CTL Chromebox CBx3 Series

User's Manual

chromebox

TABLE OF CONTENTS

SAFETY 4

Products incorporating button or coin cell batteries 5

COPYRIGHT 7

PRODUCT OVERVIEW 8

Package contents 8

Front view 9

Rear view 10

Status indicators 11

Specifications 12

GETTING STARTED 14

Connecting the AC power 14

Connecting a display device 15

Connecting a mouse and keyboard 16

Connecting a wired mouse and keyboard 16

Connecting a wireless mouse and keyboard 17

Performing additional connections 18

Connecting audio components 18

Connecting to local area network (LAN) 18

Inserting a memory card 19

Connecting USB devices 19

Mounting the Chromebox 21

Powering on your Chromebox 23

FREQUENTLY ASKED QUESTIONS 24

COMPLIANCE & ENVIRONMENTAL INFORMATION 25

REGULATORY STATEMENT 26

Federal Communication Commission (FCC) Statement 26

FCC RF Radiation Exposure Statement *27*
EU & UKCA Regulatory Conformance & Documentation *27*
Radio Equipment Directive Statement *28*
Restriction of Hazardous Substances (RoHS) *28*
Industry Canada Class B Emission Compliance Statement *29*
5G/6G *30*
Frequency and Power *30*

ENVIRONMENTAL REGULATION 31

Energy Star Compliance *31*
Environmental Regulation *33*

CTL CONTACT INFORMATION 35

SAFETY

When using this Chromebox, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not place the device on an uneven or unstable surface.
- Do not use this device near water.
- Do not spill water or other liquids into or on the device.
- The device may produce some heat during normal operation or charging. If you feel the device is too warm, avoid sustained contact with exposed skin otherwise this might cause discomfort, or eventually a burn.
- Clean only with a soft cloth. If needed, dampen the cloth slightly before cleaning. Never use abrasives or cleaning solutions.
- Always disconnect the device from an electrical outlet and power off before cleaning the device.
- Do not handle the device with wet hands while it is being charged. This may cause an electric shock.
- Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way such as:
  - Power-supply cord or plug is damaged.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or moisture.
  - The device does not operate normally.
  - The device was dropped or the chassis is damaged.

Battery Notices

⚠ **WARNING!** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

⚠ **WARNING!** Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.

⚠ **WARNING!** A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

Products incorporating button or coin cell batteries

Instructions and manuals, if provided, shall include all of the applicable markings in figures "Packing marking - Warning: Contains coin battery" or "Packing marking - Warning of ingestion hazard" and the statements noted below. If instructions and manuals are not provided, the statements shall be present on the principal display panel or secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label.

a) The statement "Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate."

b) The statement "Even used batteries may cause severe injury or death."

c) The statement "Call a local poison control center for treatment information."

d) A statement indicating the compatible battery type ML1220.

e) The nominal battery voltage is 3V.

f) The statement "Non-rechargeable batteries are not to be recharged."

g) The statement "Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns."

Packing marking - Warning: Contains coin battery

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH of CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.

Packing marking - Warning of ingestion hazard

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH of CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.

The product contains non-replaceable button/coin cell battery ML1220.

COPYRIGHT

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SD™ is a trademark of SD Card Association.

All products use in this device and trademarks mentioned herein are trademarks or registered trademarks of their respective owners.

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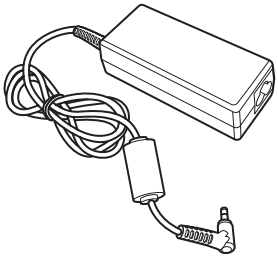
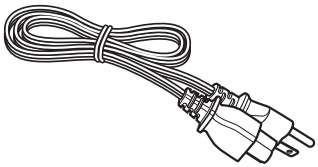
Package contents

Please take a moment to check if all the necessary items are included in the package. If anything is missing or damaged, please contact your dealer immediately.

