SAMSUNG

503C12 / 503C32

User Manual

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Chapter 1.
Getting Started

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Before You Start

Before reading the User Guide, first check the following information.

- Optional items, some devices and software referred to in the User Guide may not be provided and/or changed by upgrade.
  Note that the computer environment referred in the User Guide may not be the same as your own environment.
- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series and may differ from the actual appearance of the product.
- This manual decribes procedures for using both the mouse and the touchpad.
- The User manual supplied with this computer may vary depending on your model.

Safety Precaution Notations

Icon	Notation	Description
	Warning	Failure to follow instructions marked with this symbol, may cause personal injury and or fatality.
	Caution	Failure to follow instructions marked with this symbol, may cause slight injury to yourself or damage your property.

Text Notations

Icon	Notation	Description
	Caution	Content included in this section includes information required about the function.
	Note	Content included in this section includes helpful information to use the function.

To service your computer

For inquiries about the Chrome operating system or applications, visit http://www.google.com/support/chromeos.

If you have a problem while using the Chromebook hardware, please contact our Customer Care Center below or visit http://www.samsung.com/global/notepc.

Sub	TEL
U.K	0330-SAMSUNG (726-7864)
USA	1-800-SAMSUNG (726-7864)
Canada	1-800-SAMSUNG (726-7864) / 1-905-696-9011(Toronto) / 1-604-273-0680 (Vancouver)
Ireland	0818 717100
France	01 48 63 00 00
Germany	01805-SAMSUNG (726-7864)
Italy	800-SAMSUNG (726-7864)
Spain	902-172-678
Netherlands	0900-SAMSUNG (0900-726-7864)
Belgium	02-201-2418 (lokaal tarief)
Sweden	0771-SAMSUNG (0771-7267864)
Norway	81556480
Finland	306227515
Denmark	70701970
Switzerland	0848 / 72 67 864
Russia	8-800-555-5555
Hong Kong	(852) 3698-4698
Australia	1300-362-603
New Zealand	0800 726 786
Singapore	1-800-SAMSUNG (726-7864)
Malaysia	1-800-88-9999
Mexico	1-800-SAMSUNG (726-7864)
Brazil	4004-0000 / 0800-124421
India	1-800-3000-8282 / 1800-266-8282

Since this product operates on the Chrome operating system, a replacement or upgrade of the hardware is not possible due to restrictions of the Chrome operating system.

If you replace or upgrade the hardware yourself, the Chrome operating system will not be automatically updated and the product will not work properly.

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The information in this document is subject to change without notice due to improving the performance of the product.

Samsung Electronics shall not be liable for any data loss. Please take care to avoid losing any important data and backup your data to prevent any such data loss.

- Since the information about countries where the product has been released is subject to change without prior notice, please refer to the warranty card supplied with the product for more information.
- For the international warranty information, please refer to the warranty card supplied with the product or the **International Warranty** banner at http://www.samsung.com/global/notepc.

Precautions for Operating System Support

If a problem occurs because of the reinstallation of other operating systems(OS) or a previous version of an OS pre-installed on this computer, or a software that does not support the OS, the company will not provide technical support, a replacement or refund, and if our service engineer visits you due to this problem, a service charge will be applied.

Performance Restrictions

Online games and some games(3D,2D) may not be supported and Full HD video and some high bit rate HD video playback may be slow and stutter on this computer.

About the Product Capacity Representation Standard

About Memory Capacity Representation

The memory capacity reported in the Chrome OS is less than the actual capacity of memory.

This is because BIOS or a video adapter uses a portion of memory or claims it for further use.
(E.g. For 1GB(=1,024MB) memory installed, OS(Windows, Chrome, etc.) may report the capacity as 1,022MB or less)

Safety Precautions

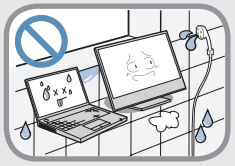
For your security and to prevent damage, please read the following safety instructions carefully.

Since this is commonly applied to Samsung computers, some pictures may differ from actual products.

Warning

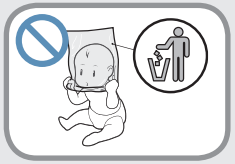
Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Installation Related



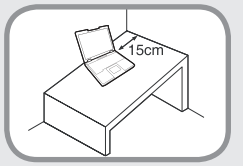
Do not install the product in places exposed to humidity such as bathrooms.

There is a danger of electric shock. Use the product within the operating conditions specified in the Manufacturers user manual.



Keep the plastic bags out of the reach of children.

There is a danger of suffocation.



Keep a distance of 15cm or more between the computer and the wall and do not place any objects between them.

This may increase the internal temperature of the computer and may cause an injury.

Do not install the computer on a slant or a place prone to vibrations, or avoid using the computer in that location for a long time.

This increases the risk that a malfunction or damage to the product will occur.

Be careful that people are not exposed to the computer's ventilator, adapter, etc., as they generate heat over a long period of time when your PC is powered on.

Exposing a part of your body close to the heat from the vent or AC adapter for long periods of time may cause a burn.

Warning

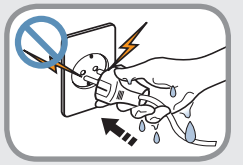
Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Avoid blocking the vent at the bottom or side of the computer when using it on a bed or cushion.

If the vent is blocked, there is a danger of damaging the computer or overheating the inside of the computer.

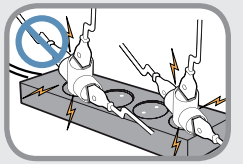
Power Related

The power plug and wall outlet figures may differ depending on the country specifications and the product model.



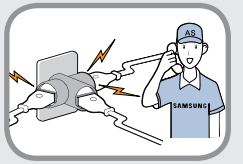
Do not touch the main plug or power cord with wet hands.

There is a danger of electric shock.



Do not exceed the standard capacity (voltage/current) of a multiplug or power outlet extension when using it for the product.

There is a danger of electric shock or fire hazard.



If the power cord or power outlet makes a noise, disconnect the power cord from the wall outlet and contact a service center.

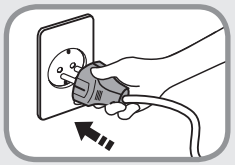
There is a danger of electric shock or fire hazard.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

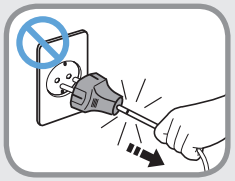
Do not use a damaged or loose main plug or power cord or power outlet.

There is a danger of electric shock or fire hazard.



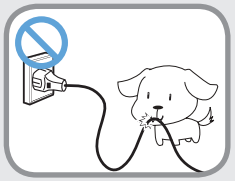
Plug the power cord firmly into the power outlet and AC adapter.

Failure to do so may cause fire hazard.



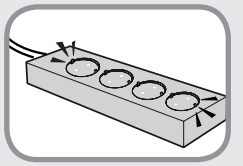
Do not unplug the power cord by pulling the cable only.

If the cord is damaged, it may cause electric shock.



Do not bend the power cord excessively or do not place a heavy object over the power cord. It is especially important to keep the power cord out of reach of infants and pets.

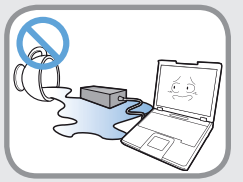
If the cord is damaged, it may cause electric shock or fire.



Connect the power cord to an outlet or multiple power plug (extended cable) with a ground terminal.

Failure to do so may result in electric shock.

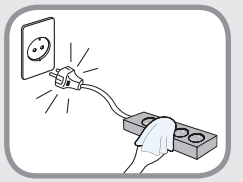
When the power supply is ungrounded, the current may leak resulting in electric shock.



If water or another substance enters the power input jack, AC adapter or the computer, disconnect the power cord and contact the service center.

If the notebook computer has an external type (removable) battery, separate the battery also.

Damage to the device within the computer may cause electric shock or fire hazard.



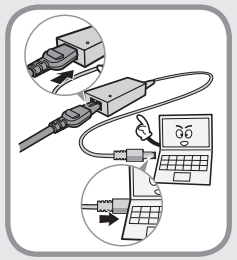
Keep the power cord or outlet clean so that they are not covered with dust.

Failure to do so may result in fire.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

AC Adapter Usage Precautions

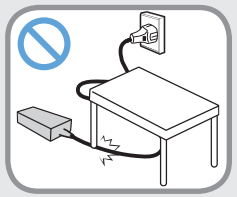


Connect the power cord to the AC adapter firmly.

Otherwise, there is a danger of fire due to an incomplete contact.

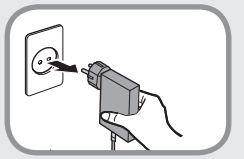
Use only the AC adapter supplied with the product.

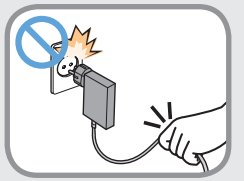
Using another adapter may cause the screen to flicker.



