------------------------|----|
| Lenovo Customer Support Center . . . . . | 18 |
|------------------------------------------|----|

|                                |    |
|--------------------------------|----|
| Get help from Google . . . . . | 19 |
|--------------------------------|----|

## Chapter 4. Chromebook and accessibility . . . . . 21

|                                                                      |    |
|----------------------------------------------------------------------|----|
| Accessibility features of the Chromebook hardware . . . . .          | 21 |
| USB connectors for connecting assistive technology devices . . . . . | 21 |
| Keyboard accessibility . . . . .                                     | 21 |
| Biometric devices . . . . .                                          | 22 |
| Accessibility features of ChromeOS . . . . .                         | 22 |
| Configuring accessibility features . . . . .                         | 22 |
| Text-to-Speech . . . . .                                             | 23 |
| Adjusting the Display and magnification . . . . .                    | 23 |
| Sticky keys . . . . .                                                | 24 |
| Accessible user documentation . . . . .                              | 24 |
| Accessibility features of user documentation . . . . .               | 24 |
| Testing documentation accessibility . . . . .                        | 24 |

## Appendix A. Compliance statements . . . . . 26

## Appendix B. Safety instructions for teachers, parents and adult supervisors. . . . . 27

## Appendix C. Open source information. . . . . 28

## Appendix D. Notices and trademarks. . . . . 29

---

## 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 models listed below. Illustrations in this guide may look slightly different from your product model.

| Model name                | Machine type (MT) |
|---------------------------|-------------------|
| Lenovo Chrome 100e G5 ITN | 83T4, 83T5        |
| Lenovo Chrome 100e G5 M89 | 83T6, 83T7        |

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at [https://pcsupport.lenovo.com/docs/generic\\_notices](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

---



|                         |                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------|
| 1. Camera light         | If the light is on, the camera is in use.                                                                 |
| 2. Camera cover         | Cover or uncover the camera lens.<br><b>Note:</b> The camera cover helps you better protect your privacy. |
| 3. Camera               | Capture still and moving images for taking photos, recording videos, and video chatting.                  |
| 4. Microphone           | Capture or record sound and voice.                                                                        |
| 5. Wireless LAN antenna | Send and receive radio waves for the built-in wireless local area network (LAN) and Bluetooth module.     |
| 6. Screen               | Display text, graphics, and videos. Selected models support multi-touch function.                         |
| 7. 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.

### 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.



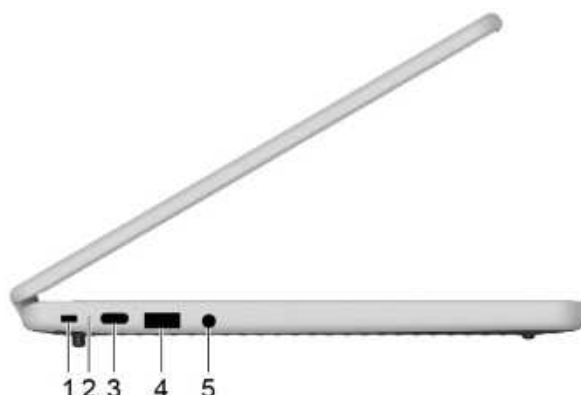
Base



|                         |                                                                                                                                                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Keyboard             | Enter characters and interact with programs.<br><b>Note:</b> The keyboard also includes function keys and key combinations for changing settings and performing tasks quickly. |
| 2. Touchpad             | Perform finger touch and all the functions of a traditional mouse.<br><b>Note:</b> The touchpad also supports multi-touch function.                                            |
| 3. Wireless WAN antenna | Send and receive radio waves for the built-in wireless WAN.                                                                                                                    |
| 4. Wireless LAN antenna | Send and receive radio waves for the built-in wireless LAN and Bluetooth module.                                                                                               |

**Note:** The antennas are not visible from the outside of the Chromebook.

## Left



|                                        |                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 9.                                                                                                                                                                                                                    |
| 2. Charging light                      | Indicate the ac power status and the battery status. See “AC power status indicator behavior” on page 9.                                                                                                                                                                                                                                                    |
| 3. Multi-purpose USB Type-C® connector | <p>This multi-purpose connector can be used to connect devices that utilize the USB data transfer technology and display devices. It also supports USB Power Delivery.</p> <p><b>Note:</b> When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device.</p> |
| 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                    | <p>Connect headphones or headsets with a 3.5 mm (0.14 inch), 4-pole plug.</p> <p><b>Note:</b> This jack does not support standalone external microphones. If you use headsets, choose one with a single plug.</p>                                                                                                                                           |

