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An abstract graphic consisting of several overlapping, curved, and angular shapes in various shades of blue, creating a modern, layered effect that occupies the middle section of the page.

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Basics

Read me first

Please read this manual before using the device to ensure safe and proper use.

- Descriptions are based on the device's default settings.
- Some content may differ from your device depending on the region, service provider, model specifications, or device's software.
- Content (high quality content) that requires high CPU and RAM usage will affect the overall performance of the device. Apps related to the content may not work properly depending on the device's specifications and the environment that it is used in.
- Samsung is not liable for performance issues caused by apps supplied by providers other than Samsung.
- Samsung is not liable for performance issues or incompatibilities caused by edited registry settings or modified operating system software. Attempting to customise the operating system may cause the device or apps to work improperly.
- Software, sound sources, wallpapers, images, and other media provided with this device are licensed for limited use. Extracting and using these materials for commercial or other purposes is an infringement of copyright laws. Users are entirely responsible for illegal use of media.
- You may incur additional charges for data services, such as messaging, uploading and downloading, auto-syncing, or using location services depending on your data plan. For large data transfers, it is recommended to use the Wi-Fi feature.
- Default apps that come with the device are subject to updates and may no longer be supported without prior notice. If you have questions about an app provided with the device, contact a Samsung Service Centre. For user-installed apps, contact service providers.
- Modifying the device's operating system or installing softwares from unofficial sources may result in device malfunctions and data corruption or loss. These actions are violations of your Samsung licence agreement and will void your warranty.
- Depending on the region, you can view the regulatory information on the device. To view the information, launch the **Settings** app and tap **System** → **About phone** → **Regulatory information**.

Instructional icons



Warning: situations that could cause injury to yourself or others



Caution: situations that could cause damage to your device or other equipment



Notice: notes, usage tips, or additional information

Device overheating situations and solutions

When the device heats up while charging the battery

While charging, the device and the charger may become hot. During wireless charging or fast charging, the device may feel hotter to the touch. This does not affect the device's lifespan or performance and is in the device's normal range of operation. If the battery becomes too hot, the charger may stop charging.

Do the following when the device heats up:

- Disconnect the charger from the device and close any running apps. Wait for the device to cool down and then begin charging the device again.
- If the lower part of the device overheats, it could be because the connected USB cable is damaged. Replace the damaged USB cable with a new Samsung-approved one.
- When using a wireless charger, do not place foreign materials, such as metal objects, magnets, and magnetic stripe cards, between the device and the wireless charger.



The wireless charging or fast charging feature is only available on supported models.

When the device heats up during use

When you use features or apps that require more power or use them for extended periods, your device may temporarily heat up due to increased battery consumption. Close any running apps and do not use the device for a while.

The following are examples of situations in which the device may overheat. Depending on the functions and apps you use, these examples may not apply to your model.

- During the initial setup after purchase or when restoring data
- When downloading large files
- When using apps that require more power or using apps for extended periods
 - When playing high-quality games for extended periods
 - When recording videos for extended periods
 - When streaming videos while using the maximum brightness setting
 - When connecting to a TV
- While multitasking (or, when running many apps in the background)
 - When using Multi window
 - When updating or installing apps while recording videos
 - When downloading large files during a video call
 - When recording videos while using a navigation app
- When using large amount of data for syncing with the cloud, email, or other accounts
- When using a navigation app in a car while the device is placed in direct sunlight
- When using the mobile hotspot and tethering feature
- When using the device in areas with weak signals or no reception
- When charging the battery with a damaged USB cable
- When the device's multipurpose jack is damaged or exposed to foreign materials, such as liquid, dust, metal powder, and pencil lead
- When you are roaming

Do the following when the device heats up:

- Keep the device updated with the latest software.
- Conflicts between running apps may cause the device to heat up. Restart the device.
- Deactivate the Wi-Fi, GPS, and Bluetooth features when not using them.
- Close apps that increase battery consumption or that run in the background when not in use.
- Delete unnecessary files or unused apps.
- Decrease the screen brightness.
- If the device overheats or feels hot for a prolonged period, do not use it for a while. If the device continues to overheat, contact a Samsung Service Centre.

Device limitations when the device overheats

When the device heats up, the features and performance may be limited or the device may turn off to cool down. The feature is only available on supported models.

- If the device becomes hotter than usual, a device overheating message will appear. To lower the device's temperature, the screen brightness and the performance speed will be limited and battery charging will stop. Running apps will be closed and you will only be able to make emergency calls until the device cools down.
- If the device overheats or feels hot for a prolonged period, a power off message will appear. Turn off the device, and wait until it cools down.

Precautions for operating environment

Your device may heat up due to the environment in the following conditions. Use caution to avoid shortening the battery's lifespan, damaging the device, or causing a fire.

- Do not store your device in very cold or very hot temperatures.
- Do not expose your device to direct sunlight for extended periods.
- Do not use or store your device for extended periods in very hot areas, such as inside a car in the summertime.
- Do not place the device in any areas that may overheat, such as on an electric heating mat.
- Do not store your device near or in heaters, microwaves, hot cooking equipment, or high pressure containers.
- Never use a damaged charger or battery.

Device layout and functions

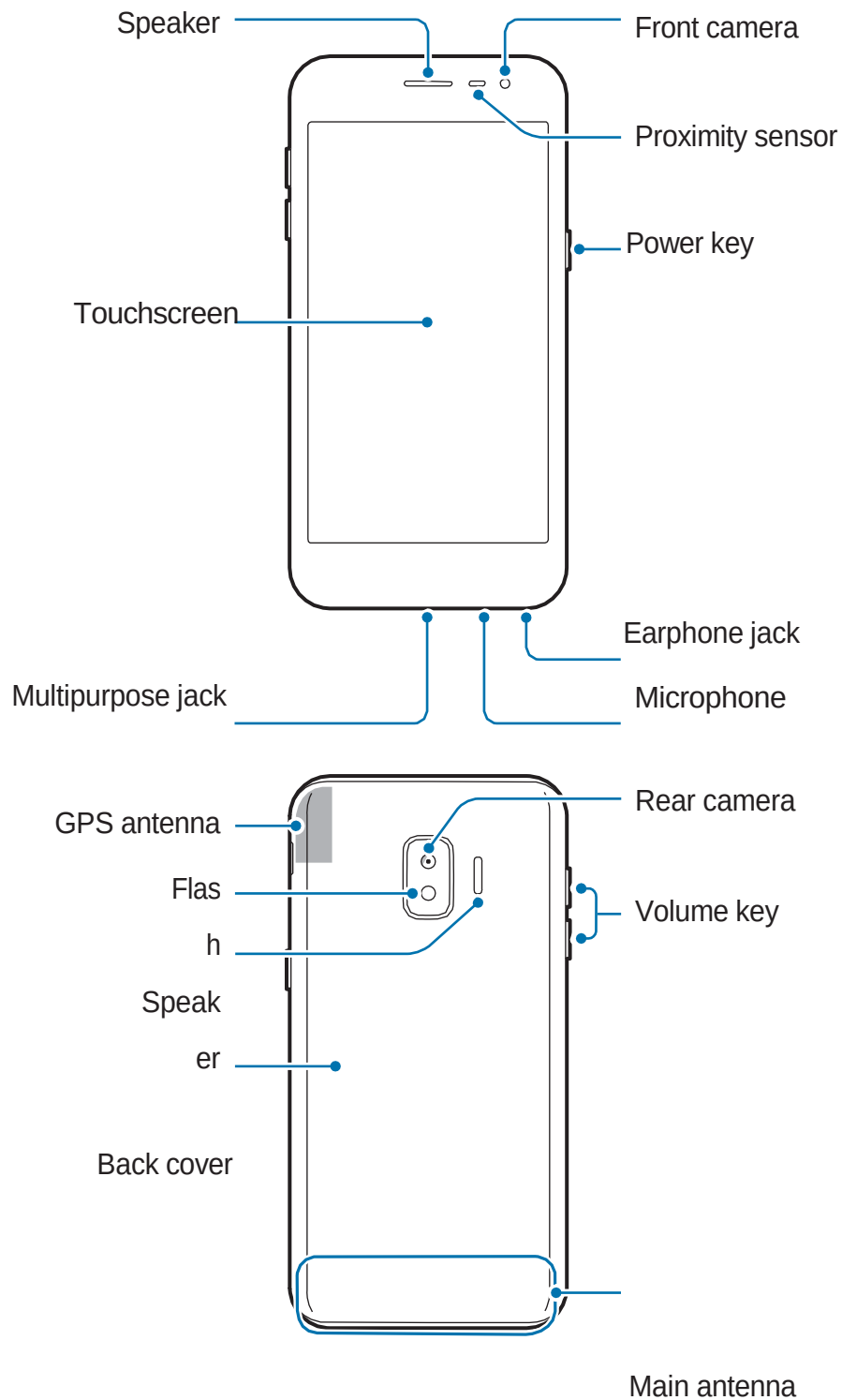
Package contents

Refer to the quick start guide for package contents.