- **Chromebox**

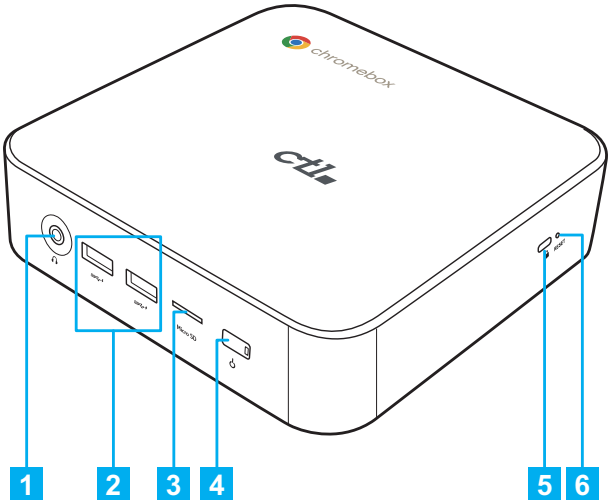


- **Power adapter**



- **Power cord**

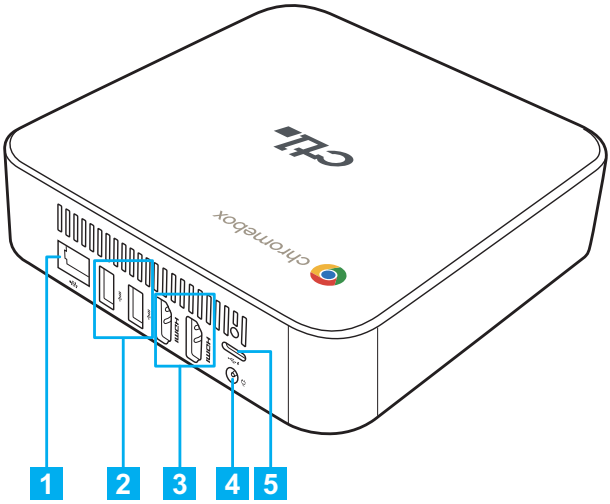
Front view



No.	Description	No.	Description
1	Audio jack (3.5mm)	4	Power button with LED
2	(2) USB-A 3.2 ports*	5	Kensington lock port
3	MicroSD™ card reader	6	Reset hole

» ***NOTE:*** **Supports battery charging.*

Rear view

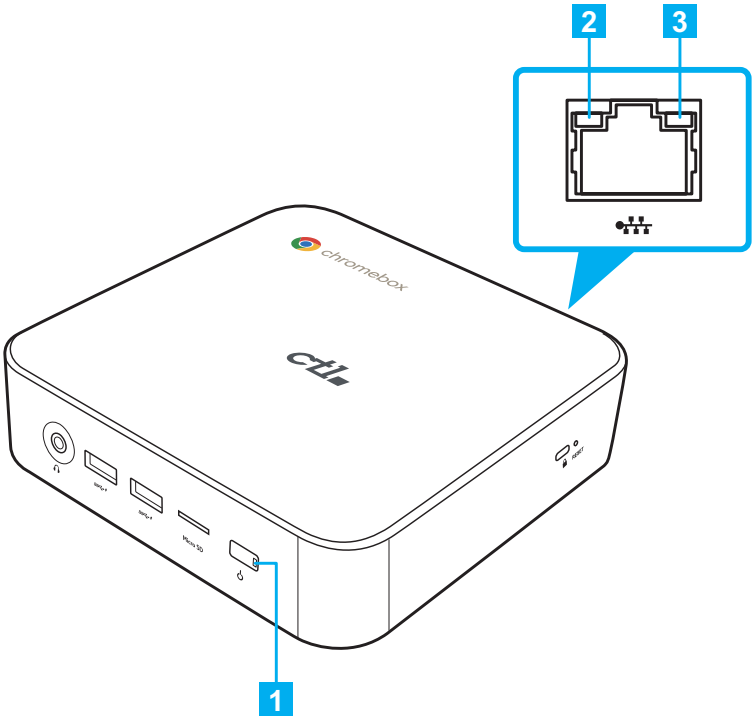


No.	Description	No.	Description
1	LAN port	4	DC-in jack
2	(2) USB-A 3.2 ports*	5	USB-C port
3	(2) HDMI ports		

» ***NOTE:*** **Supports battery charging.*

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Status indicators



No.	Indicator	Color	Status	Description
1	Power button	White	On	Chromebox is switched on.
			Off	Chromebox is switched off.
			Flashing	Chromebox is suspended.
		Red	On	Insufficient power to boot the system.
			Flashing	A critical firmware error has occurred.
2	LAN port	Orange	Flashing	Activity on the link.
			Off	No activity on the link.
3		Green	On	Active link connection.
			Off	No link connection.