## Right



|                                       |                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Power light                        | <ul style="list-style-type: none"><li>• On: the Chromebook is turned on.</li><li>• Off: the Chromebook is turned off or in hibernation mode.</li><li>• Blinking: the Chromebook is in sleep mode.</li></ul>                                                                                                                                                                               |
| 2. Power button                       | <p>Press the button to turn on the Chromebook or put the Chromebook into sleep mode.</p> <p><b>Notes:</b> When you finish working with your Chromebook, shut it down to save power.</p> <ul style="list-style-type: none"><li>• Click  in the system tray.</li><li>• Press the power button.</li></ul> |
| 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 | <p>This multi-purpose connector can be used to connect devices that utilize the USB data transfer technology and display devices. It also supports USB Power Delivery.</p> <p><b>Note:</b> When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device.</p>                               |

## Features and specifications

**Note:** Specifications might change without notice. Some specifications are model-specific and might not apply to the Chromebook model that you purchased.

| Item                     | Value or specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions               | <ul style="list-style-type: none"><li>• Width: 288.9 mm (11.4 inches)</li><li>• Depth: 210 mm (8.3 inches)</li><li>• Thickness<ul style="list-style-type: none"><li>– Thinnest: 18.5 mm (0.7 inches)</li><li>– Thickest: 19.7 mm (0.8 inches)</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                    |
| ac power adapter         | <ul style="list-style-type: none"><li>• Input: 100 V ac–240 V ac, 50 Hz–60 Hz</li><li>• Output: 20 V dc, 3.25 A</li><li>• Power: 65 W</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Battery pack             | <ul style="list-style-type: none"><li>• Capacity: 50 Wh</li><li>• Number of cells: 3</li></ul> <p><b>Note:</b> The battery capacity is the typical or average capacity as measured in a specific test environment. Capacities measured in other environments may differ but are no lower than the rated capacity (see product label).</p>                                                                                                                                                                                                                                                                            |
| Microprocessor           | To view the microprocessor information of your Chromebook, type system information in the search box and then press Enter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Memory                   | <ul style="list-style-type: none"><li>• Type: On-board lower double data rate 5 (LPDDR5) / LPDDR5X</li><li>• Number of physical slots: 0</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Secondary storage device | <ul style="list-style-type: none"><li>• Type: Universal Flash Storage (UFS)</li><li>• Bus: UFS 2.2</li><li>• Capacity: 64 GB or 128 GB</li></ul> <p><b>Note:</b> The capacity of the storage device displayed in the operating system is typically lower than the nominal capacity.</p>                                                                                                                                                                                                                                                                                                                              |
| Screen                   | <ul style="list-style-type: none"><li>• For Lenovo Chrome 100e G5 ITN:<ul style="list-style-type: none"><li>– Size: 294.6 mm (11.6 inches)</li><li>– Display resolution: 1366 × 768 pixels</li></ul></li><li>• For Lenovo Chrome 100e G5 M89:<ul style="list-style-type: none"><li>– Size:<ul style="list-style-type: none"><li>– 294.6 mm (11.6 inches), or</li><li>– 309.9 mm (12.2 inches)</li></ul></li><li>– Display resolution:<ul style="list-style-type: none"><li>– For 11.6 inches: 1366 × 768 pixels (HD model)</li><li>– For 12.2 inches: 1920 × 1200 pixels (WUXGA model)</li></ul></li></ul></li></ul> |
| Keyboard                 | <ul style="list-style-type: none"><li>• Function keys</li><li>• Key combinations</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Item                 | Value or specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connectors and slots | <ul style="list-style-type: none"> <li>• Audio connector</li> <li>• USB Type-A connector × 2 <ul style="list-style-type: none"> <li>– Support power output up to 4.5 W (5 V, 0.9 A)</li> </ul> </li> <li>• Multi-purpose USB Type-C connector × 2 <ul style="list-style-type: none"> <li>– Support power input up to 65 W using the included power adapter</li> <li>– Support power output up to 15 W (5 V, 3 A)</li> <li>– Support USB 2.0 480 Mbps</li> <li>– Support SuperSpeed USB 5 Gbps</li> <li>– Support SuperSpeed USB 10 Gbps (for Lenovo Chrome 100e G5 ITN)</li> <li>– Support DisplayPort™ Alt Mode (DisplayPort 1.4 compliant)</li> <li>– Support USB Power Delivery</li> </ul> </li> <li>• HDMI connector <ul style="list-style-type: none"> <li>– Support 3840 × 2160 at 60 Hz as specified in HDMI 1.4b</li> </ul> </li> </ul> <p><b>Note:</b> Data rates and performance ratings are dependent on connected devices and cables if they are used. For DisplayPort connection through a USB Type-C connector, the listed maximum output capacity is only available on external displays with a DisplayPort, a Mini DisplayPort, or a USB Type-C connector that supports DisplayPort Alternate Mode. For connections using a converter or an adapter, the actual output resolution may be lower.</p> |
| Security             | Security-lock slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Network              | <ul style="list-style-type: none"> <li>• Bluetooth and Wi-Fi® combo adapter</li> <li>• Wireless WAN adapter</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 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 | 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