- The items supplied with the device and any available accessories may vary depending on the region or service provider.
- The supplied items are designed only for this device and may not be compatible with other devices.
- Appearances and specifications are subject to change without prior notice.
- You can purchase additional accessories from your local Samsung retailer. Make sure they are compatible with the device before purchase.
- Use only Samsung-approved accessories. Using unapproved accessories may cause the performance problems and malfunctions that are not covered by the warranty.
- Availability of all accessories is subject to change depending entirely on manufacturing companies. For more information about available accessories, refer to the Samsung website.

Device layout



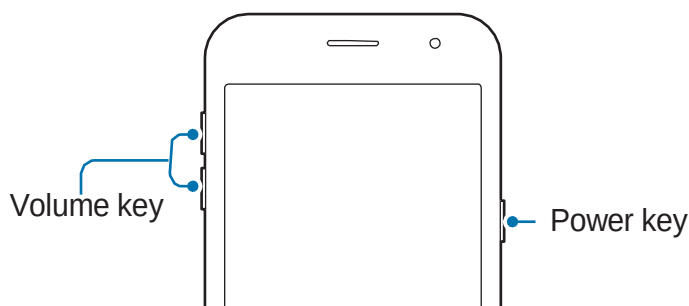


When using the speakers, such as when playing media files or using speakerphone, do not place the device close to your ears.



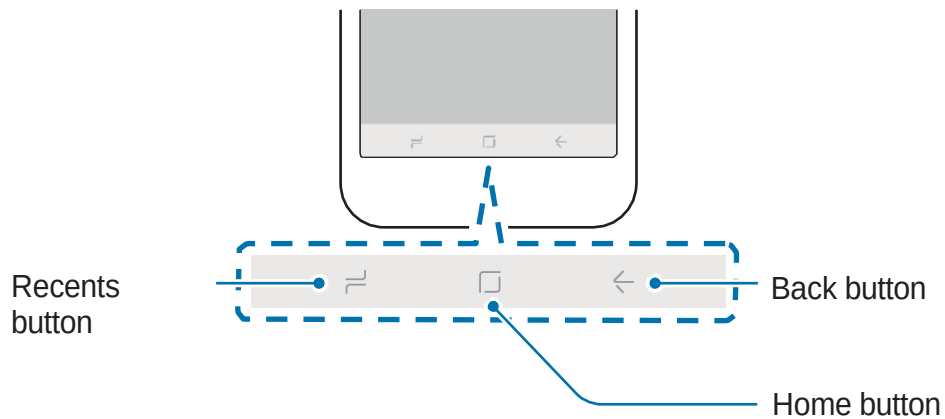
- Connectivity problems and battery drain may occur in the following situations:
 - If you attach metallic stickers on the antenna area of the device
 - If you attach a device cover made with metallic material to the device
 - If you cover the device's antenna area with your hands or other objects while using certain features, such as calls or the mobile data connection
- Using a Samsung-approved screen protector is recommended. Unapproved screen protectors may cause the sensors to malfunction.
- Do not cover the proximity sensor area with screen accessories, such as a screen protector or stickers. Doing so may cause the sensor to malfunction.
- Do not allow water to contact the touchscreen. The touchscreen may malfunction in humid conditions or when exposed to water.

Hard keys



Key	Function
Power	• Press and hold to turn the device on or off. • Press to turn on or lock the screen.
Volume	• Press to adjust the device volume.

Soft buttons

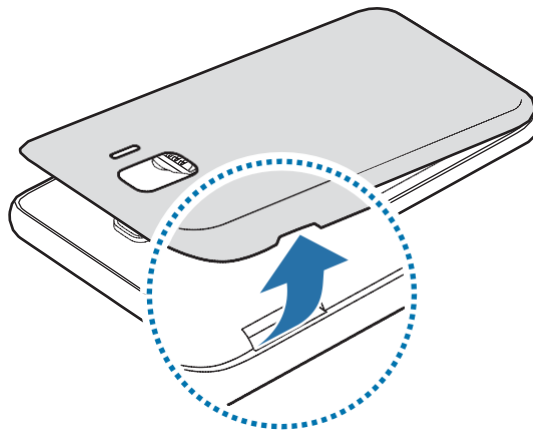


When you turn on the device, the soft buttons will appear at the bottom of the screen. The soft buttons are set to the Recents button, Home button, and Back button by default. Refer to [Navigation bar \(soft buttons\)](#) for more information.

Battery

Installing the battery

- 1 Remove the back cover.

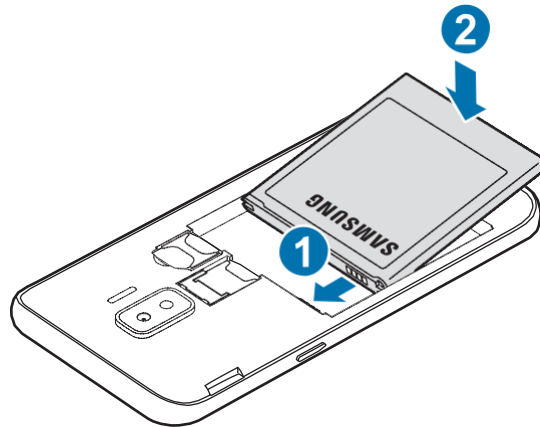


Be careful not to damage your fingernails when you remove the back cover.

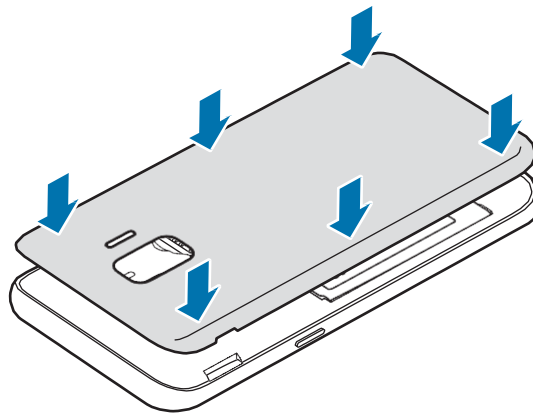


Do not bend or twist the back cover excessively. Doing so may damage the cover.

- 2 Insert the battery with the battery's gold-coloured contacts properly aligned with the device's contacts.

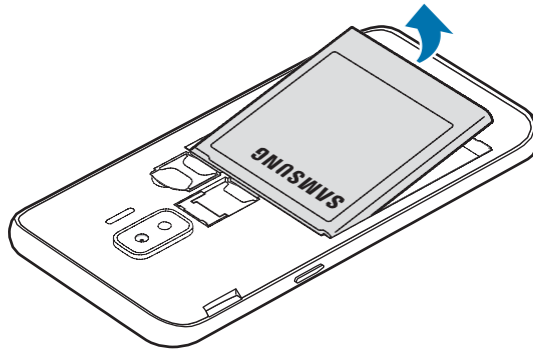


- 3 Replace the back cover.



Removing the battery

- 1 Remove the back cover.
- 2 Pull out the battery.



Charging the battery

Charge the battery before using it for the first time or when it has been unused for extended periods.



Use only Samsung-approved chargers, batteries, and cables. Unapproved chargers or cables can cause the battery to explode or damage the device.



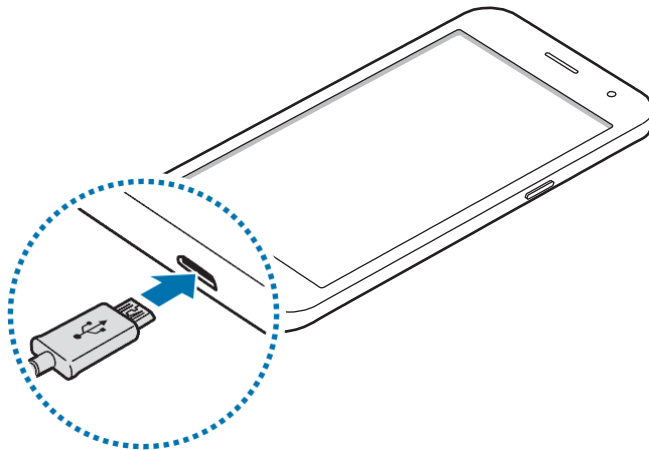
Connecting the charger improperly may cause serious damage to the device. Any damage caused by misuse is not covered by the warranty.



To save energy, unplug the charger when not in use. The charger does not have a power switch, so you must unplug the charger from the electric socket when not in use to avoid wasting power. The charger should remain close to the electric socket and easily accessible while charging.

- 1 Connect the USB cable to the USB power adaptor.

- 2 Plug the USB cable into the device's multipurpose jack.



- 3 Plug the USB power adaptor into an electric socket.
- 4 After fully charging, disconnect the charger from the device. Then, unplug the charger from the electric socket.



Do not remove the battery before removing the charger. This may damage the device.

Reducing the battery consumption

Your device provides various options that help you conserve battery power.

- Optimise the device using the Smart manager.
- When you are not using the device, turn off the screen by pressing the Power key.
- Activate power saving mode.
- Close unnecessary apps.
- Deactivate the Bluetooth feature when not in use.
- Deactivate the Wi-Fi feature when not in use.
- Deactivate auto-syncing of apps that need to be synced, such as emails.
- Decrease the backlight time.
- Decrease the screen brightness.