Specifications

Item	Description
System	
Platform	ADL-P Chromebox
CPU Processor type	Intel ADL Celeron 7305
Operating system	ChromeOS
Memory	8 GB to 32 GB, 2 slots
Memory type	SODIMM (DDR4-3200) DDR-4 module
Primary storage	eMMC
Storage capacity	64 GB or 128 GB
Secondary Storage	SSD
Storage capacity	256 GB
Storage type	2230/2280
Connectors	
Front	• 3.5 mm audio jack • (2) USB-A 3.2 Gen2 ports • MicroSD™ card reader (push-pull type) • Power button with dual color LED
Rear	• (2) USB-A 3.2 Gen2 ports • USB-C Gen2 port (incl. Power Delivery and DisplayPort features) • (2) HDMI 2.0 ports • LAN port with integrated LED indicators (white LED for connectivity and amber LED for activity) • DC-in jack (4 mm smart pin type)
Mounting	
VESA mounting	100 x 100 mm
Dimensions	
L x H x W (mm)	148.0 x 148.5 x 41.1 mm
Wireless and networking	
LAN support	Gigabit Ethernet with speed up to 10/100/1000M GbE
WLAN and Bluetooth support	• 802.11ax, BT 5.0 Combo (2x2) module • M.2 2230 Intel Wi-Fi 6E + BT 5.2 Garfield Peak 2 AX211 non-vPro

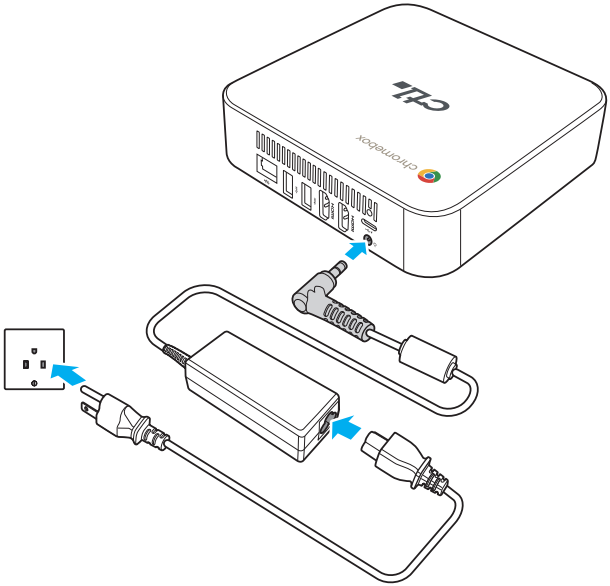
Item	Description
Power source	
AC adapter	• Output: 19V DC, 3.42A 65W (Celeron) • Input: 100~240V AC, 50/60Hz Universal • Voltage: 19V
Power cord	Available for US, EU, UK, and AUS regions
Security	
Security solution	Kensington lock

GETTING STARTED

Connecting the AC power

To connect your Chromebox to the power outlet, do the following:

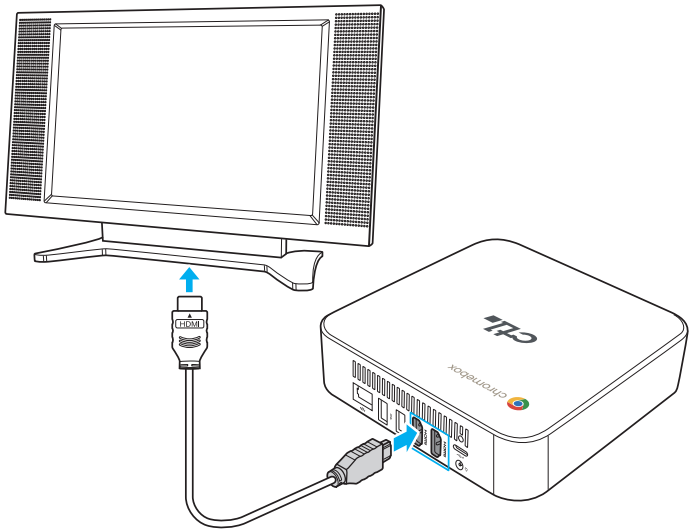
1. Connect one end of the power cord to the AC adapter and the other end to the power outlet.
2. Connect the AC adapter to the DC-in jack of your Chromebox.



Connecting a display device

To establish the connection, you need to use an HDMI cable (not supplied).

1. Connect one end of the HDMI cable to either of the two HDMI ports on your Chromebox.
2. Connect the other end of the HDMI cable to the HDMI port of a display device, for example monitor.