Do not place heavy objects on top of or step onto the power cord or AC adapter to avoid damaging the power cord or AC adapter.

If the cord is damaged, there is a danger of electric shock or fire.





Unplug the wall-mount AC adapter (adapter and plug intergrated type) from the wall outlet while holding the body and pulling it in the direction of the arrow.

If you unplug the adapter by holding and pulling the cable, the adapter may be damaged and an electric shock, explosive sound or spark may occur as a result.

Warning

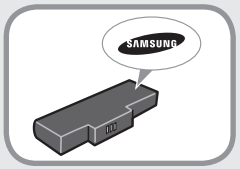
Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Battery Usage Related

Please charge the battery fully before using the computer for the first time.

Keep the battery out of the reach of infants and pets, as they could put the battery into their mouths.

There is a danger of electric shock or choking.



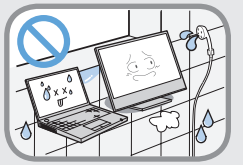
Use an authorized battery and AC adapter only.

Please use an authorized battery and adapter approved by Samsung Electronics.

Unauthorized batteries and adapters may not meet the proper safety requirements and may cause problems or malfunctions and result in an explosion or fire.

Do not use the computer in a badly ventilated location such as on bedding, on a pillow or cushion, etc, and do not use it in a location such as a room with floor heating as it may cause the computer to overheat.

Take care that the computer vents (on the side or the bottom) are not blocked especially in these environments. If the vents are blocked, the computer may overheat and it may cause a computer problem, or even an explosion.



Do not use the computer in a humid location such as a bathroom or sauna.

Please use the computer within the recommended temperature and humidity ranges (10 - 32°C (50 - 90°F), 20 - 80% RH)

Do not close the LCD panel and put the computer into your bag to move it when it is still turned on.

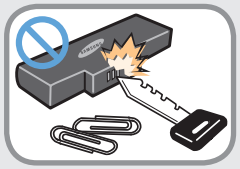
If you put the computer into your bag without turning it off, the computer may overheat and there is a danger of fire. Shut the computer down properly before moving it.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Never heat the product (or battery) or put the product (or battery) into a fire. Do not put or use the product (or battery) in a hot location such as a sauna, inside a vehicle exposed to the heat, and so on.

There is a danger of an explosion or fire.

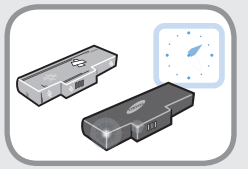


Take care not to allow metal objects such as a key or clip to touch the battery terminal (metal parts).

If a metal object touches the battery terminals, it may cause excessive current flow and it may damage the battery, or result in a fire.

If liquid leaks out of the product (or battery) or there is a funny smell coming from the product (or battery), remove the the product (or battery) the computer and contact a service center.

There is a danger of an explosion or fire.



To use the computer safely, replace a dead battery with a new, authorized battery.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

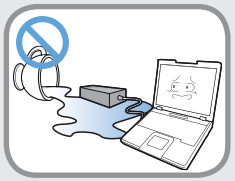
Usage Related

Disconnect all cables connected to the computer before cleaning it. If your notebook is an external & removable battery type, remove the external battery.

There is a danger of electric shock or damage to the product.

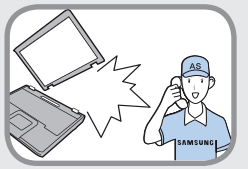
Do not connect a phone line connected to a digital phone to the modem.

There is a danger of a electric shock, fire or damage to the product.



Do not place any container filled with water or chemicals over or near the computer.

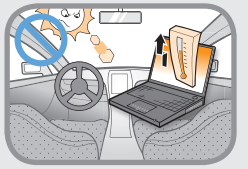
If water or chemicals enter the computer, this may cause fire or electric shock.



If the computer is broken or dropped, disconnect the power cord and contact a service center for a safety check.

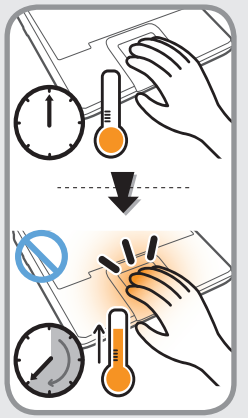
If the notebook computer has an external type (removable) battery, separate the battery also.

Using a broken computer may cause electric shock or fire hazard.



Avoid direct sunlight when the computer is in an air-tight location such as inside a vehicle.

There is a danger of a fire hazard. The computer may overheat and also present opportunity to thieves.



Do not use your computer for long periods of time while any part of your body is making direct contact with it. The temperature of the product may increase during normal operation.

This may result in harming or burning your skin.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

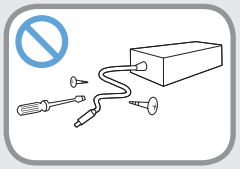
Upgrade Related

Be sure to upgrade the computer by yourself only if you have sufficient knowledge and ability.

If this is not the case, ask for assistance from the service center or an authorized engineer for the upgrade.

Be sure to upgrade only the parts specified in the user manual according to the procedures described in the user manual.

Do not disassemble any other parts or devices by yourself. There is a danger of a electric shock, fire or damage to the product.



Never disassemble the power supply or AC adapter.

There is a danger of electric shock.

When removing the RTC (Real Time Clock) battery, keep it out of the reach of children as they could touch and/or swallow it.

There is a danger of choking. If a child has swallowed it, contact a doctor immediately.

Before upgrading the computer, be sure to shutdown the computer first and then separate all connected cables. If the notebook computer has an external type (removable) battery, separate the battery, too.

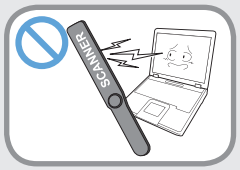
Failure to do so may cause electric shock.

Warning

Failure to follow instructions marked with this symbol may cause personal injury and even fatality.

Security and Movement Related

Follow the instructions for the relevant location (e.g., airplane, hospital, etc.) when using a wireless communication device (wireless LAN, Bluetooth, etc.).



Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands.

The airport security devices that check carry-on luggage, such as conveyor belts, use x-rays instead of magnetism and will not damage a drive.

When carrying the notebook computer with other items, such as the adapter, mouse, books, etc, take care not to press anything against the notebook computer.

If a heavy object is pressed against the notebook computer, a white spot or stain may appear on the LCD. Therefore, take care not to apply any pressure to the notebook.

In this case, place the notebook computer in a separate compartment away from other objects.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Installation Related

Do not block the ports (holes), vents, etc. of the product and do not insert objects.

Damage to a component within the computer may cause electric shock or fire.

When using the computer with it lying on its side, place it so that the vents face upwards.

Failure to do so may cause the internal temperature of the computer to rise and the computer to malfunction or halt.

Do not place a heavy object over the product.

This may cause a problem with the computer. In addition, the object may fall and cause injury, or damage the computer.

Battery Usage Related

Dispose of worn-out batteries properly.

- There is a danger of fire or explosion.
- The battery disposal method may differ depending on your country and region. Dispose of the used battery in an appropriate way.

Do not throw or disassemble the battery and do not put it into water.

This may cause an injury, fire or explosion.

Use only a battery authorized by Samsung Electronics.

Failure to do so may cause an explosion.

Avoid contact with metal objects such as car keys or clips when keeping or carrying a battery.

Contact with a metal may cause excessive current and a high temperature and may damage the battery or cause a fire.

Charge the battery according to the instructions in the manual.

Failure to do so may cause an explosion or fire from damage to the product.

Do not heat the product (or battery) or expose it to heat (e.g., inside a vehicle during the summer).

There is a danger of explosion or fire.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Usage Related

Do not place a candle, light a cigar, etc. over or on the product.

There is a danger of fire.

Use a wall outlet or multi-plug with a grounding part.

Failure to do so may cause electric shock hazard.

Make sure to have the product tested by a safety service engineer after repairing the product.

Authorized Samsung Repair Centers will carry out safety checks after a repair. Using a repaired product without testing it for safety may cause an electric shock or fire.

In case of lightning, immediately turn the system off, disconnect the power cord from the wall outlet and phone line from the modem. Do not use a modem or phone.

There is a danger of electric shock or fire.

Do not use your computer and AC-Adapter on your lap or soft surfaces.

If the computer temperature increases, there is a danger of burning yourself.

Connect only permitted devices to the connectors or ports of the computer.

Failure to do so may cause electric shock and fire.

Close the LCD panel only after checking if the notebook computer is turned off.

The temperature may rise and cause overheating and deformation of the product.

Do not press the Eject Button while the CD-ROM drive is in operation.

You might lose data and the disk might be suddenly ejected and could cause an injury.

Do not drop or knock the product.

This may result in injury or damage to the data.

Do not touch the antenna with an electricity facility such as the power outlet.

There is a danger of electric shock.

When handling computer parts, follow the instructions on the manual supplied with the parts.

Failure to do so may cause damage to the product.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

If the computer emits smoke, or there is a burning smell, disconnect the power plug from the wall outlet and contact a service center immediately. If your notebook is an external & removable battery type, remove the external battery.