Battery charging tips and precautions

- When the battery power is low, the battery icon appears empty.
- If the battery is completely discharged, the device cannot be turned on immediately when the charger is connected. Allow a depleted battery to charge for a few minutes before turning on the device.
- If you use multiple apps at once, network apps, or apps that need a connection to another device, the battery will drain quickly. To avoid losing power during a data transfer, always use these apps after fully charging the battery.
- Using a power source other than the charger, such as a computer, may result in a slower charging speed due to a lower electric current.
- The device can be used while it is charging, but it may take longer to fully charge the battery.
- If the device receives an unstable power supply while charging, the touchscreen may not function. If this happens, unplug the charger from the device.
- While charging, the device and the charger may heat up. This is normal and should not affect the device's lifespan or performance. If the battery gets hotter than usual, the charger may stop charging.
- If you charge the device while the multipurpose jack is wet, the device may be damaged. Thoroughly dry the multipurpose jack before charging the device.
- If the device is not charging properly, take the device and the charger to a Samsung Service Centre.

Power saving mode

Activate power saving mode to extend the battery's usage time.

- 1 Launch the **Settings** app and tap **Smart Manager** → **Battery**.
- 2 Tap **SAVE POWER** to change the power saving settings before entering power saving mode.
- 3 Tap **APPLY**.

SIM or USIM card

Installing the SIM or USIM card

Insert the SIM or USIM card provided by the mobile telephone service provider.

For dual SIM models, you can insert two SIM or USIM cards so you can have two phone numbers or service providers for a single device. In some areas, data transfer speeds may be slower if two SIM cards are inserted in the device than when one SIM card is inserted.



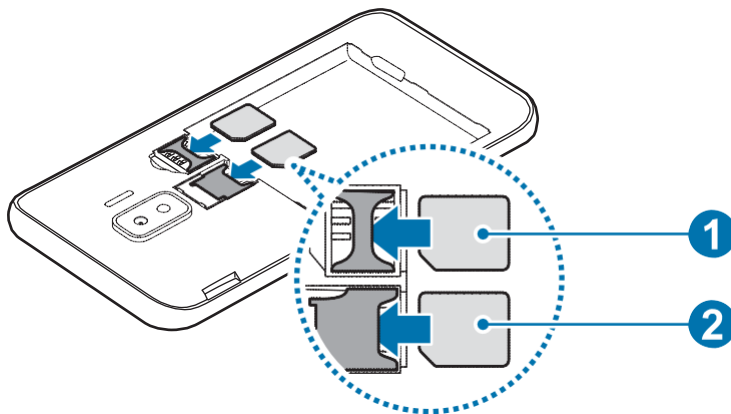
- Use only a microSIM card.
- Use caution not to lose or let others use the SIM or USIM card. Samsung is not responsible for any damages or inconveniences caused by lost or stolen cards.



Some LTE services may not be available depending on the service provider. For more information about service availability, contact your service provider.

► **Dual SIM models:** Insert the SIM or USIM card with the gold-coloured contacts facing downwards.

Insert the primary SIM or USIM card into SIM card slot 1 () and the secondary SIM or USIM card into SIM card slot 2 ().

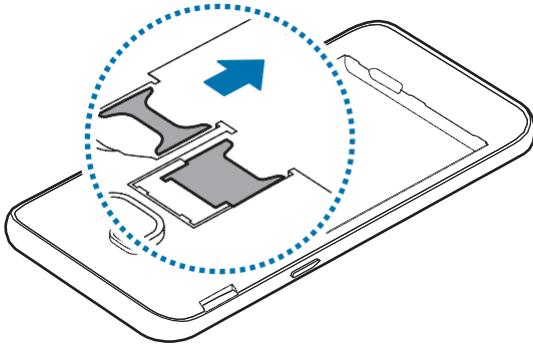


Do not insert a memory card into the SIM card slot. If a memory card happens to be lodged in the SIM card slot, take the device to a Samsung Service Centre to remove the memory card.

3 Replace the battery and back cover.

Removing the SIM or USIM card

- 1 Remove the back cover and battery.
- 2 Pull out the SIM or USIM card.



Using dual SIM or USIM cards (dual SIM models)

If you insert two SIM or USIM cards, you can have two phone numbers or service providers for a single device.

Changing the display name of SIM or USIM cards

Launch the **Settings** app, tap **Connections** → **SIM card manager**, and then select a SIM or USIM card to set a display name for each card.

Setting preferred SIM or USIM cards

When two cards are activated, you can assign voice calls, messaging, and data services to specific cards.

Launch the **Settings** app, tap **Connections** → **SIM card manager**, and then set the feature preferences for your cards in **PREFERRED SIM FOR**.

Memory card (microSD card)

Installing a memory card

Your device's memory card capacity may vary from other models and some memory cards may not be compatible with your device depending on the memory card manufacturer and type. To view your device's maximum memory card capacity, refer to the Samsung website.

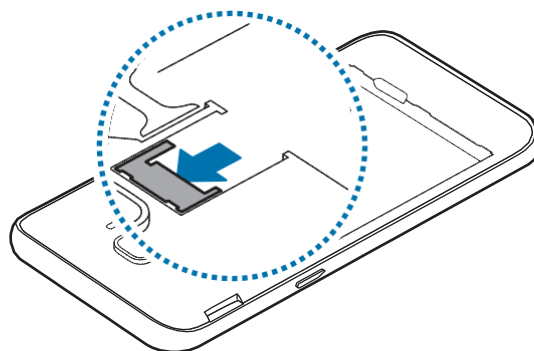


- Some memory cards may not be fully compatible with the device. Using an incompatible card may damage the device or the memory card, or corrupt the data stored in it.
- Use caution to insert the memory card right-side up.



- The device supports the FAT and the exFAT file systems for memory cards. When inserting a card formatted in a different file system, the device will ask to reformat the card or will not recognise the card. To use the memory card, you must format it. If your device cannot format or recognise the memory card, contact the memory card manufacturer or a Samsung Service Centre.
- Frequent writing and erasing of data shortens the lifespan of memory cards.

- 1 Remove the back cover and battery.
- 2 Insert a memory card with the gold-coloured contacts facing downwards.



- 3 Replace the battery and back cover.

Removing the memory card

Before removing the memory card, first unmount it for safe removal.

Launch the **Settings** app and tap **Smart Manager** → **Storage** →  → **Storage settings** → **SD card** → **UNMOUNT**.

1 Remove the back cover and battery.

2 Pull out the memory card.

3 Replace the battery and back cover.



Do not remove external storage, such as a memory card or USB storage, while the device is transferring or accessing information, or right after transferring data. Doing so can cause data to be corrupted or lost or cause damage to the external storage or device. Samsung is not responsible for losses, including loss of data, resulting from the misuse of external storage devices.

Formatting the memory card

A memory card formatted on a computer may not be compatible with the device. Format the memory card on the device.

Launch the **Settings** app and tap **Smart Manager** → **Storage** →  → **Storage settings** → **SD card** → **Format** → **FORMAT**.



Before formatting the memory card, remember to make backup copies of all important data stored in the memory card. The manufacturer's warranty does not cover loss of data resulting from user actions.

Turning the device on and off

Press and hold the Power key for a few seconds to turn on the device.

When you turn on your device for the first time or after performing a data reset, follow the on- screen instructions to set up your device.

To turn off the device, press and hold the Power key, and then tap **Power off**.



- If your device is frozen and unresponsive, press and hold the Power key and the Volume Down key simultaneously for more than 7 seconds to restart it.
- Follow all posted warnings and directions from authorised personnel in areas where the use of wireless devices is restricted, such as aeroplanes and hospitals.

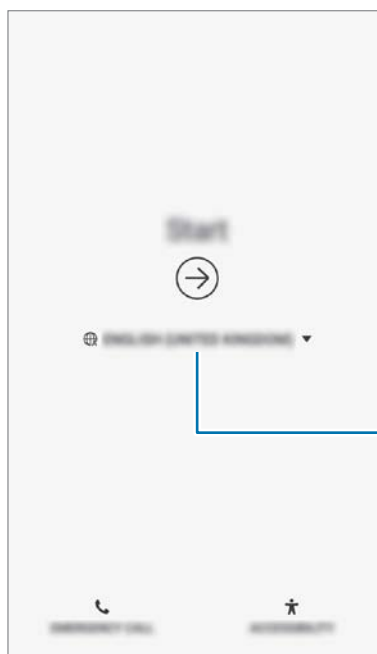
Initial setup

When you turn on your device for the first time or after performing a data reset, follow the on-screen instructions to set up your device.



The initial setup procedures may vary depending on the device's software and your region.

- 1 Turn on the device.
- 2 Select your preferred device language and select.



Select a language.

- 3 Select a Wi-Fi network and connect to it.



If you do not connect to a Wi-Fi network, you may not be able to set up some device features during the initial setup.