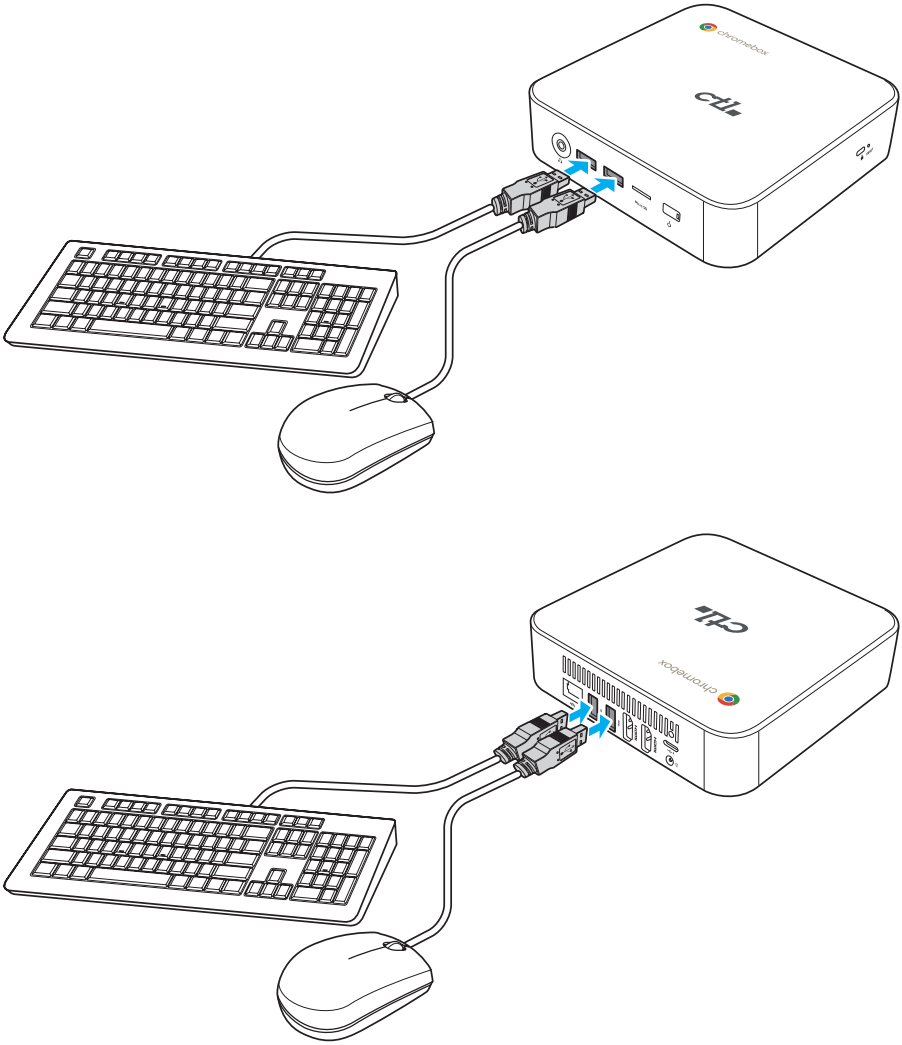


Connecting a mouse and keyboard

Your Chromebox supports both wired and wireless mouse and keyboard.

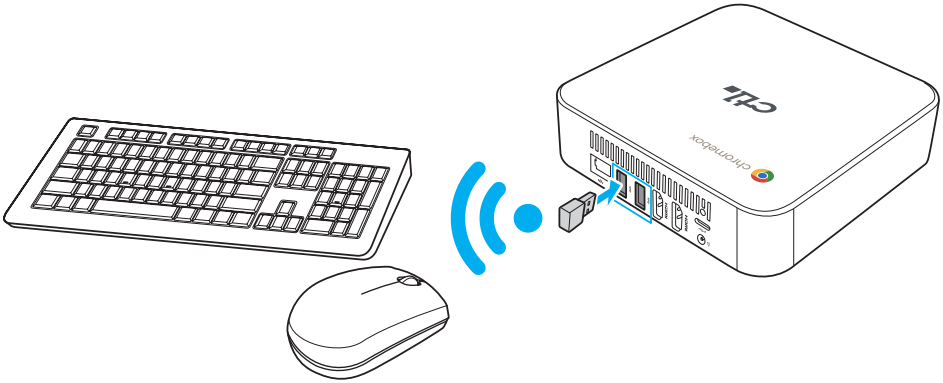
Connecting a wired mouse and keyboard

Connect the USB mouse and USB keyboard to the USB ports on your Chromebox.



Connecting a wireless mouse and keyboard

Connect the USB receiver that is supplied with your wireless mouse and keyboard to the USB port of your Chromebox.

