User Guide



Lenovo

Lenovo Chromebox Micro

Read this first

Before using this documentation and the product it supports, be sure to read and understand the following:

- Generic Safety and Compliance Notices
- Safety and Warranty Guide (shipped with your product)
- Setup Guide (shipped with your product)

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About this guide

• This guide applies to the Lenovo product model(s) listed below. Illustrations in this guide may differ slightly from your actual product model.

Model name	Machine type (MT)
Lenovo Chromebox Micro	83E0 83E4
Lenovo Chromebox Micro 1	

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at <u>https://pcsupport.lenovo.com/docs/generic_notices</u>.
- This guide contains instructions that relate to the Chrome OS. Google[®] makes regular changes to the OS. As a result, the OS-related instructions may differ slightly from your actual user interface.
- The content of this guide is subject to change without notice. To obtain the latest version, go to https://support.lenovo.com.

Chapter 1. Meet your Chromebox

Lenovo Chromebox Micro (hereinafter referred to as "your Chromebox" or "the product") is a compact and lightweight PC designed and developed by Lenovo to meet your business, work, study, and entertainment needs.

Overview

Figure 1. Product overview

No.	Description
1	Multi-purpose USB Type-C [®] connector/Power connector
2	Power button
3	Status light
4	Mounting screw holes
5	Reset hole
6	Combo audio jack
7	USB Standard-A connector
8	HDMI [™] connector
9	Ethernet connector

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
- 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.

Power connector

Use this connector and the included ac power adapter (for selected models) to connect your Chromebox to an electrical outlet.

Power button

Use this button to power the product on/off, wake the product from sleep mode, or show action options.

The table below shows typical power button scenarios.

Scenario	Action	Result
The new product is connected to ac power for the first time.	Press the power button	The product is powered on. Note: Pressing the power button is required in this scenario because the new product is in shipping protection mode. In most scenarios, connecting the product to ac power will power on the product.
The product is running.	Press the power button	Several options are shown on the display, allowing you to shut down the product, sign out from your Google Account, lock the product, or provide feedbacks.
	Press and hold the power button	The product is powered off. CAUTION: Perform this action only when necessary because you may lose unsaved work.
The product is in sleep mode.	Press the power button	The product wakes up.
The user shuts down the product and disconnects the ac power. The product does not automatically power on when it is reconnected to ac power.	Press the power button	The product is powered on. Note: Pressing the power button is required in this scenario. In most scenarios, connecting the product to ac power will power on the product.

Table 1. Light status and description

Status light

The status light indicates the current status of the product: whether it is powered on, running, powered off, or in sleep mode.

Table 2. Light status and description

Light status	Power status
White (blinking rapidly)	The product is powered on and starting.
White (solid on)	The product is running.
White (blinking slowly)	The product is in sleep mode.
Off	The product is powered off.

Mounting screw holes

The two mounting screw holes are 100 mm apart. They are designed for M2.5 x L6 screws that can fasten the product to a VESA mount.

We recommend that you attach the product to the rear of a display device using a VESA mount that conforms to the following specifications:

Table 3. VESA mount specifications

VESA standard	Pattern size	Screw thread standard	Screw length
VESA Mount Interface Standard D (MIS-D)	100 × 100	M4	10

Notes:

- You may need to purchase a compatible VESA mount if your display device does not come with one. For additional details on using the VESA mount, refer to the manufacturer's instructions.
- A VESA mount purchased separately usually comes with required screws. Purchase screws according to the specifications as necessary.

Reset hole

The reset hole is used to force shut down your Chromebox when it stops responding and cannot be shut down by pressing and holding down the power button.

For additional details on using the reset hole, see "What should I do if my Chromebox stops responding?" on page 17.

Combo audio jack

The combo audio jack is used to connect a single-plug headset, a pair of headphones, or external speakers.

USB Standard-A connector

The USB Standard-A connector is used to connect storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection.

HDMI connector

The HDMI connector is used to connect an external display device, such as a television, a projector, or a monitor.