There is a danger of fire.

Do not use a damaged or modified CD.

There is a danger of damaging the product or personal injury.

Do not insert your fingers into the PC Card Slot.

There is a danger of injury or electric shock.

Use recommended computer cleansing solution when cleaning the product and only use the computer when it is completely dried.

Failure to do so may cause electric shock or fire.

Emergency disk eject method using paperclip should not be used while the disk is in motion. Make sure to use the emergency disk eject method only when the Optical Disk Drive has stopped.

There is a danger of injury.

Do not place your face close to the Optical Disk Drive tray when it is operating.

There is a danger of injury due to an abrupt ejection.

Check CDs for cracks and damage prior to use.

It may damage the disc and cause problems with the device and injury to the user.

Do not leave the product in a location exposed to magnetic fields.

- A magnetic field may cause the product to work abnormally or the battery to discharge.
- The information saved on the magnetic tape of a credit card, phone card, bankbook, transportation tickets and so on can be damaged by a computer's electromagnetic field.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Upgrade Related

Carefully touch a part or device of the product.

Failure to do so may result in damage to the product or injury.

Take care not to throw or drop a computer part or device.

Failure to do so may result in damage to the product or injury.

After the disassembly, be sure to close the cover and then connect the power.

Failure to do so may result in an electric shock from the exposed circuit.

Use parts authorized by Samsung Electronics only.

It may damage the product or result in fire.

Never disassemble or repair the product by yourself.

If the product is modified, disassembled or repaired by the user, the warranty is expired, a service fee will be charged and there is a danger of an accident.

Be sure to use an authorized Samsung Electronics service center.

To connect a device that is not manufactured or authorized by Samsung Electronics, inquire at your service center before connecting the device.

There is a danger of damaging the product.

Security and Movement Related

When moving the product, turn the power off and separate all connected cables first.

The product might be damaged or users may trip over the cables.

For long periods of not using the notebook computer, discharge the battery and separate the battery from the computer (for external & removable battery type).

The battery will be preserved at its best condition.

Do not operate or watch the computer while driving a vehicle.

There is a danger of a traffic accident. Please concentrate on driving.

Caution

Failure to follow instructions marked with this symbol may cause slight injury or damage to the product.

Cautions on Preventing Data Loss (Hard Disk Management)

Take care not to damage the data on a hard disk drive.

- A hard disk drive is so sensitive to external impact that an external impact may cause loss of data on the surface of the disk.
- Take extra care, because moving the computer or an impact on the computer when it is turned on may damage the data of the hard disk drive.
- The company is not liable for any loss of data on the hard disk drive.

Causes that may damage the data of a hard disk drive and the hard disk drive itself.

- The data may be lost when an external impact is applied to the disk while disassembling or assembling the computer.
- The data may be lost when the computer is turned off or reset by a power failure while the hard disk drive is operating.
- The data may be lost and irrecoverable due to a computer virus infection.
- The data may be lost if the power is turned off while running a program.
- Sudden impact or movement to the computer while the hard disk drive is operating may cause files to be corrupted or bad sectors on the hard disk.

To prevent data loss due to damage to the hard disk drive, please backup your data frequently.

Using the Power Supply in an Airplane

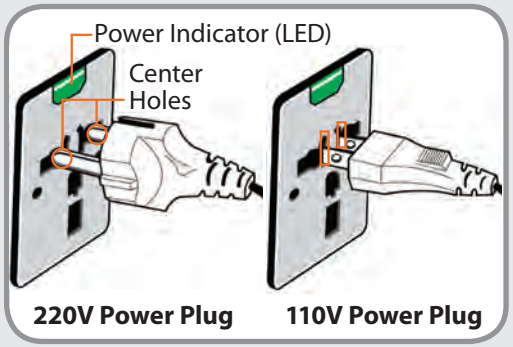
Since the power outlet type differs depending on the type of airplane, connect the power appropriately.

Since the representative figures of the power plug and the auto adapter are used, they may differ from the actual parts.

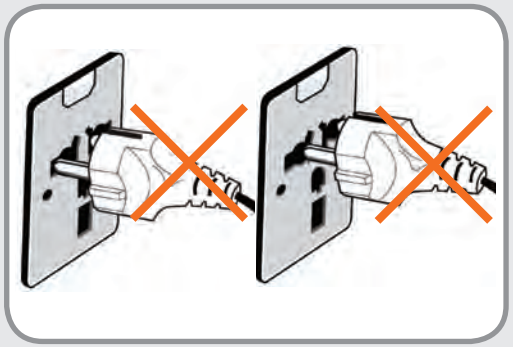
When Using the AC Power Plug

Connect the power plug pins perpendicular into the center of the power outlet.

- If the plug pins are not inserted into the center of the holes, the plug pins are only inserted up to half their length. In this case, reconnect the power plug.
- You have to insert the power plug into the outlet when the power indicator (LED) of the power outlet is lit green. If the power is connected properly, the power indicator (LED) remains green.
  Otherwise, the power indicator (LED) is turned off. In this case, unplug the power, check if the power indicator (LED) is green, and then reconnect the power plug.



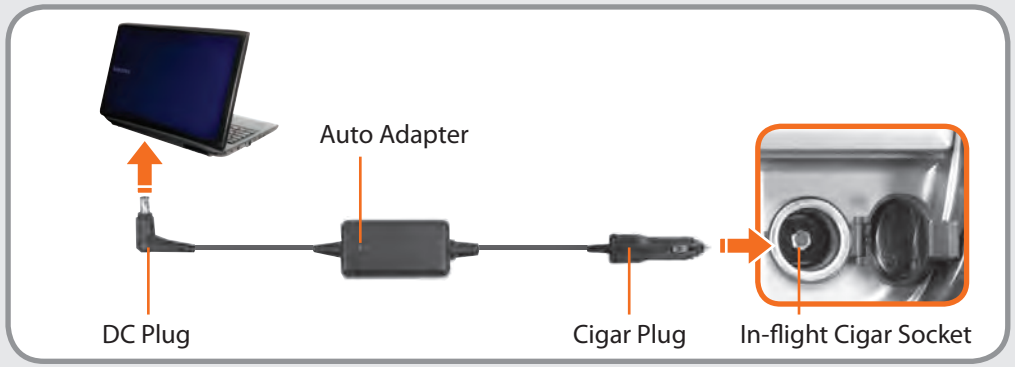
Good Example ○



Wrong Example ×

When Using the Auto Adapter

When a cigar socket is provided, you have to use the auto adapter (optional). Insert the cigar plug of the auto adapter into the cigar socket and connect the DC plug of the auto adapter to the power input port of the computer.



When Using the Airplane Charging Coverter

Depending on the airplane, you have to use the auto adapter and charging converter. Connect the airplane charging converter (optional) to the auto adapter (optional) and then insert the airplane power input jack into the power outlet.

Proper Posture During Computer Use

Maintaining a proper posture during computer use is very important to prevent physical harm.

The following instructions are about maintaining a proper posture during computer use developed through human engineering. Please read and follow them carefully when using the computer.

Otherwise, the probability of repetitive strain injury (RSI) from repeated operations may increase and serious physical harm may be caused.

- The instructions in this manual have been prepared so that they can be applied within the coverage of general users.
- If the user is not included in the coverage, the recommendation is to be applied according to the user's needs.

Proper Posture

Adjust the heights of desks and chairs appropriate to your height.

The heights are to be adjusted so that your arm forms a right angle when you place your hand over the keyboard while sitting down on a chair.

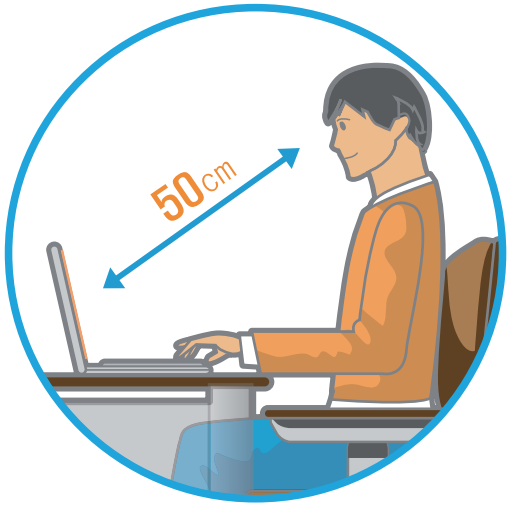
Adjust the height of the chair so that your heels are comfortably placed on the floor.

- Do not use the computer while you are lying down, but only while you are sitting down.
- Do not use the computer on your lap. If the computer temperature increases, there is a danger of burning yourself.
- Work while keeping your waist straight.
- Use a chair with a comfortable back.
- Keep the center of your leg weight not on the chair but on your feet when you are sitting on a chair.
- To use the computer while talking over the telephone, use a headset. Using the computer with the phone on your shoulder is bad for posture.
- Keep frequently used items within a comfortable work range (where you can reach them with your hands).