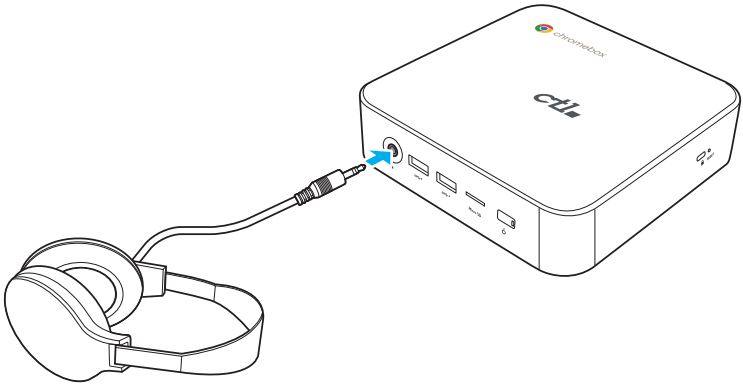


» ***NOTE:*** *After you power on the Chromebox, the wireless mouse and keyboard are usually paired automatically. If any additional steps are required, please refer to the manual that came with your accessories.*

Performing additional connections

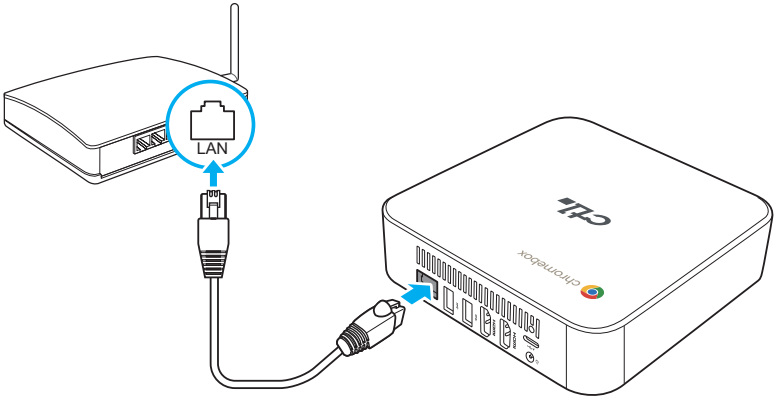
Connecting audio components

Connect the audio component into the audio jack of your Chromebox.



Connecting to local area network (LAN)

1. Connect one end of the RJ45 cable to the LAN port of your Chromebox.
2. Connect the other end of the RJ45 cable to a network connection device or a network wall connector.

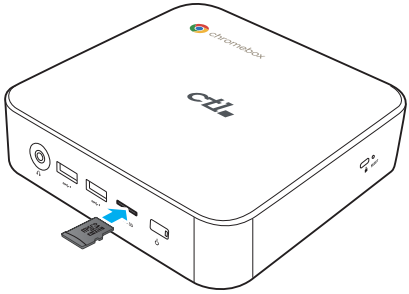


» ***NOTE:*** *For configuring LAN parameters, refer to page 28.*

Inserting a memory card

» ***NOTE:*** *Your Chromebox supports MicroSD™ cards.*

1. With the gold contacts facing down, insert the memory card into the card reader.
2. Push the memory card all the way until you hear a locking sound.

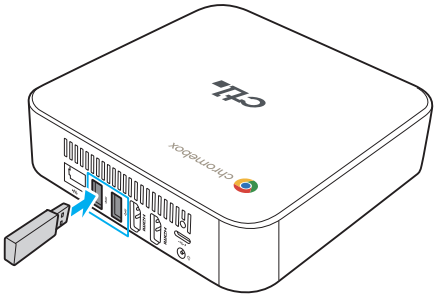


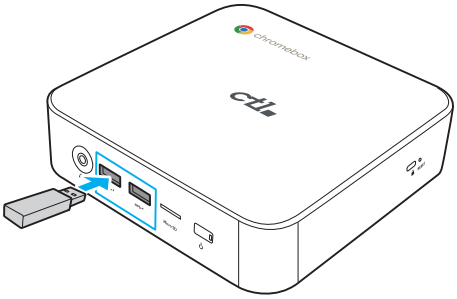
Connecting USB devices

» ***NOTE:*** *Your Chromebox supports USB-A 3.2, and USB-C.*

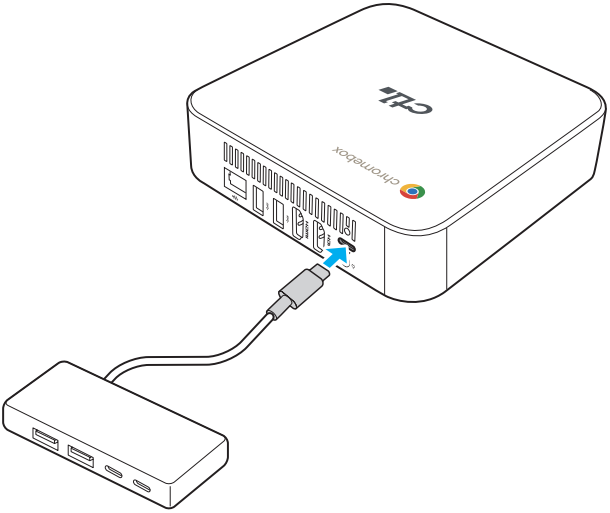
Depending on the supported USB type, connect the USB device to the respective USB port of your Chromebox.