Ethernet connector

The Ethernet connector is used to connect a cable modem or router to the product to establish wired Internet access.

Avoid prolonged direct contact with hot areas on the product

CAUTION:

When the product is in use, it should be mounted to the rear of a display device, or be placed on a hard and flat surface, not in direct contact with a user's bare skin. Under normal operating conditions, the temperature of the product will remain within an acceptable range as defined in *IEC* 62368-1, but such temperatures can still be high enough to cause discomfort or harm to the user if the user is in direct contact for over 10 seconds at a time. As such, we recommend that users avoid prolonged direct contact with the product.

Specifications

Dimensions

Length	163 mm (6.4 inches)
Width	79 mm (3.1 inches)
Thickness	19.7 mm (0.8 inches)

ac power adapter (for selected models)

Input	100 V ac to 240 V ac, 50 Hz to 60 Hz
Maximum output	15 V dc, 3 A / 20 V dc, 3.25 A
Maximum power	45 W / 65 W

Supported resolution

Connect the display device via	Supported resolution
Multi-purpose USB Type-C connector	Up to 4096 x 2160 pixels @ 60 Hz
HDMI connector	Up to 3840 x 2160 pixels @ 30 Hz

Note: The product can support refresh rates above 60 Hz. However, if you set the refresh rate higher than 60 Hz, the maximum resolution might be limited.

Memory

Туре	LPDDR4X (dual channel)
Installation	On-board

Mass storage

Туре	eMMC 5.1
Capacity	32 GB / 64 GB

Connectors and slots

USB Standard-A connector	 Quantity: 2 Maximum power output: 5 V, 0.9 A Supported signaling protocols: USB 2.0 480 Mbps SuperSpeed USB 5 Gbps
Multi-purpose USB Type-C connector	 Quantity: 2 Maximum power output: 5 V, 3 A Supported signaling protocols: USB 2.0 480 Mbps SuperSpeed USB 5 Gbps DisplayPort 1.4
HDMI connector	Supported signaling protocols: • Fixed-rate link (FRL) • Transition minimized differential signaling (TMDS)
Combo audio jack	 Diameter: 3.5 mm Supported plugs: 3-pole, TRS 4-pole, TRRS (CTIA and OMTP)

Note: Data rates and performance ratings are dependent on connected devices and cables (if applicable). USB Type-C connectors that are DisplayPort 1.4 compliant through DisplayPort alternate mode provide a maximum output resolution of 4096 x 2160 at a 60 Hz frame rate and a color depth of 24 bpp (bits per pixel). The actual maximum output resolution is dependent on the connected display device and the cable used.

Networking

Ethernet	1.0 Gbps
Wi-Fi [®]	Wi-Fi 6
Bluetooth®	Bluetooth 5.2

Statement on USB transfer rate

Due to various factors such as the processing capability of the host and peripheral devices, file attributes, and other system configuration and operating environment factors, the actual transfer rates of the various USB connectors on this device may vary and may be slower than the rate(s) listed below for each corresponding device.

USB device	Data rate (Gbit/s)
3.2 Gen 1	5

Operating environment

Maximum altitude (without pressurization)

3048 m (10 000 ft)

Temperature

- At altitudes up to 2438 m (8000 ft)
 - Operating: 5°C to 35°C (41°F to 95°F)
 - Storage: 5°C to 43°C (41°F to 109°F)
- At altitudes above 2438 m (8000 ft)
 - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°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 Chromebox

This chapter tells you how to set up your Chromebox when you use it for the first time.

Connect your Chromebox to ac power

CAUTION:

- To ensure proper functionality and compatibility, you need to use the ac power adapter that is provided with the product, or use a display device with a minimum power output of 45 watts as the ac power source for your Chromebox.
- Your Chromebox can only use one ac power adapter or USB Type-C display device as its power source at the same time. If it has two suitable USB Type-C connections, the first connected power adapter or display device serves as the power source. If this power adapter or device is disconnected, your Chromebox will shut down immediately.