- 4 Follow the on-screen instructions to proceed the initial setup.
- 5 Set a screen lock method to protect your device. You can protect your personal information by preventing others from accessing your device. To set the screen lock method later, tap **Not now**.
- 6 Select features you want to use and complete the initial setup.
The Home screen will appear.

Samsung account

Introduction

Your Samsung account is an integrated account service that allows you to use a variety of Samsung services provided by mobile devices, TVs, and the Samsung website. Once your Samsung account has been registered, you can use apps provided by Samsung, without signing in to your account.

Create your Samsung account with your email address.

To check the list of services that can be used with your Samsung account, visit account.samsung.com. For more information on Samsung accounts, launch the **Settings** app and tap **Accounts** → **Accounts** → **Samsung account** → **Help**.

Registering your Samsung account

Registering a new Samsung account

If you do not have a Samsung account, you should create one.

- 1 Launch the **Settings** app and tap **Accounts** → **Accounts** → **Add account**.
- 2 Tap **Samsung account** → **CREATE ACCOUNT**.
- 3 Follow the on-screen instructions to complete creating your account.

Registering an existing Samsung account

If you already have a Samsung account, register it to the device.

- 1 Launch the **Settings** app and tap **Accounts** → **Accounts** → **Add account**.
- 2 Tap **Samsung account**.
- 3 Enter your email address and password, and then tap **SIGN IN**.
If you forget your account information, tap **Find ID** or **Reset password**. You can find your account information when you enter the required information.

Removing your Samsung account

When you remove your registered Samsung account from the device, your data, such as contacts or events, will also be removed.

- 1 Launch the **Settings** app and tap **Accounts** → **Accounts**.
- 2 Tap **Samsung account** → **Remove account**.
- 3 Enter your Samsung account password and tap **CONFIRM**.

Transferring data from your previous device

You can copy your data, such as images, contacts, and apps from your previous device via Smart Switch.



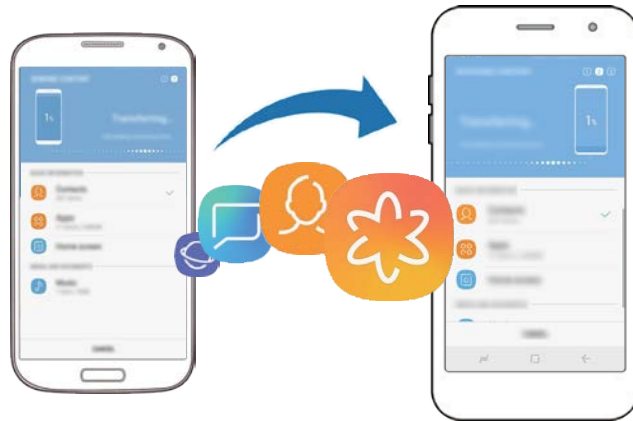
- This feature may not be supported on some devices or computers.
- Limitations apply. Visit www.samsung.com/smartswitch for details.
Samsung takes copyright seriously. Only transfer content that you own or have the right to transfer.

Smart Switch

Transfer data between mobile devices via Smart Switch. If you do not have the app, download it from **Galaxy Apps** or **Play Store**.

Transferring data from a mobile device

Transfer data from your previous device to your device.



- 1 On both devices, download and install Smart Switch from **Galaxy Apps** or **Play Store**.
- 2 Place the devices near each other.
- 3 Launch **Smart Switch** on both devices.
- 4 On the previous device, tap **WIRELESS** → **SEND**.
- 5 On your device, tap **WIRELESS** → **RECEIVE** and select the previous device type.
- 6 Follow the on-screen instructions to transfer data from your previous device.

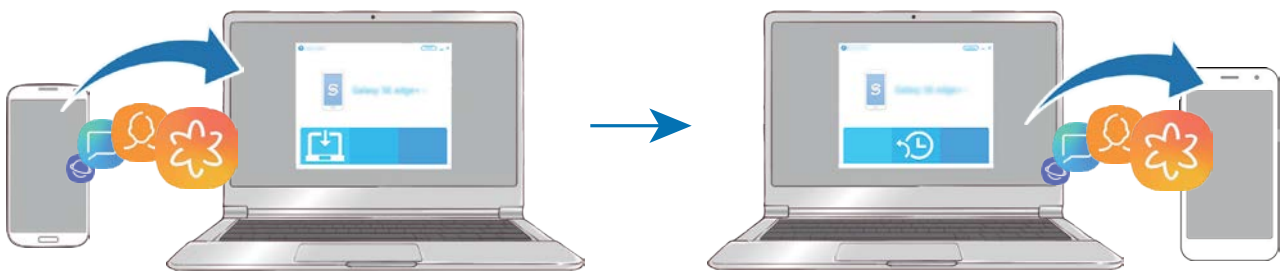
Transferring data using external storage

Transfer data using external storage, such as a microSD card.

- 1 Transfer data from your previous device to external storage.
- 2 Insert or connect the external storage device to your device.
- 3 On your device, launch the **Smart Switch** app and tap **EXTERNAL STORAGE** → **RESTORE**.
- 4 Follow the on-screen instructions to transfer data from external storage.

Transferring backup data from a computer

Transfer data between your device and a computer. You must download the Smart Switch computer version app from www.samsung.com/smartswitch. Back up data from your previous device to a computer and import the data to your device.



- 1 On the computer, visit www.samsung.com/smartswitch to download Smart Switch.
 - 2 On the computer, launch Smart Switch.
-  If your previous device is not a Samsung device, back up data to a computer using a program provided by the device's manufacturer. Then, skip to the fifth step.
- 3 Connect your previous device to the computer using the device's USB cable.
 - 4 On the computer, follow the on-screen instructions to back up data from the device. Then, disconnect your previous device from the computer.
 - 5 Connect your device to the computer using the USB cable.
 - 6 On the computer, follow the on-screen instructions to transfer data to your device.

Understanding the screen

Controlling the touchscreen



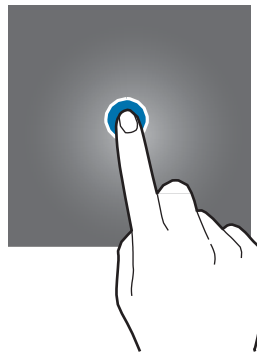
- Do not allow the touchscreen to come into contact with other electrical devices. Electrostatic discharges can cause the touchscreen to malfunction.
- To avoid damaging the touchscreen, do not tap it with anything sharp or apply excessive pressure to it with your fingertips.
- Leaving the touchscreen idle for extended periods may result in afterimages (screen burn-in) or ghosting. Turn off the touchscreen when you do not use the device.



- The device may not recognise touch inputs close to the edges of the screen, which are outside of the touch input area.
- It is recommended to use fingers when you use the touchscreen.

Tapping

Tap the screen.



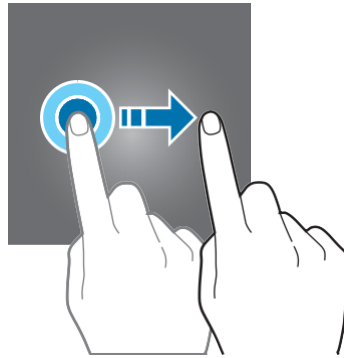
Tapping and holding

Tap and hold the screen for approximately 2 seconds.



Dragging

Tap and hold an item and drag it to the target position.



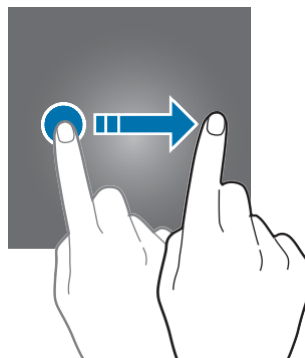
Double-tapping

Double-tap the screen.



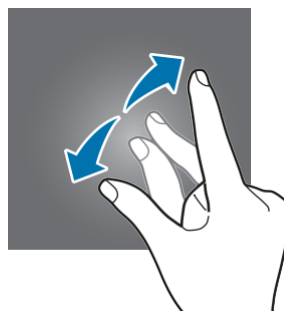
Swiping

Swipe upwards, downwards, to the left, or to the right.



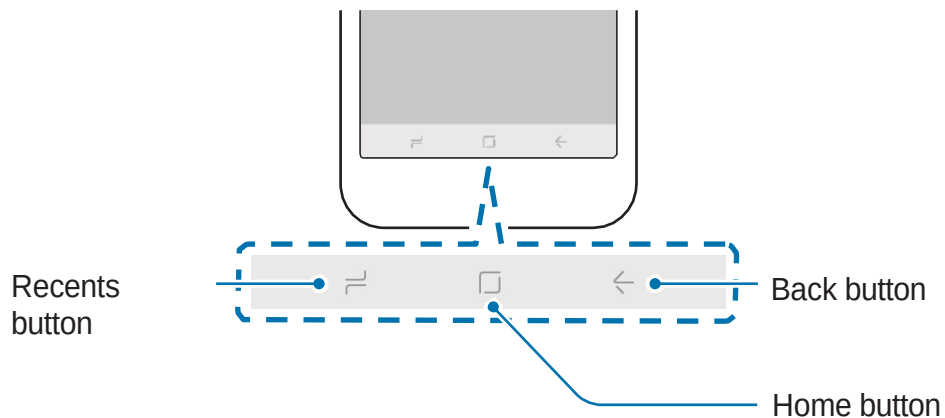
Spreading and pinching

Spread two fingers apart or pinch on the screen.