Proper Posture During Computer Use

Eye Position

Keep the monitor or LCD away from your eyes by at least 50cm.



- Adjust the height of the monitor and the LCD screen so that its top height is equal to or lower than your eyes.
- Avoid setting the monitor and LCD excessively bright.
- Keep the monitor and LCD screen clean.
- If you wear glasses, clean them before using the computer.
- When entering contents printed on a paper into the computer, use a static paper holder so that the height of the paper is almost equal to that of the monitor.

Hand Position

Keep your arm at a right angle as shown by the figure.

- Keep the line from your elbow to your hand straight.
- Do not place your palm over the keyboard while typing.
- Do not hold the mouse with excessive force.
- Do not press the keyboard, touchpad or mouse with excessive force.
- It is recommended to connect an external keyboard and mouse when using the computer for long periods of time.

Proper Posture During Computer Use

Volume Control (Headphones and Speakers)

Check your volume first to listen to music.

- Check if the volume is too loud before using headphones.
- It is not recommended using headphones for long periods of time.
- Any deviation from the equalizer default setting could cause hearing impairment.
- The default setting can be changed through software and driver updates without your intervention. Please check the equalizer default setting before first usage.

To prevent possible hearing damage, do not listen at high volume levels for long periods.

Use Time (Break Time)

- Take a break for 10 minutes or more after a 50-minute period when working for more than one hour.

Illumination

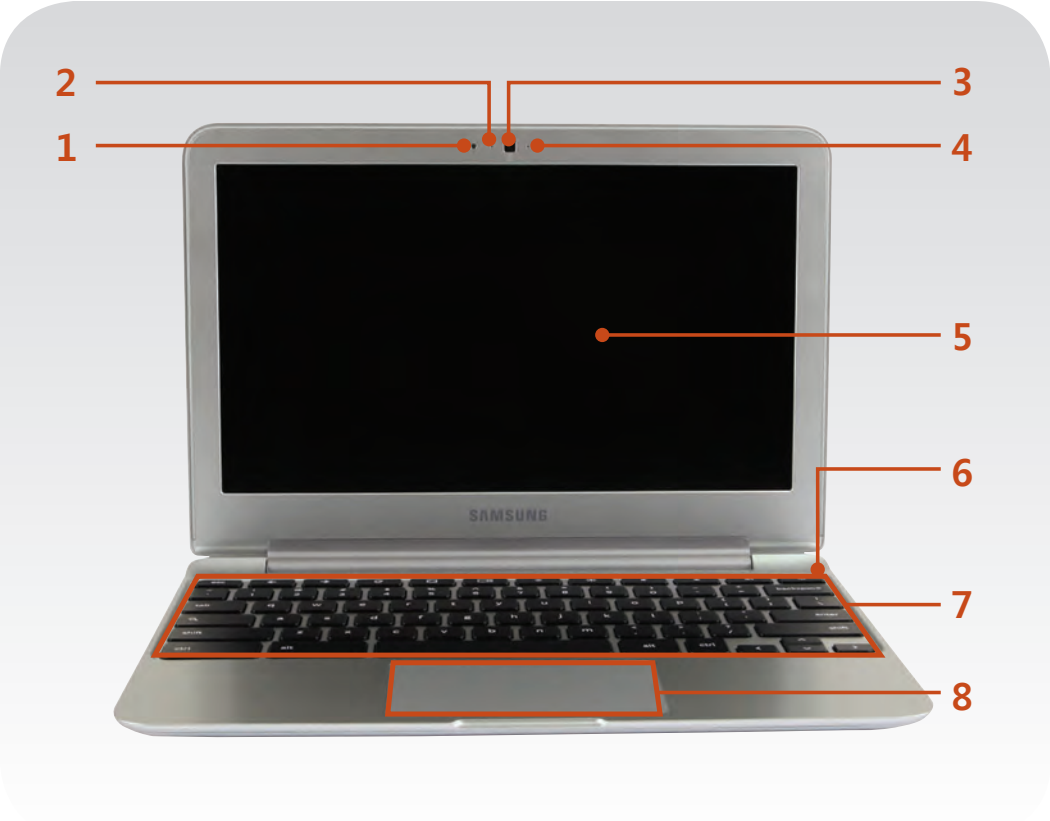
- Do not use the computer in dark locations. The illumination level for computer use must be as bright as for reading a book.
- Indirect illumination is recommended. Use a curtain to prevent reflection on the LCD screen.

Operation Condition

- Do not use the computer in hot and humid locations.
- Use the computer within the allowed temperature and humidity range specified in the user manual.

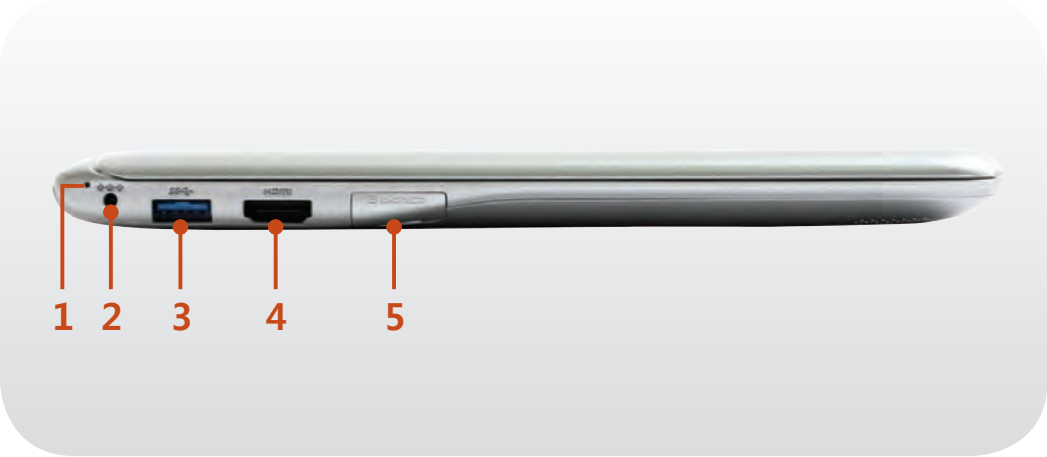
Front View

- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series. Therefore the colors and appearance of the pictures may differ from the actual appearance of the product depending on the model.
- The actual color and appearance of the computer may differ from the pictures used in this guide.



1	Illumination sensor	A sensor that senses the ambient brightness of the Chromebook. When it is dark, the display gets darker. When it is bright, the display gets brighter.
2	Camera operating indicator	This indicates the camera operating status.
3	Camera	Using this camera, you can take still pictures and record video.
4	Microphone	You can use the built-in microphone.
5	LCD	The screen images are displayed here.
6	Power Button ⏻/I	Turns the computer on and off.
7	Keyboard	A device to enter data by pressing the keys.
8	Touchpad	Use the touchpad to move the pointer on the screen or click items.

Left View



What is a chargeable USB port?

- USB device accessing and charging functions are supported.
- The USB charging function is supported regardless of whether the power is turned on or off.
- Charging a device through a chargeable USB port may take longer than general charging.
- Using the Chargeable USB function when the computer is running on battery power reduces the battery usage time.
- The user cannot evaluate the charging status of the USB device from the computer.
- This may not be supported for some USB devices.
- You can turn the Chargeable USB function **ON/OFF** by selecting the **Settings** > **Power Management** > **USB Charging** option. (Optional)

1	Charge Status	This shows the power source and the battery charge status. ● **Green:** When the battery is fully charged or the battery is not installed. ●/● **Red** or **orange:** When the battery is being charged. ● **Off:** When the computer is running on battery power without being connected to AC adapter.
2	DC Jack	Connect the AC adapter that supplies power to the Chromebook.
3	USB 3.0 Port or Chargeable USB 3.0 Port (Optional)	USB ports to which you can connect USB devices as well as a chargeable USB port are provided. Using a chargeable USB port, you can access or charge a USB device. The port can be distinguished by the figure (or) printed on the port of the product.
4	Digital Video/ Audio Port (HDMI) HDMI (Optional)	You can connect an HDMI cable to this port. Using this port, you can enjoy digital video and audio on the TV.
5	Multi Card Slot	A card slot supports multi cards.

Right View

1	Earset / headset Jack	Use this jack to connect your earset or headset.
2	USB 2.0 Port (Optional)	You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.

Bottom View

1	Speaker	The built-in speaker is located here.

Turn the Computer On and Off

Turn the Computer On

To use the Chromebook, you have to connect to the Internet and then log in with your Google account.

1 Connect the **AC adapter**.

2 If you open the LCD panel, the computer is automatically turned on.
If the LCD panel is already opened, press the power button.

3 **Power button LED** is lit while the computer is turned on.

Turn the Computer Off

Press and hold the Power button for about 4 seconds to shut down the Chromebook.

Press and hold the Power button for about 2 seconds to lock the system.

In this lock state, press and hold the Power button for 2 seconds to shut down the Chromebook.