Use the included ac power adapter (for selected models)

- Step 1. Connect the power cord to the ac power adapter.
- Step 2. Plug the power adapter into either multi-purpose USB Type-C connector on your Chromebox.
- Step 3. Plug the power cord into a grounded electrical outlet.



Figure 2. Connect to ac power

Notes:

- All plugs must be firmly inserted into the power socket.
- The first time you turn on your Chromebox, you must connect to ac power and then press the power button.

 If your Chromebox did not come with an ac power adapter, you may use a display device as its ac power source.

Use a display device as the power source

If your Chromebox did not come with an ac power adapter, you need to use a display device as its power source. In that case, ensure that your display device can serve as its power source and prepare an appropriate USB cable.

For the connection procedure, refer to "Connect a display device" on page 8.

Connect a display device

You can connect your Chromebox to display devices such as monitors, projectors, and TVs.

Ensure that an appropriate HDMI cable or USB cable is available to connect your Chromebox to the desired display device.

- Step 1. Connect one end of the cable to the HDMI connector or a multi-purpose USB Type-C connector on your Chromebox.
- Step 2. Connect the other end of the cable to the display device.



Figure 3. Connect a display device

Note: Your Chromebox can be connected to up to two display devices at a time. Repeat the steps in this section to connect a second display device.

Initial setup of your new Chromebox

With both your Chromebox and the connected display device powered on, you will see setup instructions on the screen. Your Chromebox then walks you through the initial setup process with clear, concise, and intuitive instructions.

The table below describes some of the procedures.

Procedure	Description
Connection to collaborating devices	 Upon startup, your new Chromebox searches for Bluetooth and USB devices and automatically connects to available Bluetooth devices.
	• Once a keyboard and a pointing device (typically a mouse) are connected either via wired connection or Bluetooth, you can fully interact with your Chromebox.
Language and keyboard settings	Select your preferred language for greater convenience when using your Chromebox in the future.
Accessibility settings	Multiple accessibility options are available for users with physical limitations.
Network connection	Your Chromebox detects available Wi-Fi networks for you to select from. You can also choose to use an Ethernet cable to establish a wired Internet connection.
Signing in or guest browsing	You can sign in to your Chromebox with an existing Google Account, create a new Google Account to sign in, or choose to browse as a guest with limited functionality. Note: If you choose to browse as a guest, you can exit the guest mode and sign in later.

After you have signed in to your Chromebox and entered the operating system, the initial setup tour is complete.

Shut down your Chromebox

When you finish working with your Chromebox, you can shut it down to conserve power.

- Step 1. Select the time to open the system tray.
- Step 2. Select the power button icon.
- Step 3. Select **Shut down**.

Note: You can also use this method to restart your Chromebox, sign out of your current Google Account, or lock your Chromebox.

Chapter 3. Explore your Chromebox

This chapter guides you through a further exploration of the product.

Access networks

This section helps you connect to a Wi-Fi network or establish a wired Internet connection.

Connect to a Wi-Fi network

This section describes how to connect to a Wi-Fi network after initial setup.

Ensure that you have a secure Wi-Fi network account and the required credentials.

- Step 1. At the bottom right, select the time to open the system tray.
- Step 2. Select the network icon from the system tray, and then turn on the wireless feature if necessary.
- Step 3. Select the Wi-Fi network you want to connect to, and then input your credentials.
- Step 4. Follow the on-screen instructions to connect to the selected Wi-Fi network.

Establish a wired connection

You can connect your Chromebox to the Internet via an Ethernet cable.

- Step 1. Plug the Ethernet cable into the Ethernet connector on your Chromebox.
- Step 2. Plug the other end of the Ethernet cable into a network wall jack or a router.



Figure 4. Establish a wired connection

Change display settings

- Step 1. At the bottom right, select the time to open the system tray.
- Step 2. Select the Settings icon from the system tray, and then go to **Device** \rightarrow **Displays**.