- USB-A 3.2 compatible device connect to one of the following USB ports:





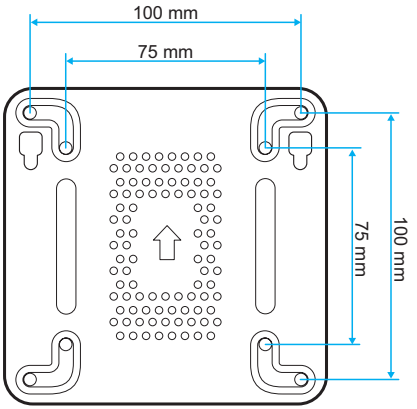
- USB-C compatible device connect to the following USB port:



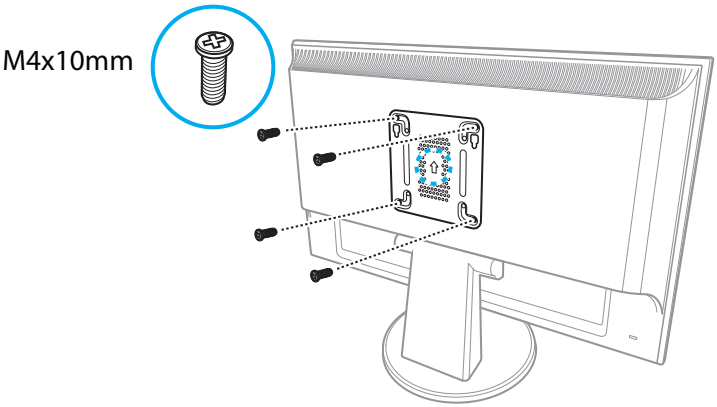
Mounting the Chromebox

Mount the Chromebox to the back of your display device.

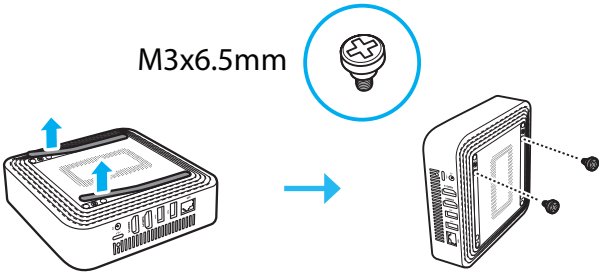
» ***NOTE:*** *Make sure your display device supports VESA mounting. Refer to the following illustration for size measurements:*



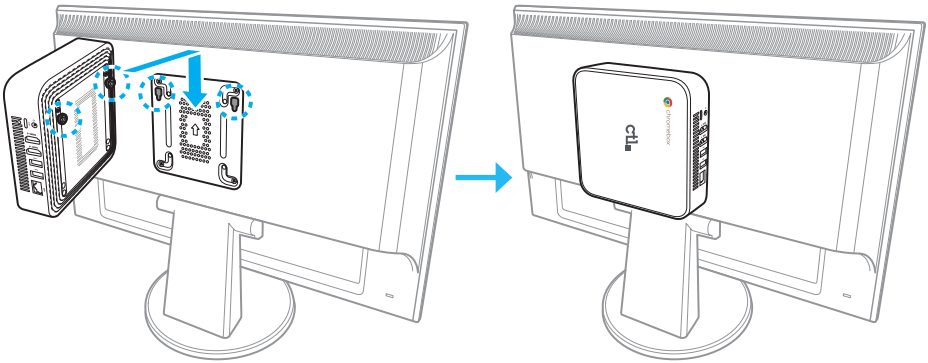
1. Secure the mounting plate (optional accessory) to the VESA mounting holes behind your display device with the four M4x10mm screws.



2. Remove the two rubber feet from the bottom side of the Chromebox. Then secure the two M3x6.5mm screws (optional accessories) to the mounting holes of your Chromebox as illustrated.



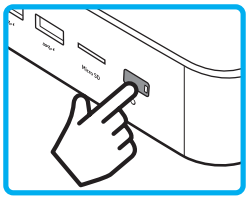
3. Align and install your Chromebox to the screw holes in the mounting plate.



NOTE: After installation, the total weight of the display device and Cromebox should not exceed 15lbs (7kg).

Powering on your Chromebox

To power on your Chromebox, press the **Power** button on the front panel. The **Power** button LED lights solid white.



After you power on the Chromebox for the first time, you are asked to configure some device's basic settings, such as set the language, configure accessibility options, connect to the network, and finally sign in to your Chromebox. Follow the on-screen instructions to complete the initial setup.