To shut down the Chromebook when the system has frozen unexpectedly, press and hold the Power button for at least 8 seconds.

Controlling the power of the Chromebook

	If the Lid is closed	When there is no input for a predetermined period of time	If the Power button is pressed
Signed-in state	Enters sleep mode	Enters sleep mode	The state changes to the signout state.
Signed-out state	The computer is turned off	The computer is turned off	The computer is turned off

Press any key or swipe the touchpad to wake the Chromebook from sleep mode.

Chapter 2.
Using the computer

Keyboard 31

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Connecting an External Display Device (Optional) 38

Network (Optional) 40

LCD Brightness Control 41

Battery 42

Keyboard

Shortcut key functions and procedures are discussed in the following sections.

- The keyboard image may differ from the actual keyboard.
- The keyboard may differ depending on your country. The following mainly describes the shortcut keys.

Shortcut Keys

Here is an overview of the shortcut keys on the top row of the keyboard.

Shortcut Keys	Function
←	Go to the previous page in your browser history.
→	Go to the next page in your browser history.
↻	Reload your current page.
⛶	Open your page in full-screen mode.
⧉	Switch to your next window.

Keyboard

Shortcut Keys	Function
	Decrease screen brightness.
	Increase screen brightness.
	Mutes the sound. In Mute mode, press the key to cancel the Mute function.
	Decrease the volume.
	Increase the volume.

Shift key

Hold the Shift key down to enter upper case letters.

shift

Hot key function

Press the following keys at the same time.
You can check the hot keys in Chrome OS.

ctrl + alt + ? /

Search key

Where you'd find the Caps Lock key on a traditional keyboard, we've put the Search key.

Press the Search key to move the pointer to the address bar of the apps list.

If you really need Caps Lock, go to the Settings page to make the Search key behave like a Caps Lock key.

Touchpad

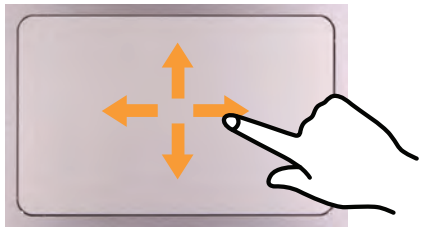
- Touch the touchpad with your fingers only.
  Anything other than your fingers, such as a ball-point pen, will not be recognized by the touchpad.
- The pictures in this manual may differ from the actual screenshots and the appearance of the touchpad may differ depending on the model.

Basic Touchpad Functions

Moving the cursor on the screen

Place your finger on the touchpad slightly and move your finger.

The mouse cursor will move accordingly. Move your finger in the direction you wish to move the cursor.

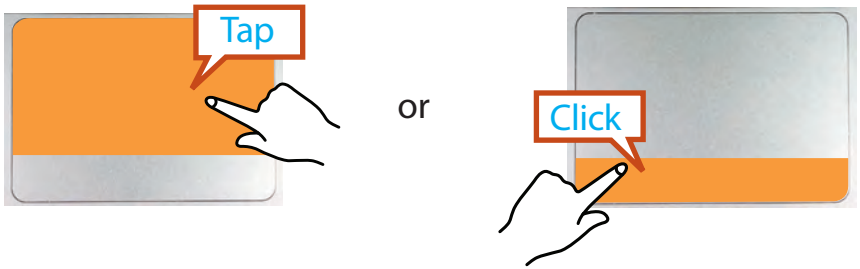


Touchpad

Click Function

To click on an item, place a finger on the touch area and tap once.

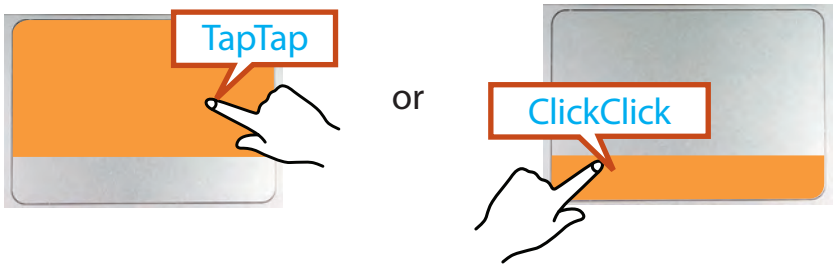
You can also do this by clicking once on the click area.



Double-Click Function

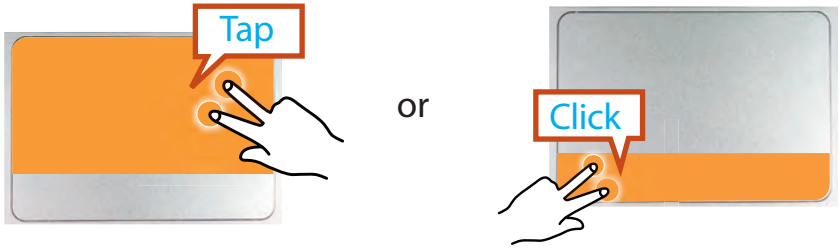
To select an item, place a finger on the touch area and quickly tap twice.

You can also do this by quickly clicking twice on the click area.



Right Button Function

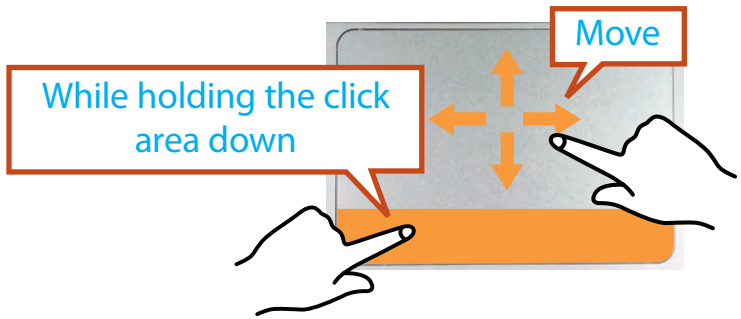
To right-click, place two fingers on the touch area and tap once. You can also do this by placing two fingers on the click area and clicking once.



Drag Function

Dragging refers to moving an item to another place after selecting it.

To drag an item to a new location, press the click area and hold while dragging the item to the new location.



Adjusting your Touchpad Settings

If your touchpad is too sensitive, you can adjust your settings by following these steps:

1 Click the list icon ≡ on the top-right corner of your browser.

2 Select **Settings**.

3 Go to **Device** > **Touchpad** speed, and change the settings as appropriate.

Multi-Card Slot (Optional)

Using the multi-card slot, you can read and write data on various types of memory cards.

When you insert a memory card, make sure to insert the memory card in the correct direction. Pushing an incorrectly inserted memory card may damage the card itself or the slot.

- You can use memory cards as a removable disk and conveniently exchange data with digital devices such as a digital camera, etc.
- Separately purchase memory cards of your desired capacity.
- The color of the multi-card slot may differ from the picture in this manual.
- Before using the slot, remove the dummy card from inside the slot. (Only for models providing dummy cards.)
- Insert the memory card into the multi-card slot in the direction printed on the slot.
- The data transfer rate may diff er depending on the specification of the memory card.

Using the card

1 Insert a memory card into the multi-card slot in the correct direction.

Memory Card Naming

The following table shows the full names of memory cards for each abbreviation.

Abbreviation	Memory Card's Name
***mini SD**	mini Secure Digital
***micro SD**	micro Secure Digital
***mini SDHC**	mini Secure Digital High Capacity
***micro SDHC**	micro Secure Digital High Capacity
***micro SDXC**	micro Secure Digital eXtended Capacity

2 A new tab opens and the list of files on the card appears. Click on a file to read the data for the file.

To remove a memory card

Gently push the tip of the memory card in to pop it out.
Take the tip of the card, and remove it.

- Available data formats depend on the current version of the Chrome operating system.
- Data on the card can be saved to the Download folder under **Apps list** > **Files**.
- The maximum file size to save is 3 GB.

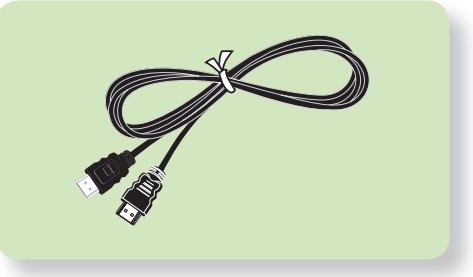
Connecting an External Display Device (Optional)

If you connect an external display device such as a monitor, TV, projector, etc., you can view the picture on the wider screen of the external device when you give a presentation or watch a video or movie.

Before you start, check the port and cable of the external display device and then connect the display device to the computer.

About the Connection Cable

Users should additionally purchase the necessary connection cables.