Navigation bar (soft buttons)

When you turn on the device, the soft buttons will appear on the navigation bar at the bottom of the screen. The soft buttons are set to the Recents button, Home button, and Back button by default. The functions of the buttons can change according to the app currently being used or usage environment.



Butto		Funcio
	Recent s	• Tap to open the list of recent apps.
	Hom	• Tap to return to the Home screen. • Tap and hold to launch the Google Assistant .
		

Setting the navigation bar

Launch the **Settings** app, tap **Display** → **Navigation bar**, and then select an option.

- **Button layout:** Change the order of the buttons on the navigation bar.

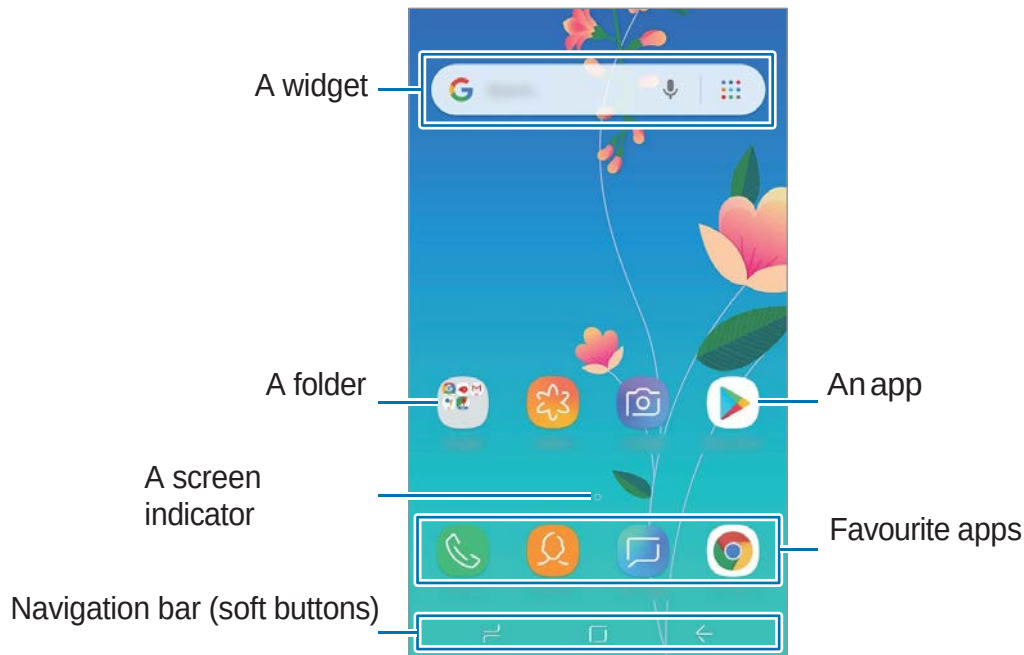
Home screen and Apps screen

The Home screen is the starting point for accessing all of the device's features. It displays widgets, shortcuts to apps, and more.

The Apps screen displays icons for all apps, including newly installed apps.



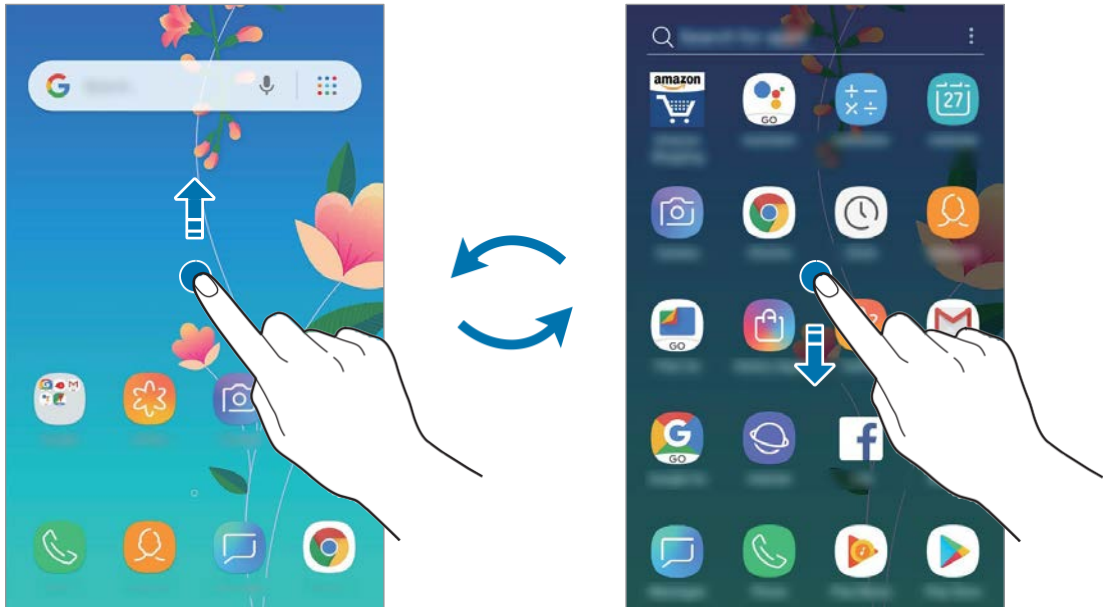
The screen may appear differently depending on the region or service provider.



Switching between Home and Apps screens

On the Home screen, swipe upwards to open the Apps screen. To return to the Home screen, swipe downwards on the Apps screen.

Alternatively, tap the Home button or the Back button.



Home screen

Apps screen

Moving items

Tap and hold an item, and then drag it to a new location. To move the item to another panel, drag it to the side of the screen.

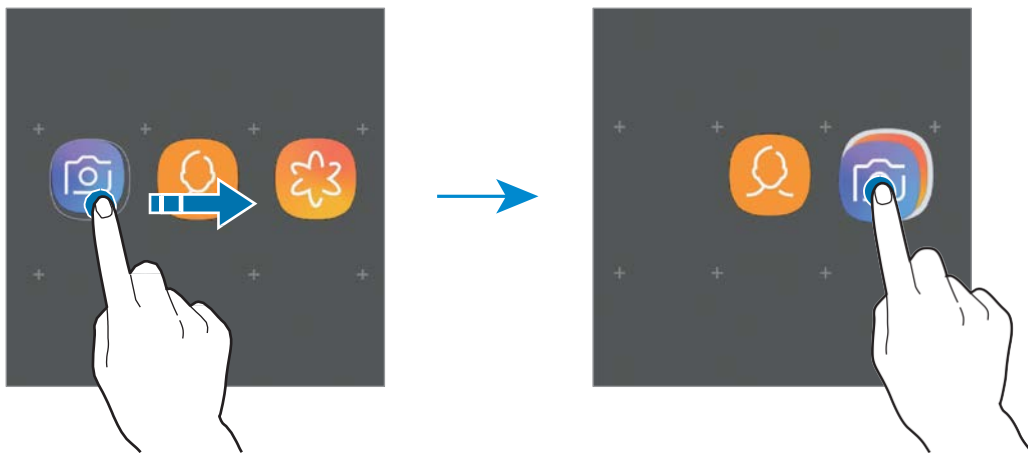
To add a shortcut to an app on the Home screen, tap and hold an item on the Apps screen, and then drag it to the top or bottom of the screen. A shortcut to the app will be added on the Home screen.

You can also move frequently used apps to the shortcuts area at the bottom of the Home screen.

Creating folders

Create folders and gather similar applications to quickly access and launch apps.

- 1 On the Home screen, tap and hold an app, and then drag it over another app.
- 2 Drop the app when a folder frame appears around the apps.
A new folder containing the selected apps will be created. Tap **Enter folder name** and enter a folder name.



- **Adding more apps**

You can add an app by dragging it to the folder.