FREQUENTLY ASKED QUESTIONS

folder of image files

What software works on a Chromebox?	Chromeboxes use apps from the Google Play Store and on the web. There are apps to be productive, get creative, enjoy movies and shows, play games and more.
How do I get more apps?	You can get more apps from the Google Play Store or the web.
Can I use Microsoft Office software?	Chromeboxes work with Microsoft® Office. Whether it's Word, Excel® or PowerPoint®, you can easily find the apps on the web.
Where can I find my 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?	Transfer your local files using a compatible storage device. Your Chromebox works with most external storage devices (e.g.: USB thumb drives, removable hard drives). You can also upload your files, photos, and videos to Google Drive. After setting up your Chromebox with your Google Account, you'll be able to access your files on Drive.
Why does my Chromebox need my Google Account information?	You'll use your Google Account to sign in to your Chromebox. It is the same account you use for Google services such as Gmail and Drive. Your Chromebox uses your account information to automatically sign you into apps and services.
How do I set this up for my child?	If you want to set up parental controls for your child, it's important that you sign in using your child's personal Google Account. If they don't already have one, you can create one during the sign-in process on your Chromebox. You will be able to add your child's school account after you complete device onboarding.

Get help or more information:

Visit google.com/support/chromebook/

Open the Explore app on your Chromebox

Compliance & Environmental Information

Read this guide before you set up and use your product.

REGULATORY STATEMENT

Federal Communication Commission (FCC) Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference that may cause undesired operation. (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Responsible party:
CTL Corporation
9700 SW Harvest Ct, Bldg 100, Beaverton, OR 97005
U.S.A.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operated with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux rayonnements FCC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps. Cet émetteur ne doit pas être situé ou utilisé avec une autre antenne ou un autre émetteur.

EU & UKCA Regulatory Conformance and Documentation

EU Regulatory Compliance

Hereby, CTL Corporation declares that this device is in compliance with the following Directive: RED 2014/53/EU, RoHS 2011/65/EU, ErP 2009/125/EC. The full text of the EU declaration of conformity, the detailed ErP information and most recent information are available at the following internet address: CTL EU CBx3 Declaration of Conformity

UK Regulatory Compliance

Hereby, CTL Corporation declares that this device is in compliance with the following Regulations: Radio Equipment Regulations 2017, The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, The Ecodesign for Energy-Related Products Regulations 2010.The full text of the UK declaration of conformity, the detailed ErP information and most recent information are available at the following internet address: CTL UK CBx3 Declaration of Conformity

Radio Equipment Directive Statement:

This product is in conformity with all the requirements and essential norms that apply to EU Council Radio Equipment Directive 2014/53/EU on the approximation of the laws of the Member States relating to radio equipment.

CTL cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the installation of option cards from other manufacturers. This product has been tested and found to comply with the limits for Class B equipment according to European Standards harmonized in the Directives in compliance. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Restriction of Hazardous Substances (RoHS) Directive

This CTL product, with included parts (cables, cords, and so on) meets the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Industry Canada Class B emission compliance statement

ISED Statement

This device complies with Innovation, Science and Economic Development Canada (ISED) license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1.) This device may not cause interference, and

(2.) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1.) *l'appareil ne doit pas produire de brouillage, et*

(2.) *l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

Canadian Department of Communications Statement

This Class B digital apparatus complies with Canadian ICES - 003 du Canada.

Cet appareil numérique de la classe Best conforme à la norme NMB - 003 du Canada.

ISED Radiation Exposure for Canada

This equipment complies with IC RSS -102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cette appareil et toutes les personnes.

5G/6G

- In the 5 150-5 250MHz band: Indoor, including installations inside road vehicles, trains and aircraft, and limited outdoor use. If used outdoors, equipment shall not be attached to a fixed installation or to the external body of road vehicles, a fixed infrastructure or a fixed outdoor antenna.
- In the 5 250-5 350MHz band: Indoor use, inside buildings only. Installations in road vehicles, trains and aircraft are not permitted. Outdoor use is not permitted.
- In the 5470-5725MHz band: Indoor and outdoor use. Installations in road vehicles, trains and aircraft and use for UAS are not permitted.
- In the 5945-6425 MHz band is restricted to indoor use only

This restriction exists in Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), Northern Ireland (UK(NI)), Switzerland (CH), Iceland (IS), Liechtenstein (LI) and Norway (NO)

In accordance with the relevant statutory requirements in the UK, the 5150 to 5350 MHz and 5945-6425 MHz frequency range is restricted to indoor use only in the United Kingdom.