HDMI Cable

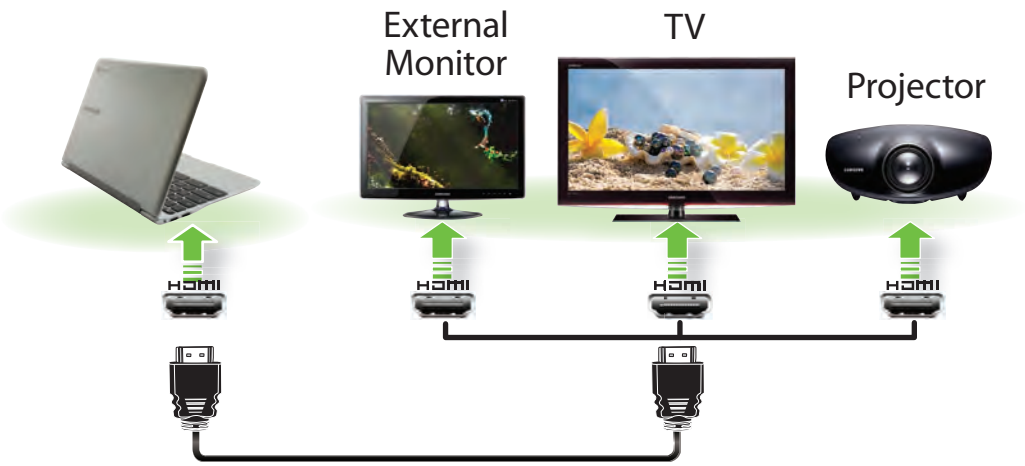
Connecting an External Display Device (Optional)

Connecting through the HDMI port (Optional)

By connecting the computer to a TV with a HDMI port, you can enjoy both a high visual quality and a high sound quality.

After connecting a TV through HDMI, you have to configure the screen and sound.

1 Connect the HDMI cable to the HDMI port of the TV.



- This is only supported for models that support a TV output port (HDMI).
- When a TV provides more than one HDMI port, connect the computer to the **DVI IN** port.
- When connecting the computer to a TV, switch the external input mode of the TV to **HDMI**.

2 Connect the power cable of the external monitor (or TV or projector) to the Chromebook, and turn on the external monitor.

3 The current Chromebook screen extends to the external monitor.

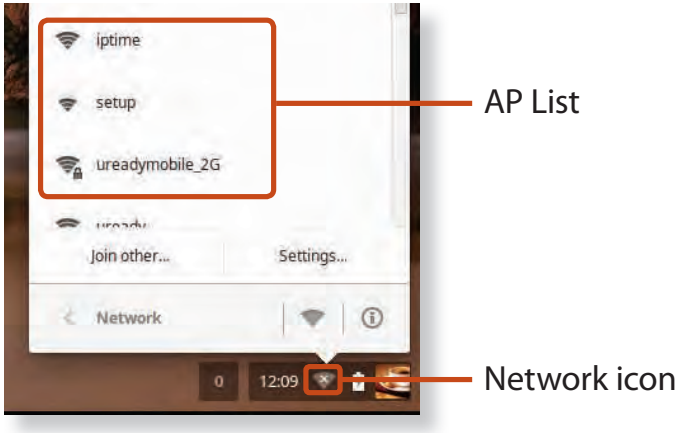
- If you close the upper panel of the Chromebook while connected via HDMI, the display appears only on the external monitor.
- If the connected external display device is blank, reconnect the cable.

Connecting to a Network

When the Chromebook is turned on, the login window appears. In the login window, connect to the network.

Connecting to a Wireless Network

1 Click the network icon on the bottom-right corner of the log-in screen, and the AP list appears.



2 To connect to a network, simply select its name in the network menu.

3 If the connection is successfully established, the network icon is displayed as .

- If the network is not properly connected, it is represented as .
- The number of activated bars in the network icon represents the signal strength of the wireless LAN.

LCD Brightness Control

Adjust the LCD brightness by pressing the ☼ key to decrease brightness or the ☼ key to increase brightness.

Whenever you press the ☼ key, the LCD brightness increases by one level.

- **LCD bad pixels principle of computer**

  Samsung observes the specifications regarding strict quality and reliability of LCD. But in spite of that, it is inevitable that there might be a small number of bad pixels. A large number of bad pixels can cause problems in appearance, but a small number of pixels doesn't affect the computer performance.

  Therefore Samsung observes and manages the following dot principles:

  - Bright dot : 2 or less
  - Black dot : 4 or less
  - Combination of Bright and Dark : 4 or less

Instructions for Cleaning the LCD

Clean the LCD panel with a soft cloth lightly moistened with computer cleansing detergent moving in one direction.

Cleaning the LCD panel with excessive force can damage the LCD.

Battery

Please refer to the following instructions when running the computer on battery power without connecting the AC power.

This computer is equipped with an internal battery.

Before using your computer for the first time after purchasing it, charge the battery completely.

Precautions

- **Users cannot remove or replace the internal battery.**
- **To remove or replace the battery, use an authorized service center in order to protect the product and users. You will be charged for this service.**
- Use only chargers specified in the User Manual.
- Never heat the battery pack, put it near or in a fire or use at a temperature higher than 60°C, as this may cause fire.
- Please refer to the system operation environment of this manual and operate and store the battery at room temperature.

The location of the internal battery

How to Charge the Battery

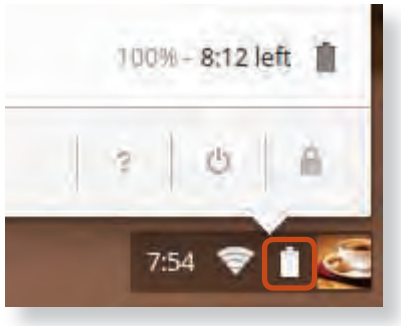
Connect the AC adapter to the power input jack on the rear side of the Chromebook.

The battery will start charging. When charging is complete, the Charge LED turns green.

Status	Charge LED	
Charging in progress		Red
Charging complete		Green
AC adapter not connected		Off

Measuring the Remaining Battery Charge

To check the remaining capacity of the battery, click the battery icon on the bottom- right of the screen.



Battery Usage Time Information

A battery is an expendable supply, so when using it over a long time, the capacity/battery life is shortened. If the battery life is reduced to under half of its initial time, we recommend purchasing a new battery.

When not using the battery for a long time, store the battery after charging it to 30-40% of its capacity. This extends the battery lifetime.

Chapter 3. Chrome OS

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Discover web apps 49

FAQ 50

Recovery (Optional) 51

All about Chrome OS

Your Chromebook runs the Chrome operating system that's built and optimized for the web. Using your Chromebook is as easy as surfing the web.

- **Zero to web in less than 10 seconds.**
  Chromebooks start in 10 seconds and resume instantly from sleep. Your favorite websites load quickly and run smoothly, with full support for the latest web standards and Adobe Flash. The best part: Chromebooks not only stay fast, but are designed to get faster over time as updates are released.
- **Same experience everywhere.**
  All your apps, documents, and settings are synced to your account and stored in the cloud. To customize the data that gets synced, click the wrench and go to **Settings** > **Personal Stuff**.
- **Always connected.**
  Now, you can stay online at home, outdoors, or on your morning commute because your Chromebook makes it easy to get online anywhere, anytime, via Wi-Fi and, if included, mobile broadband service.
- **Built-in security.**
  Your Chromebook is much safer than a regular computer. Each webpage and application you visit runs in a restricted environment. So if you visit an infected page, it can't affect the other tabs, apps, or anything else on your computer.
- **Less updating. More surfing.**
  When you turn your Chromebook on, it updates itself. Automatically. All of your apps stay up-to-date, and you get the latest and greatest version of the operating system without having to think about it. Starting now, say goodbye to annoying update prompts.

For more information, visit the Help Center at https://support.google.com/chromebook.

Usage Precautions

- Some functions and screenshots are subject to change depending on the Chrome version.
- To sign-in, you need a Google account. If you do not have a Google account, you can create one or connect with a guest account. Some functions may not be available when signed in as a guest.
- You may experience limitations using the product under the following circumstances. Please refer to the link.
  - When reading from or writing to external storage devices with the filing system. (https://support.google.com/chromebook/answer/183093?hl=en)
  - When playing certain local video or music files. (https://support. google.com/chromebook/answer/183093?hl=en)
  - When using a local printer. (https://support.google.com/chromebook/topic/2586004?hl=en&parent=2586068&ctx=topic)
- For additional inquiries about the Chrome operating system or applications, visit https://support.google.com/chromebook
- If you have a problem while using the Chromebook hardware, please visit http://www.samsung.com/global/notepc.

Logging in with your Google account

You can log into the Chromebook with your Google account.

If you don't have an account, connect to www.google.com/accounts/NewAccount and sign up. If you log in with your Google account, you can conveniently use Google services such as Gmail, Google Calendar, Google Docs and so on. In addition, since your saved bookmarks and browser settings are saved in the Google account, you can use the same settings even on another Chromebook.

1 Enter the email address and the password that are used for your Google account.
To add a user, click **Add User**.

2 Click **Sign in**.

If the network connection fails, or if you do not have a Google account, click **Add User** to log in with the guest account.