---

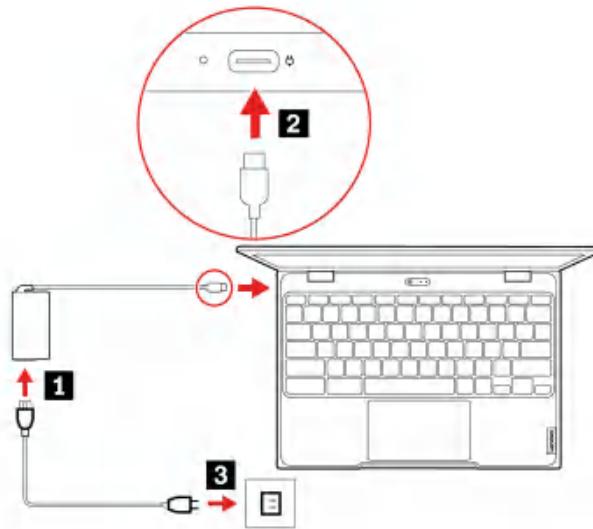
### Charge your Chromebook

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.

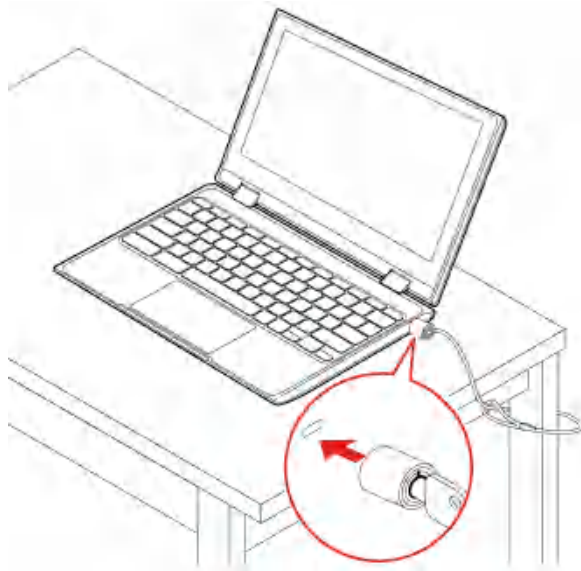
| AC power status indicator | Power status | Battery status                                       |
|---------------------------|--------------|------------------------------------------------------|
| on (red)                  | plugged in   | being charged, remaining power is less than 5%       |
| 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/>.



---

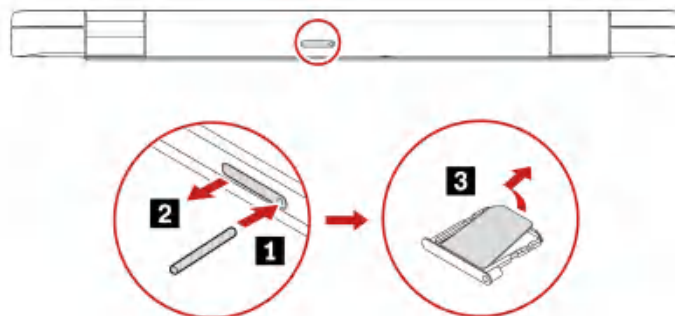
## Connect to a cellular network

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 (for selected models)

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.



Tap once to single click



Tap and hold to right-click



Slide to scroll through items



Drag



Zoom out



Zoom in



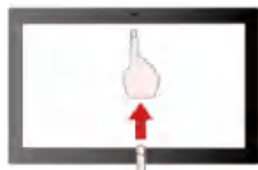
Swipe from the left: view all open windows



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.

|                                                                                     |                                                        |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|
|    | Go to the previous page                                |
|    | Reload your current page                               |
|    | Hide the tabs and the App Launcher in full-screen mode |
|    | Show all windows in overview mode                      |
|    | 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.

|                                                                                                    |                               |
|----------------------------------------------------------------------------------------------------|-------------------------------|
| ctrl + shift +  | Take a screenshot             |
| fn +            | Switch the Caps Lock function |
|  + l            | Lock your Chromebook screen   |
|  + ctrl + s     | View all keyboard shortcuts   |

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.

---

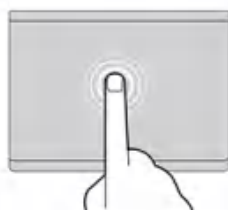
## Use the touchpad

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

#### Notes:

- 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.