- **Moving apps from a folder**

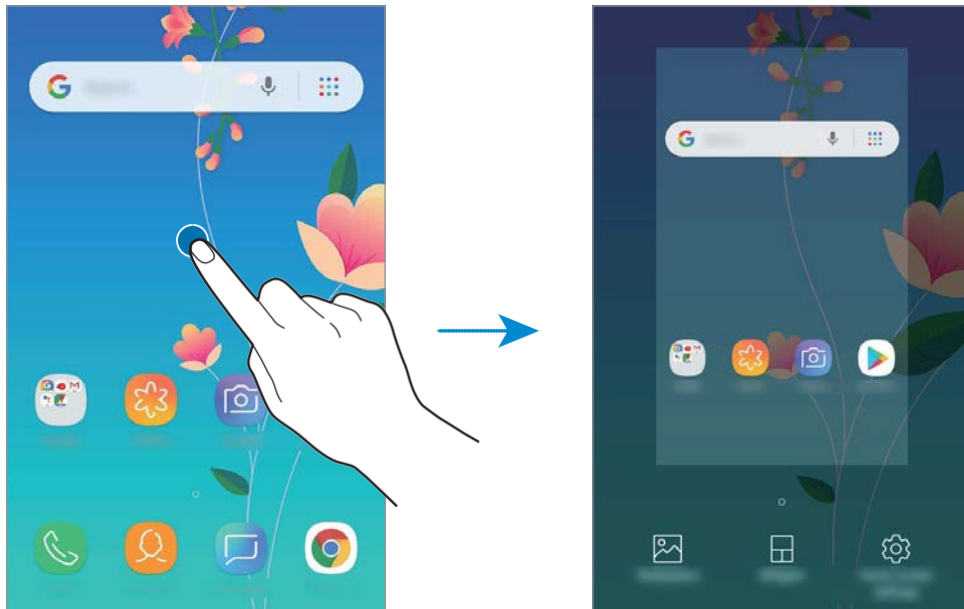
Tap and hold an app to drag it to a new location.

- **Deleting a folder**

Tap and hold a folder, and then tap **Delete folder**. Only the folder will be deleted. The folder's apps will be relocated to the Apps screen.

Editing the Home screen

On the Home screen, tap and hold an empty area, or pinch your fingers together to access the editing options. You can set the wallpaper, add widgets, and more. You can also rearrange Home screen panels.



- **Wallpapers:** Change the wallpaper settings for the Home screen and the locked screen.
- **Widgets:** Widgets are small apps that launch specific app functions to provide information and convenient access on your Home screen. Tap and hold a widget, and then drag it to the Home screen. The widget will be added on the Home screen.
- **Home screen settings:** Change the Home screen settings.

Indicator icons

Indicator icons appear on the status bar at the top of the screen. The icons listed in the table below are most common.



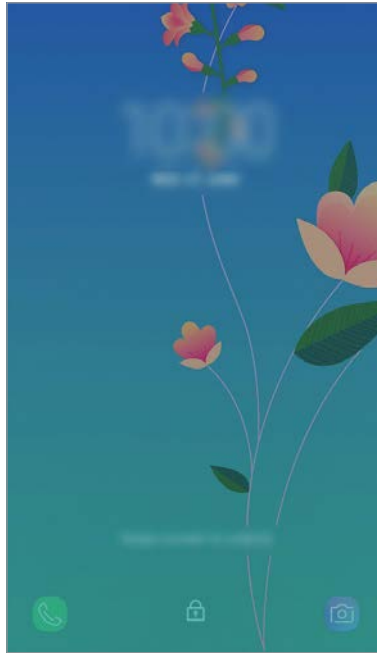
The status bar may not appear at the top of the screen in some apps. To display the status bar, drag down from the top of the screen.

Icon	Meaning
	No signal
	Signal strength
	Roaming (outside of normal service area)
	Preferred SIM or USIM card for calls (dual SIM models)
	GPRS network connected
	EDGE network connected
	UMTS network connected
	HSDPA network connected
	connected HSPA+ network connected LTE
	Wi-Fi connected
	Bluetooth feature activated
	Location services being used
	Call in progress
	Missed call
	New text or multimedia message
	Alarm activated
	Mute mode activated
	Vibration mode
	activated Flight mode
	activated

Lock screen

Pressing the Power key turns off the screen and locks it. Also, the screen turns off and automatically locks if the device is not used for a specified period.

To unlock the screen, swipe in any direction when the screen turns on. If the screen is off, press the Power key to turn on the screen.



Locked screen

Changing the screen lock method

To change the screen lock method, launch the **Settings** app, tap **Lock screen and security** →

Screen lock type, and then select a method.

When you set a pattern, PIN, or password for the screen lock method, you can protect your personal information by preventing others from accessing your device. After setting the screen lock method, the device will require an unlock code whenever unlocking it.

- **Swipe**: Swipe in any direction on the screen to unlock it.
- **Pattern**: Draw a pattern with four or more dots to unlock the screen.
- **PIN**: Enter a PIN with at least four numbers to unlock the screen.
- **Password**: Enter a password with at least four characters, numbers, or symbols to unlock the screen.
- **None**: Do not set a screen lock method.

Screen capture

Capture a screenshot while using the device.

Press and hold the Volume Down key and the Power key simultaneously. You can view captured images in **Gallery**.

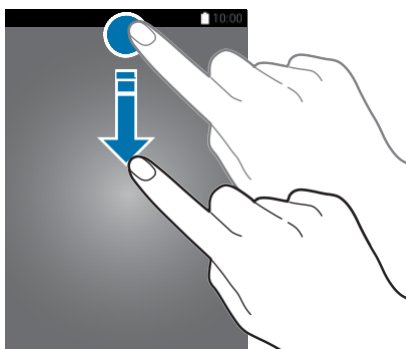


It is not possible to capture a screenshot while using some apps and features.

Notification panel

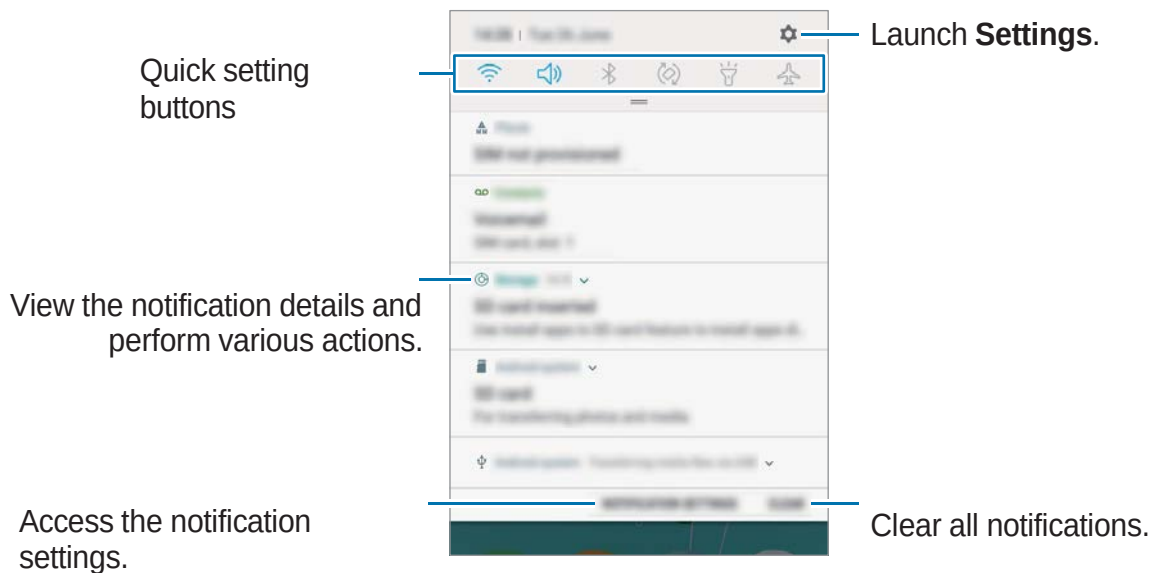
When you receive new notifications, such as messages or missed calls, indicator icons appear on the status bar. To see more information about the icons, open the notification panel and view the details.

To open the notification panel, drag the status bar downwards. To close the notification panel, swipe upwards on the screen.



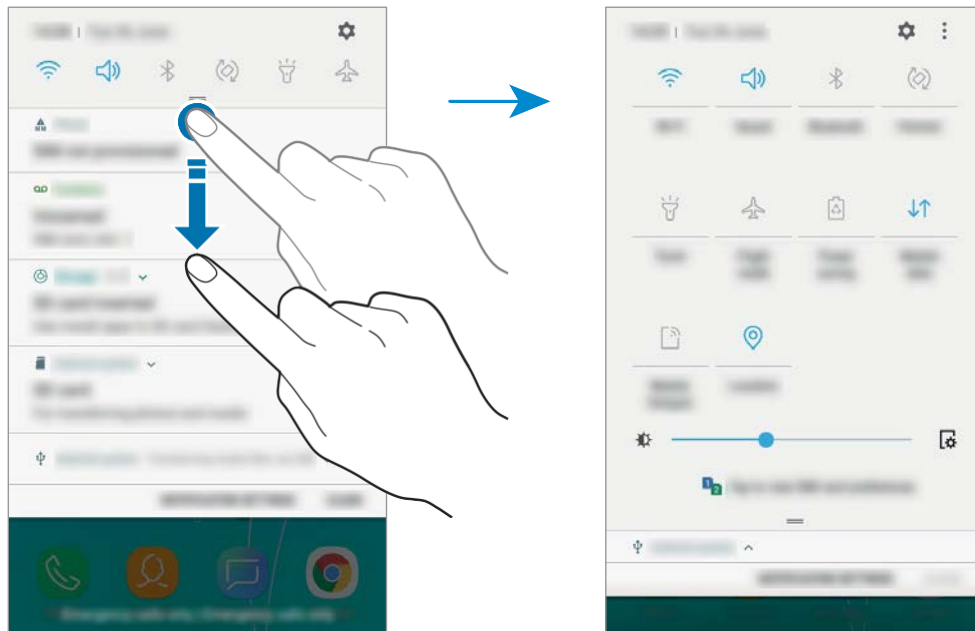
You can open the notification panel, even on the locked screen.