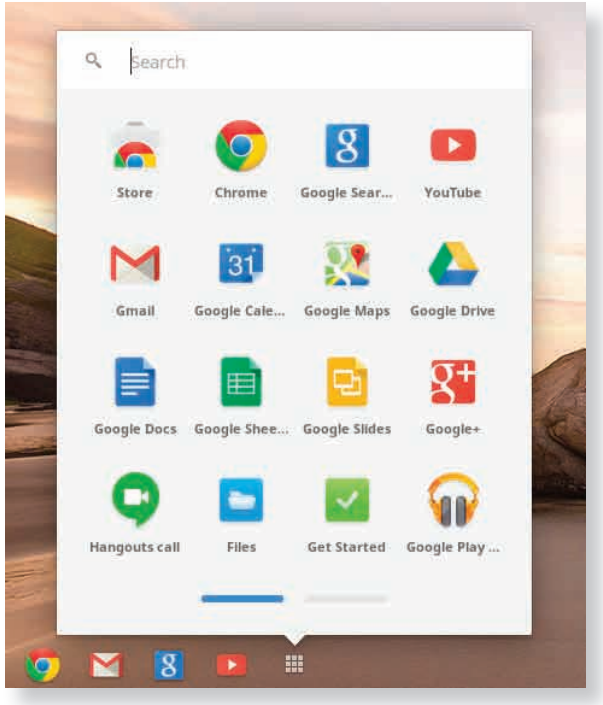
Desktop

When you have completed the login, the **Desktop** appears.
You can use the Chrome and various apps by clicking the icons of the bottom left of the screen.

Get on the web

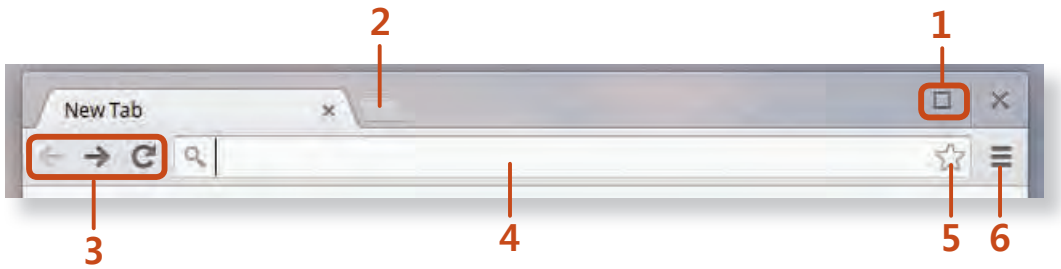
Choosing apps for the apps list

Click **App list button**( ) at the bottom of the screen to display all the Apps that are currently installed.
You can control which apps appear in the list and easily open them.



The browsing interface

Once you're signed in, you're instantly on the web. Here's a quick overview of the interface you'll see:



	Menu	Function
1	**Resizing button**	Minimize the window or move it to the left or right.
2	**New tab button**	Click to see your apps and most visited sites.
3	**Navigation buttons**	Go back, forward, or reload your page.
4	**Address bar**	Search or enter a web address.
5	**Bookmark**	Bookmark the page.
6	**Setting**	Click to adjust your browser settings.

To learn about using the browser, visit the Help Center at https://support.google.com/chromebook.

Discover web apps

Want to edit a photo, listen to music, or play games in your browsers? The Chrome Web Store offers a wide range of apps, extensions, and themes that you can use to customize your browser.

- **Apps** can offer powerful functionality that you'd expect from desktop programs.
- **Extensions** are custom features and functionality that you can add to the browser.
- **Themes** change the skin of the browser, to give it a bit more style and flair.

Items you installed are automatically synced to your account, so you always have access to your apps and extensions.

To open the Chrome Web Store, open a new tab and click the store icon. You can also get to the store directly by visiting http://chrome.google.com/webstore.

- To use the Web Store, you must have the latest version of the Chrome browser installed.
- Some items purchased from the Web Store may not work depending on your computer specifications.
- The web store items may or may not be free-of-charge. Confirm that an item is free-of-charge or not before you select or purchase it.
- You have to install an App or Extension that is supported by the Chrome OS to use it. Before downloading it, check if it is supported by the operating system.

Q1 How can I print on a Chromebook?

A Chromebook supports the Google Cloud Print service for printing.

If the printer supports cloud printing, you can print without connecting the Chromebook and the printer. Also, you don't need to install the printer driver on the Chromebook.

For more information about the Google Cloud Printing service, please refer to http://www.google.com/cloudprint.

Recovery (Optional)

Using the Recovery function, you can restore your computer when a problem occurs with your computer. You can restore your computer after creating an update image and using a USB flash drive. For more information, refer to the Chrome OS Help. (www.google.com/support/chromeos)

If you restore the Chromebook using a restore image, all the data saved on the Chromebook will be deleted.

Performing the Update from a USB Flash Drive

1 Save the recovery image to be updated onto the SD card or USB flash drive.

For the procedures to save a recovery image onto the SD card or USB flash drive, refer to the Chrome OS Help (https://support.google.com/chromebook/answer/1080595).

2 Open the LCD panel and press the power button to turn the power off.

3 Insert the SD card or the USB flash drive containing the recovery image, and press both the Refresh button and the Power button while holding down the ESC key.

esc + ↻ + ⏻

4 When the Chromebook restarts, follow the onscreen instructions to complete the recovery process.

5 Remove the SD card or the USB flash drive as instructed.

6 When the system has restarted, the update is successfully completed.

Chapter 4.
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Important Safety Information

Safety Instructions

Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Always follow these instructions to help guard against personal injury and damage to your system.

Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only with the type of power source indicated on the rating label.
- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.
- If you use an extension cord with this system, make sure that the total power rating on the products plugged into the extension cord does not exceed the extension cord power rating.
- For Notebooks with glossy display bezels the user should consider the placement of the Notebook as the bezel may cause disturbing reflections from surrounding light and bright surfaces.

Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer.

  Dispose of batteries according to the manufacturers instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task.
- When the computer is turned off, a small amount of electrical current still flows through the computer.
  To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped or the casing is damaged.
  - The system performance changes.

The Instruction On Safety Operation of NotePC

1. When installing and operating devices please refer to safety requirements in the user manual.
2. Devices can be used only with the equipment specified in the technical specifications of the devices.
3. If any smell of burning or smoke is detected from the computer the unit should be switched off and battery removed. The unit should be checked by a qualified technician before reuse.
4. Service and repair of devices should be carried out by authorized service centers.
5. Do not allow your portable computer to operate with the base resting directly on exposed skin for extended periods of time. The surface temperature of the base will rise during normal operation (particularly when AC Power is present). Allowing sustained contact with exposed skin can cause discomfort or eventually a burn.

Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

Battery Disposal

Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

THERE IS A RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Laser Safety

All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 60825-1. The laser devices in these components are classified as “Class 1 Laser Products” under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

- **Laser Safety Note:**

  Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

- Class 1M laser radiation when operating part is open.

  Do not view directly with optical instruments.

- Class 3B invisible laser radiation when open.

  Avoid exposure to the beam.

Connect and Disconnect the AC adapter

The socket-outlet shall be installed near the equipment and shall be easily accessible.

Do not unplug the power cord by pulling the cable only.

Power Cord Requirements

The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

General Requirements

The requirements listed below are applicable to all countries:

- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system. (USA ONLY)
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 (or C5) connector, for mating with appliance inlet on the computer.

Wireless Guidance

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The RF field strength of the wireless device or devices that may be embedded in your notebook are well below all international RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe using. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed on the next page:

- Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane.
  802.11ABGN (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.
- In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.
- Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.
- If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.

- Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.
- Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

United States of America

USA and Canada Safety Requirements and Notices

Do not touch or move antenna while the unit is transmitting or receiving.

Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.

Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.

The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).

The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning

Do not operate a portable transmitter (such as a wireless network device) near unshielded blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

Use On Aircraft Caution

Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: Refer to the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user's authority to operate this device.

Unintentional Emitter per FCC Part 15

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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. If not installed and used in accordance with the instructions, it may cause harmful interference. 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.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: “Something About Interference.”

This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

Intentional emitter per FCC Part 15

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

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

Wireless devices are not user serviceable. Do not modify them in any way.

Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

Health and safety information

Exposure to Radio Frequency (RF) Signals

Certification Information (SAR)

This product can contain an embedded radio transmitter and receiver. It is designed and manufactured not to exceed the exposure limits for radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. government. These FCC exposure limits are derived from the recommendations of two expert organizations, the National Council on Radiation Protection and Measurement (NCRP) and the Institute of Electrical and Electronics Engineers (IEEE). In both cases, the recommendations were developed by scientific and engineering experts drawn from industry, government, and academia after extensive reviews of the scientific literature related to the biological effects of RF energy.

The exposure limit set by the FCC for wireless devices employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR is a measure of the rate of absorption of RF energy by the human body expressed in units of watts per kilogram (W/kg). The FCC requires wireless devices to comply with a safety limit of 1.6 watts per kilogram (1.6 W/kg). The FCC exposure limit incorporates a substantial margin of safety to give additional protection to the public and to account for any variations in measurements.