Step 3. Follow the on-screen instructions to change the display settings according to your preferences.

Set the power plan

For an ENERGY STAR[®] compliant Chromebox, the following power plan takes effect when your Chromebox has been idle for a specified duration:

Table 4. Default power plan (when plugged into ac power)

- Turn off the display: After seven minutes and 30 seconds
- Put your Chromebox to sleep: After eight minutes and 30 seconds

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

- 1. At the bottom right, select the time to open the system tray.
- 2. Select the **Settings** icon from the system tray, and then select **Device** \rightarrow **Power**.
- 3. Follow the on-screen instructions to change the settings according to your preferences.

Connect a USB device

Ensure that an appropriate USB cable or USB dongle is available.

- Step 1. Plug one end of the USB cable or the USB dongle into a USB connector on your Chromebox.
- Step 2. (If a USB cable is used) Connect the other end of the USB cable to the target USB device.

Note:

Using a USB device from another manufacturer may require software drivers. In that case, check the manufacturer's Web site for the latest software drivers.

Connect a Bluetooth device

Ensure that the Bluetooth device you want to connect is discoverable and within 10 meters (33 feet) from your Chromebox.

- Step 1. At the bottom right, select the time to open the system tray.
- Step 2. Select the Bluetooth icon from the system tray, and then turn on Bluetooth.
- Step 3. Select the Bluetooth device you want to connect from the displayed list, and then follow the onscreen instructions.

Use a keyboard

This section provides some tips on using keyboards with your Chromebox.

- To connect a USB keyboard, refer to "Connect a USB device" on page 12.
- To connect a new Bluetooth keyboard, follow the instructions provided by the keyboard manufacturer, and refer to "Connect a Bluetooth device" on page 12.

- To customize your keyboard settings, select the Launcher button at the bottom left, and then go to Settings → Device → Keyboard.
- To learn about useful key shortcuts, select the **Launcher** button at the bottom left, and then select **Key Shortcuts**.

Use an audio device

Your Chromebox does not come with built-in microphones or speakers. The external display device connected to your Chromebox may or may not meet your audio requirements.

To enhance your listening enjoyment and improve your voice input quality, you can connect wired or Bluetooth audio devices such as speakers or a headset via the USB connectors, combo audio jack, or Bluetooth receiver of your Chromebox.

The figure below shows how to connect a wired headset to the combo audio jack.



Figure 5. Position of the combo audio jack

You can also connect wireless audio devices via Bluetooth. See "Connect a Bluetooth device" on page 12.

CAUTION:

To reduce the risk of injury to your ears, adjust the volume before putting on headphones, earbuds, or a headset.

Use a webcam

If the display device connected to your Chromebox includes a webcam, you can immediately use it to take photos, record videos, or video chat. Otherwise, you may want to attach an external webcam for such purposes.

To use a webcam purchased separately, you need to follow the manufacturer's instructions to connect the webcam to your Chromebox and place it in an appropriate position.

Chapter 4. Help and support

What is a CRU

Customer replaceable units (CRUs) are parts that can be upgraded or replaced by the customer. A Lenovo computer may contain the following types of CRUs:

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

If you intend to install a CRU, Lenovo will ship the CRU to you. 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* at https://www.lenovo.com/warranty/llw_02.

CRUs for your product model

The table below lists the CRUs and CRU types that are defined for your product model.

Part	Self-service CRU	Optional-service CRU
Power cord	Х	
ac power adapter	Х	

Notes:

- CRU replacement instructions are provided in one or more of the following publications and are available from Lenovo at any time upon your request.
 - The product's User Guide (this document)
 - Printed publications that came with the product
- Replacement of any parts not listed above must be conducted by a Lenovo-authorized repair facility or technician. Go to <u>https://support.lenovo.com/partnerlocation</u> for more information.

Frequently asked questions

Why does my Chromebox require me to sign in with a Google Account?

Your Google account is the same account you use for Google services such as Gmail and Drive. For security and synchronization purposes, your Chromebox uses your account information to sign you in to apps and services.