You can use the following functions on the notification panel.



Using quick setting buttons

Tap quick setting buttons to activate certain features. Swipe downwards on the notification panel to view more buttons.



To change feature settings, tap the text under each button or tap and hold a button.

To rearrange buttons, tap  → **Button order**, tap and hold a button, and then drag it to another location.

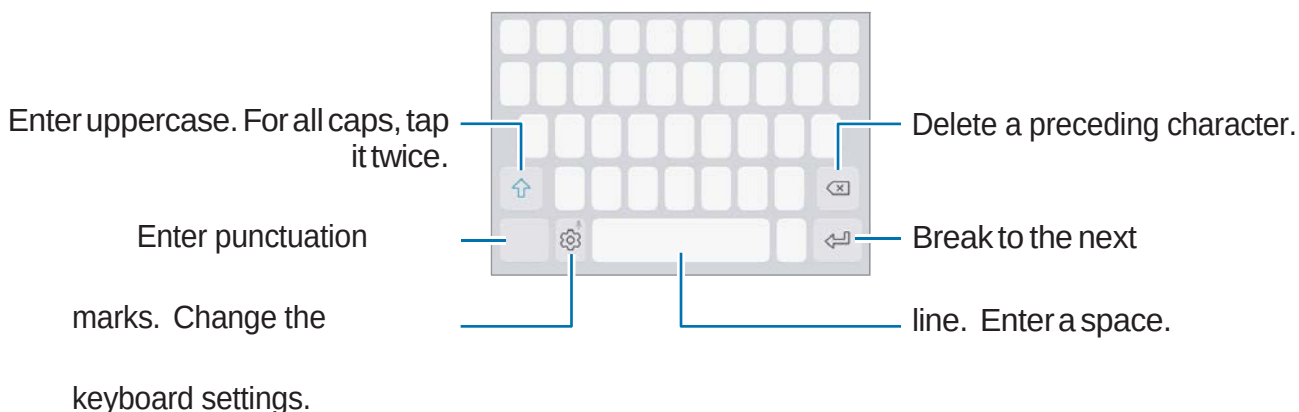
Entering text

Keyboard layout

A keyboard appears automatically when you enter text to send messages and more.



Text entry is not supported in some languages. To enter text, you must change the input language to one of the supported languages.



Changing the input language

Tap  → **Languages and types** → **MANAGE INPUT LANGUAGES**, and then select the languages to use. When you select two or more languages, you can switch between the input languages by swiping to the left or right on the space key.

Changing the keyboard

Tap  to change the keyboard.

To change the keyboard type, tap  → **Languages and types**, select a language, and then select the keyboard type you want.



On a **3x4 keyboard**, a key has three or four characters. To enter a character, tap the corresponding key repeatedly until the desired character appears.

Additional keyboard functions

Tap and hold  to use various functions. Other icons may appear instead of the  icon depending on the last function that was used.



Some features may not be available depending on the region or service provider.

-  : Enter text by voice.
-  : Enter emoticons.
-  : Change the keyboard for one-handed operation.
-  : Change the keyboard settings.

Copying and pasting

- 1 Tap and hold over text.
- 2 Drag  or  to select the desired text, or tap **SELECT ALL** to select all text.
- 3 Tap **COPY** or **CUT**.
- 4 Tap and hold where the text is to be inserted and tap **PASTE**.

Apps and features

Installing or uninstalling apps

Galaxy Apps

Purchase and download apps. You can download apps that are specialised for Samsung Galaxy devices.

Launch the **Galaxy Apps** app.



This app may not be available depending on the region or service provider.

Installing apps

Browse apps by category or tap the search field to search for a keyword.

Select an app to view information about it. To download free apps, tap **INSTALL**. To purchase and download apps where charges apply, tap the price and follow the on-screen instructions.



To change the auto update settings, tap  → **Settings** → **Auto update apps**, and then select an option.

Play Store

Purchase and download apps.

Launch the **Play Store** app.

Installing apps

Browse apps by category or search for apps by keyword.

Select an app to view information about it. To download free apps, tap **INSTALL**. To purchase and download apps where charges apply, tap the price and follow the on-screen instructions.



To change the auto update settings, tap  → **Settings** → **Auto-update apps**, and then select an option.

Managing apps

Uninstalling or disabling apps

Tap and hold an app and select an option.

- **Disable:** Disable selected default apps that cannot be uninstalled from the device.
- **Uninstall:** Uninstall downloaded apps.

Enabling apps

Launch the **Settings** app, tap **Apps and notifications** → **All apps** → → **Disabled**, select an app, and then tap **ENABLE**.

Setting app permissions

For some apps to operate properly, they may need permission to access or use information on your device. When you open an app, a pop-up window may appear and request access to certain features or information. Tap **ALLOW** on the pop-up window to grant permissions to the app.

To view your app permission settings, launch the **Settings** app and tap **Apps and notifications** → **All apps**. Select an app and tap **Permissions**. You can view the app's permissions list and change its permissions.

To view or change app permission settings by permission category, launch the **Settings** app and tap **Apps and notifications** → **App permissions**. Select an item and tap the switches next to apps to grant permissions.



If you do not grant permissions to apps, the basic features of the apps may not function properly.

Phone

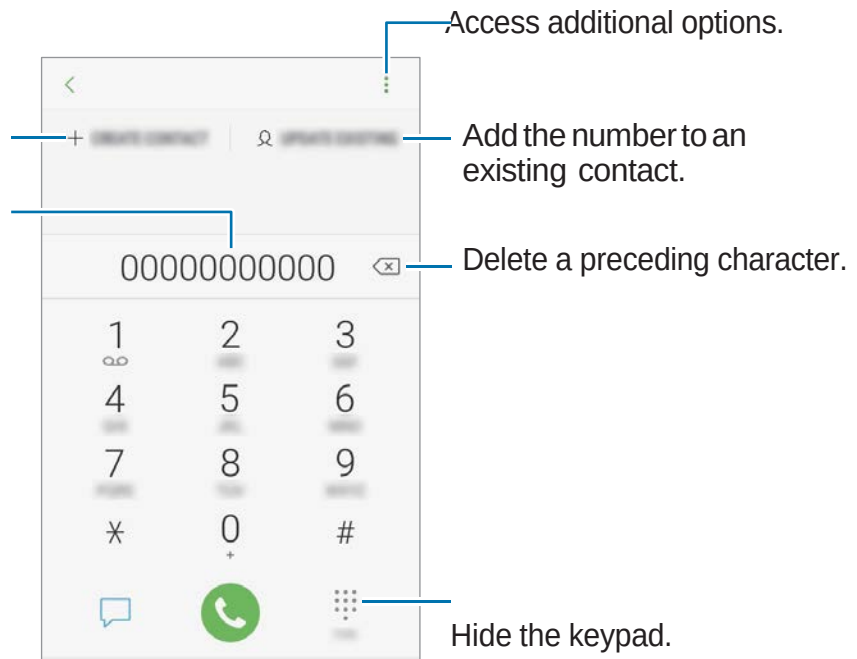
Introduction

Make or answer voice calls.

Making calls

- 1 Launch the **Phone** app and enter a phone number.
If the keypad does not appear on the screen, tap  to open the keypad.
- 2 Tap  to make a voice call.
For dual SIM models, tap  or  to make a voice call.

Create a new
contact. Preview the
phone number.



Making calls from call logs or contacts list

Swipe to the right on a contact or a phone number to make a call.

Making calls from the locked screen

On the locked screen, drag  outside the circle.

Making an international call

- 1 Tap  to open the keypad if the keypad does not appear on the screen.
- 2 Tap and hold **0** until the **+** sign appears.
- 3 Enter the country code, area code, and phone number, and then tap .
For dual SIM models, enter the country code, area code, and phone number, and then tap  or .

Receiving calls

Answering a call

When a call comes in, drag  outside the large circle.

Rejecting a call

When a call comes in, drag  outside the large circle.

To send a message when rejecting an incoming call, drag the rejection message bar upwards.

To create various rejection messages, launch the **Phone** app, tap  → **Settings** → **Quick decline messages**, enter a message, and then tap .

Missed calls

If a call is missed, the  icon appears on the status bar. Open the notification panel to view the list of missed calls.

Blocking phone numbers

Block calls from specific numbers added to your block list.

- 1 Launch the **Phone** app and tap  → **Settings** → **Block numbers**.
- 2 Tap , select contacts, and then tap **DONE**.
To manually enter a number, tap **Enter phone number**, enter a phone number, and then tap .

When blocked numbers try to contact you, you will not receive notifications. The calls will be logged in the call log.



You can also block incoming calls from people that do not show their caller ID. Tap the **Block unknown callers** switch to activate the feature.