Frequency Bands and Power

Wi-Fi 2.4GHz: 20 dBm, Bluetooth 2.4GHz: 13 dBm, Wi-Fi 5GHz: 5150-5350MHz: 23 dBm, 5470-5725MHz: 23 dBm,5725-5850MHz: 14 dBm ,5945-6425 MHz :23dBm

ENVIRONMENTAL REGULATION

ENERGY STAR® compliance

As an ENERGY STAR Partner, CTL has followed the EPA's enhanced product qualification and certification process to ensure that the products marked with the ENERGY STAR logo are ENERGY STAR qualified per the applicable ENERGY STAR guidelines for energy efficiency. The logo on the left appears on all ENERGY STAR-qualified computers.

The ENERGY STAR program for computers was created by the EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in homes, offices, and factories. One way that products achieve this goal is by using a power management feature to reduce power consumption when the product is not in use.

By using ENERGY STAR® compliant products and taking advantage of the power-management features of your computer, you reduce the consumption of electricity. Reduced electrical consumption contributes to potential financial savings, a cleaner environment, and the reduction of greenhouse gas emissions.

All CTL products with the ENERGY STAR logo comply with the ENERGY STAR standard, and the power management feature is enabled by default. The monitor and computer are automatically set to sleep after 10 and 30 minutes of user inactivity. To wake your computer, click the mouse or press any key on the keyboard.

Additional information on the potential energy and financial savings of the power management feature can be found on the EPA ENERGY STAR Power Management website at http://www.energystar.gov/powermanagement. Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR website at http://www.energystar.gov.

The power management feature allows the computer to initiate a low- power or "Sleep" mode after a period of user inactivity. When used with an external ENERGY STAR qualified monitor, this feature also supports similar power management features of the monitor. To take advantage of these potential energy savings, the power management feature has been preset to behave in the following way when the system is operating on AC power:

- Turn off the display / Initiate Sleep after <= 15 minutes (varies by model).
- Initiate Sleep after <= 30 minutes (varies by model).

The computer exits Sleep when the power/Sleep button is pressed. When the Wake On LAN (WOL) feature is enabled, the computer can also exit Sleep in response to a network signal.

1. Please follow the guidelines on below website:

http://www.chromium.org/chromium-os/developer-information-for-chrome-os-devices

on how to enter the Developer mode.

2. In Chrome operating system user interface, please press the "**Ctrl**+ **Alt** + **F2**" or "**Ctrl** + **Alt** + **->**" to enter Console mode.

3. Login as "root" user.

4. Run the following command to disable WOL function:
ethtool -s eth0 wol d

Or run the following command to enable WOL function:
ethtool -s eth0 wol g

Press the "**Ctrl** + **Alt** + **F2**" or "**Ctrl** + **Alt** + **<-**" to return to Chrome operating system user interface.

Environmental Regulation

Regional notice for California

WARNING! This product may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling. Cancer and Reproductive Harm - www.P65Warnings.ca.gov

WEEE information

The WEEE marking on CTL products applies to countries with WEEE and e-waste regulations. Appliances are labeled in accordance with local regulations concerning waste electrical and electronic equipment (WEEE).

Battery recycling information for the European Union

Notice: This mark applies only to countries within the European Union (EU).

Batteries or packaging for batteries are labeled in accordance with European Directive 2006/66/EC concerning batteries and accumulators and waste batteries and accumulators. The Directive determines the framework for the return and recycling of used batteries and accumulators as applicable throughout the European Union. This label is applied to various batteries to indicate that the battery is not to be thrown away, but rather reclaimed upon end of life per this Directive.

Environmental Regulation

REACH

Complying with the REACH(Registration, Evaluation, Authorization, and Restriction of Chemical) regulatory framework, we publish the chemical substances in our products at CTL REACH website, http://www.ctl.net/corporateresponsibility/reach

CTL Recycling and Takeback Services

Take Back Services

CTL's electronics disposition and disposal services include removal/recycling of qualified CTL electronics equipment, including rechargeable batteries and packing. CTL allows customers to optionally keep the hard drives associated with the system that is de-installed. Equipment and packing are cleansed and recycled/disposed of according to EPA standards. Visit http://ctl.info/electronics-take-back/

Rechargeable Battery Recycling

CTL offers stand-alone rechargeable no-cost rechargeable battery recycling services for customers in the US and Canada for all CTL products. CTL offers this service through a partnership with Call2Recycle. Call2Recycle has drop off locations within 10 miles of more than 87% of the US population. To find a location near you, visit https://www.call2recycle.org/locator

COATING NOTICE

IMPORTANT! To provide electrical insulation and maintain electrical safety, a coating is applied to insulate the device except on the areas where the I/O ports are located.

CTL CONTACT INFORMATION

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