Tap once to select or open an item.



Tap twice quickly to display a shortcut menu.



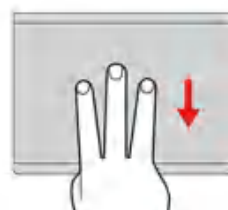
Two-finger zoom in or zoom out.



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.

---

## 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 3840 x 2160 pixels @ 30 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.

---

## 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)*

- |                                                                                                                                                                                        |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"><li>• Turn off the display: After seven minutes and 30 seconds</li><li>• Put the Chromebook into sleep: After eight minutes and 30 seconds</li></ul> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

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. The Powerwash reset is provided on every Chromebook to reset the ChromeOS and erase personal files from the local storage device.

### 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.

- Step 1. Sign out of the ChromeOS.
- Step 2. Press ctrl + alt + shift + r.
- Step 3. Select **Powerwash**.
- Step 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.

**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. Help and support

---

### Frequently asked questions

---

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.
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                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Product name</li><li>• Machine type and serial number</li></ul> | <ul style="list-style-type: none"><li>• What is the problem? Is it continuous or intermittent?</li><li>• Any error message or error code?</li><li>• What operating system are you using? Which version?</li><li>• Which software applications were running at the time of the problem?</li><li>• Can the problem be reproduced? If so, how?</li></ul> |

**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/supportphonenumberlist> 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://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 4. 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.

Google 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.

- Step 1. Select **Launcher → Settings → Accessibility → Display and magnification → Display settings**.
- Step 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.

- Step 1. Select **Launcher → Settings → Accessibility → Display and magnification**.
- Step 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.

- Step 1. Select **Launcher → Settings → Accessibility → Display and magnification**.
- Step 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

Google 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. Compliance statements

This appendix provides compliance statements that are applicable to your product and contains model-specific information, such as the model name and values determined as part of the conformity assessment procedures. Compliance statements relevant to your product that do not include model-specific information are available in a separate publication titled *General Safety and Compliance Notices*. The PDF version of this publication can be found on the Lenovo Support website.

### Korea minimum energy performance standard (MEPS) value

| 모델명          | 컴퓨터 유형 | 연간소비 전력량<br>(kWh) | 슬립모드 소비전력<br>(W) | 오프모드 소비전력<br>(W) |
|--------------|--------|-------------------|------------------|------------------|
| Catalog name | xxx    | xxx               | xxx              | xxx              |

---

## Appendix B. 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.



- 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.

### 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.



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 C. 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.

The open source software is distributed in hope it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See for example the GNU General Public License and/or the Lesser General Public License for more information.

To view additional information regarding licenses, acknowledgments and required copyright notices for the open source software used in your device, type: “Chrome://credits” in the Chrome Browser’s address bar.

This device may include certain pre-installed application programs or pre-configured links for downloading application programs published by parties other than Lenovo. Such third-party application programs may include open source software made publicly available by the respective publishers of those application programs. You may obtain the corresponding source code for any such open source software directly from the publisher of the applicable application program, to the extent permitted under the relevant open source software license agreement. Additional information is provided by the publisher of each application program within the menu structure of its application program.

---

## Appendix D. Notices and trademarks

### Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service.

Lenovo may have patents or pending patent programs covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

*Lenovo (United States), Inc.  
8001 Development Drive  
Morrisville, NC 27560  
U.S.A.  
Attention: Lenovo Director of Licensing*

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

Changes are made periodically to the information herein; these changes will be incorporated in new editions of the publication. To provide better service, Lenovo reserves the right to improve and/or modify the products and software programs described in the manuals included with your Chromebook, and the content of the manual, at any time without additional notice.

The software interface and function and hardware configuration described in the manuals included with your Chromebook might not match exactly the actual configuration of the Chromebook that you purchase. For the configuration of the product, refer to the related contract (if any) or product packing list, or consult the distributor for the product sales. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary.

Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

This document is copyrighted by Lenovo and is not covered by any open source license, including any Linux® agreement(s) which may accompany software included with this product. Lenovo may update this document at any time without notice.

For the latest information or any questions or comments, contact or visit the Lenovo Web site:

<https://pcsupport.lenovo.com>

### **Trademarks**

Lenovo and the Lenovo logo are trademarks of Lenovo. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. Google, Google Keep, and Chromebook are trademarks or registered trademarks of Google LLC. NanoSaver and Cleat are trademarks or registered trademarks of ACCO Brands. USB Type-C is a registered trademark of USB Implementers Forum. Wi-Fi is a registered trademark of Wi-Fi Alliance. All other trademarks are the property of their respective owners.

**Lenovo**