SAR tests are conducted using standard operating positions accepted by the FCC with the wireless transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a new model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each model are performed in positions and locations (e.g. at the bottom on the body) as required by the FCC.

For body worn operation, this model has been tested and meets the FCC RF exposure guidelines when used with Samsung accessory designated for this product. Non-compliance with the above restrictions may result in violation of FCC RF exposure guidelines.

SAR information on this and other model can be viewed on-line at http://www.fcc.gov/oet/ea/fccid/. This site uses this product FCC ID number on the outside of the product. Sometimes it may be necessary to remove the battery pack to find the number. Once you have the FCC ID number for a particular product, follow the instructions on the website and it should provide values for typical or maximum SAR for a particular product.

Canada

Unintentional Emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Intentional Emitter per RSS 210

This device complies with RSS 210 of Industry Canada. 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 this device."

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication. To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85 GHz frequency range in point-to-point operation.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

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

To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

Brazil

Este produto esta homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolucao 242/2000, e atende aos requisitos tecnicos aplicados.

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

European Union

European Union CE Marking and Compliance Notices

Products intended for sale within the European Union are marked with the Conformité Européene (CE) Marking, which indicates compliance with the applicable Directives and European standards and amendments identified below. This equipment also carries the Class 2 identifier.

The following information is only applicable to systems labeled with the CE mark CE.

European Directives CE

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC
- R&TTE Directive 1999/5/EC

European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

CE ⓘ

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark CE with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

The low band 5.15 - 5.35 GHz is for indoor use only.

> ! See 802.11b and 802.11g restrictions for specific countries or regions within countries under the heading “European Economic Area Restrictions” below.

EU R&TTE Compliance Statements

cs	**Česky [Czech]**	Samsung tímto prohlašuje, že tento Notebook PC je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da	**Dansk [Danish]**	Undertegnede Samsung erklærer herved, at følgende udstyr Notebook PC overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de	**Deutsch [German]**	Hiermit erklärt Samsung, dass sich das Gerät Notebook PC in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et	**Eesti [Estonian]**	Käesolevaga kinnitab Samsung seadme Notebook PC vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en	**English**	Hereby, Samsung, declares that this Notebook PC is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es	**Español [Spanish]**	Por medio de la presente Samsung declara que el Notebook PC cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el	**Ελληνική [Greek]**	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Samsung ΔΗΛΩΝΕΙ ΟΤΙ Notebook PC ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr	**Français [French]**	Par la présente Samsung déclare que l'appareil Notebook PC est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it	**Italiano [Italian]**	Con la presente Samsung dichiara che questo Notebook PC è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
lv	**Latviski [Latvian]**	Ar šo Samsung deklarē, ka Notebook PC atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
lt	**Lietuvių [Lithuanian]**	Šiuo Samsung deklaruoja, kad šis Notebook PC atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl	**Nederlands [Dutch]**	Hierbij verklaart Samsung dat het toestel Notebook PC in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt	**Malti [Maltese]**	Hawnhekk, Samsung, jiddikjara li dan Notebook PC jikkonforma mal-ħtiāijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

hu	**Magyar [Hungarian]**	Alulírott, Samsung nyilatkozom, hogy a Notebook PC megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
pl	**Polski [Polish]**	Niniejszym Samsung oświadcza, Ŝe Notebook PC jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt	**Português [Portuguese]**	Samsung declara que este Notebook PC está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl	**Slovensko [Slovenian]**	Samsung izjavlja, da je ta Notebook PC v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
sk	**Slovensky [Slovak]**	Samsung týmto vyhlasuje, že Notebook PC spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi	**Suomi [Finnish]**	Samsung vakuuttaa täten että Notebook PC tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv	**Svenska [Swedish]**	Härmed intygar Samsung att denna Notebook PC står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

	Íslenska [Icelandic]	Hér með lýsir Samsung yfir því að Notebook PC er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
no	**Norsk [Norwegian]**	Samsung erklærer herved at utstyret Notebook PC er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
	Türkiye [Türkçe]	Bu belge ile, Samsung bu Notebook PC'nin 1999/5/EC Yönetmeliğinin temel gerekliliklerine ve ilgili hükümlerine uygun olduğunu beyan eder.

To view the EU Declaration of Conformity for this product (in English only), go to: http://www.samsung.com/uk/support/main/supportMain.do or http://www.samsung.com/uk/support then search the model number of the product.

If the Declaration of Conformity for the model you are interested in is not available on our web-site, please contact your distributor or below address.

doc.eu@samsung.com

Manufacturer Information

Samsung Electronics Co., Ltd.

416, Maetan-3Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, 443-742, Korea

Samsung Electronics Suzhou Computer Co., Ltd.

No. 198, Fangzhou Road, Suzhou Industrial Park, Jiangsu Province, 215021, China

Tel: +86-512-6253-8988

Samsung Electronics Vietnam Co., Ltd.

Yen Phong 1, I.P Yen Trung Commune, Yen Phong Dist., Bac Ninh Province, Vietnam

For the web or the phone number of Samsung Service Centre, see the Warranty or contact the retailer where you purchased your product.

European Economic Area Restrictions

Local Restriction of 802.11b/802.11g Radio Usage

[Note to integrator: The following statements on local restrictions must be published in all end-user documentation provided with the system or product incorporating the wireless product.]

Due to the fact that the frequencies used by 802.11b/802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11b/802.11g products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use.

As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. Any deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

The European variant is intended for use throughout the European Economic Area. However, authorization for use is further restricted in particular countries or regions within countries, as follows:

General

European standards dictate maximum radiated transmit power of 100 mW effective isotropic radiated power (EIRP) and the frequency range 2400 – 2483.5 MHz.

The low band 5.15 - 5.35 GHz is for indoor use only.

Belgium

Dans le cas d'une utilisation privée, à l'extérieur d'un bâtiment, au-dessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l'IBPT est requise. Pour une utilisation publique à l'extérieur de bâtiments, une licence de l'IBPT est requise. Pour les enregistrements et licences, veuillez contacter l'IBPT.

Pour les autres langues, reportez-vous aux modes d'emploi correspondants.

France

The low band 5.15 - 5.35 GHz is for indoor use only.

RTC CAUTION

CAUTION : Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the Manufacturer's instruction.

Attention: Danger d'explosion si les piles sont mal palcées. Remplacez les piles usagées uniquement par des piles de type identique ou équivalent recommandees par is fabriquant. Otez les piles usagées selon les instructions du fabriquant.

WEEE Symbol Information

Correct disposal of this product (Waste Electrical & Electronic Equipment)

(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

India Only

For more information on safe disposal and recycling visit our website www.samsung.com/in or contact our Helpline numbers - 18002668282, 180030008282.

Pb

Correct disposal of batteries in this product

(Applicable in countries with separate collection systems)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material re-use, please separate batteries from other types of waste and recycle them through your local, free battery return system.

USA ONLY

BC

This Perchlorate warning applies only to primary CR (Maganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA.

"Perchlorate Material- special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate."

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website: www.samsung.com/recyclingdirect Or call, (877) 278-0799

For battery recycling go to call2recycle.org; or call 1-877-723-1297

- Warning : This product contains chemicals known to the state of California to cause cancer and reproductive toxicity.

Samsung Packaging Take-Back Program

In partnering with select recyclers, Samsung offers packaging take-back at no cost to you.

Simply call the following number for the locations nearest you.

CRT Processing, LLC

(877) 278-0799

Kathy Severson – Logistics contact

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect Or call, (877) 278-0799

Product Specifications

The system specifications may differ depending on the derived models.

For detailed system specifications, refer to the product catalogue.

CPU	Samsung Exynos Processor
Main Memory	Memory type: DDR3L SDRAM
Storage Device	e.MMC iNAND™ Embedded Flash Drive
Graphics	Internal
Operating Environment	Temperature: -5~40°C for storage, 10~32°C when operating Humidity: 5~90% for storage, 20~80% when operating
AC/DC Rating	Input) 100-240VAC, 50/60Hz, Output) 12VDC 3.3A
PC Rating	12VDC 3.3A (40W)

- Optional components may not be provided or different components may be provided depending on the computer model.
- The system specifications are subject to change without notice.
- The amount of memory that Windows can use may be smaller than the actual amount of memory available.
- For this product, you cannot install an additional or replace the existing memory module.

Registered Trademarks

Samsung is a registered trademark of Samsung Co., Ltd.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

All other product or company names mentioned herein are registered trademarks of their respective companies.

Chrome OS Software License

The software included in this product contains copyrighted software that is licensed under the GPL/LGPL.

You may obtain the complete Corresponding Source code from website: http://git.chromium.org/gitweb/

This offer is valid to anyone in receipt of this information.

ENERGY STAR® Partner

As an ENERGY STAR® Partner, SAMSUNG has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

HDMI