How do I add an input method?

- Step 1. Select the Launcher icon at the bottom left.
- Step 2. Go to **Settings** \rightarrow **Languages and inputs**.
- Step 3. Find the **Input methods** section, select **+ Add input methods**, and then follow the on-screen instructions.

After an input method is added successfully, you can select the language code on the bottom bar and switch to the new input method.

How do I find my local files?

All your files are stored in the Files app. Find the app by clicking the Launcher icon and searching Files.

How do I transfer my local files?

You can transfer your local files using a compatible storage device. Your Chromebox works with most external storage devices, such as USB keys or removable hard disk drives.

You can also share files over your network from **Settings** \rightarrow **Advanced** \rightarrow **Files**. Follow the on-screen information to find out more.

How do I set up this Chromebox for my child?

You can set up parental controls for your child. Ensure that your child has a separate Google Account before setting up parental controls.

- Step 1. Select the Launcher icon at the bottom left.
- Step 2. Go to **Settings** \rightarrow **Accounts**.
- Step 3. Set up parental controls following the on-screen instructions.

How do I manage my apps and notifications?

- Step 1. Select the Launcher icon at the bottom left.
- Step 2. Go to **Settings** \rightarrow **Device**.
- Step 3. Scroll down the **Device** page to find the **Apps** section.
- Step 4. Follow the on-screen instruction to manage your apps and notifications.

You can also mute all notifications by selecting the time and turning on the **Do Not Disturb** function from the system tray.

How do I configure accessibility settings?

- Step 1. Select the Launcher icon at the bottom left.
- Step 2. Go to **Settings** \rightarrow **Device**.
- Step 3. Scroll down the **Device** page to find the **Accessibility** section.
- Step 4. Follow the on-screen instructions to make accessibility settings.

Where can I find my apps?

When you select the **Launcher** icon at the bottom left, a page is displayed showing the apps installed on your Chromebox.

To search for a specific app, type keywords in the search bar of this Launcher page.

Where can I download more apps?

We recommend you download Chromebox apps from the Google Play Store.

To open the Google Play Store, search for Play Store after selecting the Launcher icon.

Can I use Microsoft Office software?

Your Chromebox supports Microsoft Word[®], Excel[®], and PowerPoint[®]. You can download these apps from Google Play Store.

Additional functionalities are available with a Microsoft 365 subscription.

What should I do if I spill liquid on my Chromebox?

- Step 1. Save your work immediately and turn off your Chromebox.
- Step 2. Unplug the ac power adapter.
- Step 3. Wipe your Chromebox with a soft cloth or tissue, ensuring no liquid drips into the connector holes.
- Step 4. Connect your Chromebox to ac power and turn it on once you are certain all liquid has been cleared away.

Note: We recommend you mount your Chromebox to the rear of an external display device. This will significantly reduce the risk of spills.

How should I keep my Chromebox clean?

See https://support.lenovo.com/in/en/solutions/ht035676.

What should I do if my Chromebox stops responding?

- Step 1. Press and hold the power button for a few seconds to shut down the product. Then, press the power button to turn on the product.
- Step 2. (If Step 1 did not work) Insert a straightened paper clip into the reset hole and press firmly until the product turns off. Then, press the power button to turn on the product.

Important: The reset hole is for emergency use only. It removes all user accounts from your Chromebox and restores it to factory settings.

Lenovo Customer Support Center

If you cannot resolve a problem on your own, you can call the Lenovo Customer Support Center.

Before you contact Lenovo

Record your product information and problem details before you contact Lenovo.

 Product information
 Problem symptoms and details

 • Product name
 • What is the problem? Is it continuous or intermittent?

 • Machine type and serial number
 • 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 Chromebox, either printed on a label or etched on the product itself.

Telephone numbers

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

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 Chromebox, start Get Help from the app Launcher. The Get Help app provides comprehensive instructions on using your Chromebox.

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

Appendix A. Open source information

Your Chromebox 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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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.

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