Options during calls

During a voice call

The following actions are available:

-  : Access additional options.
- **Add call**: Dial a second call. The first call will be put on hold. When you end the second call, the first call will be resumed.
- **Extra volume**: Increase the volume.
- **Bluetooth**: Switch to a Bluetooth headset if it is connected to the device.
- **Speaker**: Activate or deactivate the speakerphone. When using the speakerphone, keep the device away from your ears.
- **Mute**: Turn off the microphone so that the other party cannot hear you.
- **Keypad / Hide**: Open or close the keypad.
-  : End the current call.

Adding a phone number to Contact

Adding a phone number to Contacts from the keypad

- 1 Launch the **Phone** app.
- 2 Enter the number.
If the keypad does not appear on the screen, tap  to open the keypad.
- 3 Tap **CREATE CONTACT** to create a new contact, or tap **UPDATE EXISTING** to add the number to an existing contact.

Adding a phone number to Contacts from the calls list

- 1 Launch the **Phone** app.
- 2 Tap a phone number → **Details**.
- 3 Tap **Create contact** to create a new contact, or tap **Update existing** to add the number to an existing contact.

Contacts

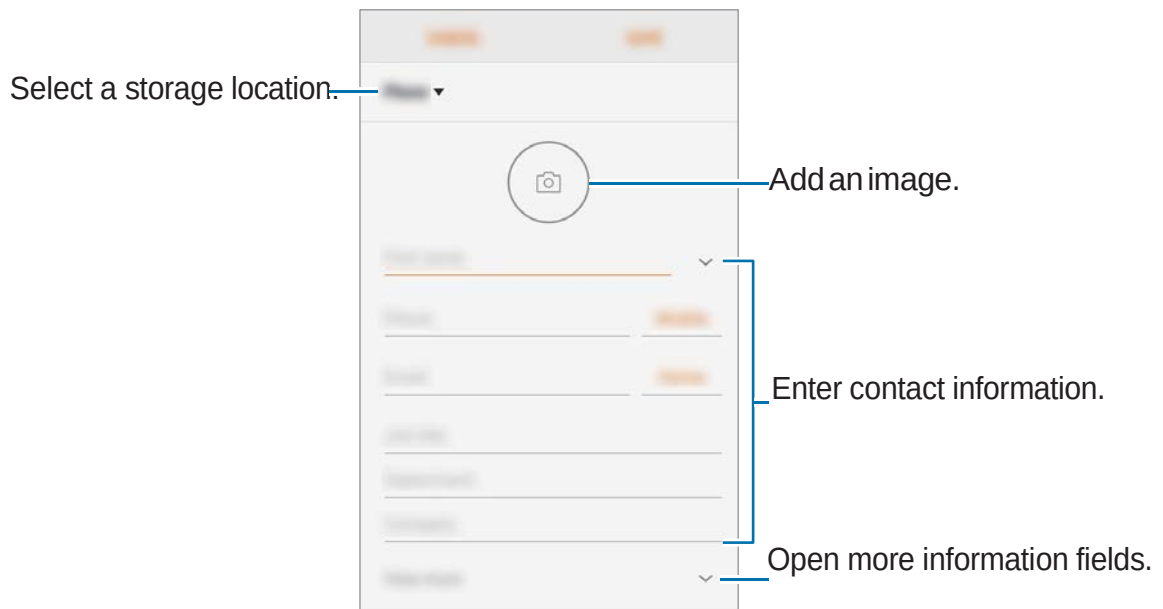
Introduction

Create new contacts or manage contacts on the device.

Adding contacts

Creating a new contact

- 1 Launch the **Contacts** app, tap , and then select a storage location.
- 2 Enter contact information.



Depending on the selected storage location, the types of information you can save may vary.

- 3 Tap **SAVE**.

Importing contacts

Add contacts by importing them from other storages to your device.

- 1 Launch the **Contacts** app and tap  → **Manage contacts** → **Import/Export contacts** → **IMPORT**.
- 2 Select a storage location to import contacts from.
- 3 Select a storage location to save contacts to.
- 4 Tick VCF files or contacts to import and tap **DONE**.

Syncing contacts with your web accounts

Sync your device contacts with online contacts saved in your web accounts, such as your Samsung account.

- 1 Launch the **Settings** app, tap **Accounts** → **Accounts** and select the account to sync with.
- 2 Tap **Sync account** and tap the **Sync Contacts** switch to activate it.
For the Samsung account, tap  → **Sync settings** and tap the **Contacts** switch to activate it.

Searching for contacts

Launch the **Contacts** app.

Use one of the following search methods:

- Scroll up or down the contacts list.
- Drag a finger along the index at the right side of the contacts list to scroll through it quickly.
- Tap the search field at the top of the contacts list and enter search criteria.

Tap the contact's image, or tap the contact's name → **Details**. Then take one of the following actions:

-  : Add to favourite contacts.
-  : Make a voice call.
-  : Compose a message.
-  : Compose an email.

Sharing contacts

You can share contacts with others by using various sharing options.

- 1 Launch the **Contacts** app and tap  → **Share**.
- 2 Select contacts and tap **SHARE**.
- 3 Select a sharing method.

Deleting contacts

- 1 Launch the **Contacts** app and tap  → **Delete**.
- 2 Select contacts and tap **DELETE**.

To delete contacts one by one, open the contacts list and tap a contact's image or tap a contact's name → **Details**. Then tap  → **Delete**.

Messages

Introduction

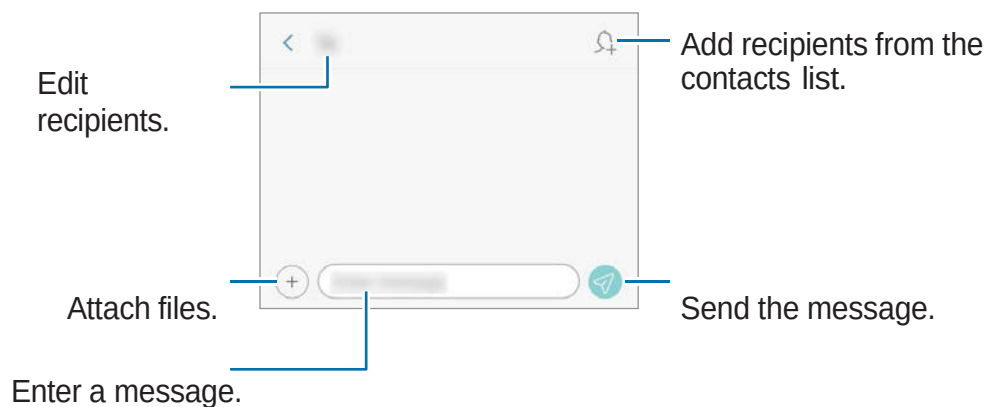
Send and view messages by conversation.

Sending messages



You may incur additional charges for sending messages when you are roaming.

- 1 Launch the **Messages** app and tap.
- 2 Add recipients.
- 3 Enter a message.



- 4 Tap to send the message.
For dual SIM models, tap or to send the message.

Viewing messages

Messages are grouped into message threads by contact.



You may incur additional charges for receiving messages when you are roaming.

- 1 Launch the **Messages** app.
- 2 On the messages list, select a contact.
- 3 View your conversation.
To reply to the message, tap **Enter message**, enter a message, and then tap .
For dual SIM models, tap  or .

Setting the message notification

You can change notification sound, display options, and more.

- 1 Launch the **Messages** app, tap  → **Settings** → **Notifications**, and then tap the switch to activate it.
- 2 Change the notification settings.

Internet

Introduction

Browse the Internet to search for information and bookmark your favourite webpages to access them conveniently.

Browsing

webpages 1 Launch

the **Internet** app. 2 Tap

the address field.

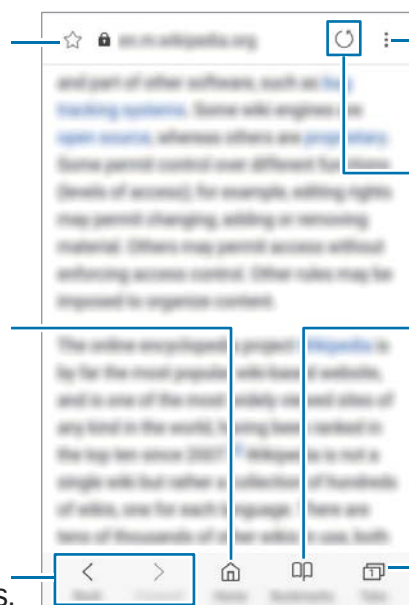
3 Enter the web address or a keyword, and then tap **Go**.

To view the toolbars, drag your finger downwards slightly on the screen.

Bookmark the current webpage.

Open the homepage.

Move between pages.



Access additional options.

Refresh the current webpage.

View your bookmarks and recent browsing history.

Open the browser's tab manager.

Camera

Introduction

Take photos and record videos using Auto mode and settings.

Camera etiquette

- Do not take photos or record videos of other people without their permission.
- Do not take photos or record videos where legally prohibited.
- Do not take photos or record videos in places where you may violate other people's privacy.

Launching Camera

Use the following methods to launch Camera:

- Launch the **Camera** app.
- On the locked screen, drag  outside the circle.

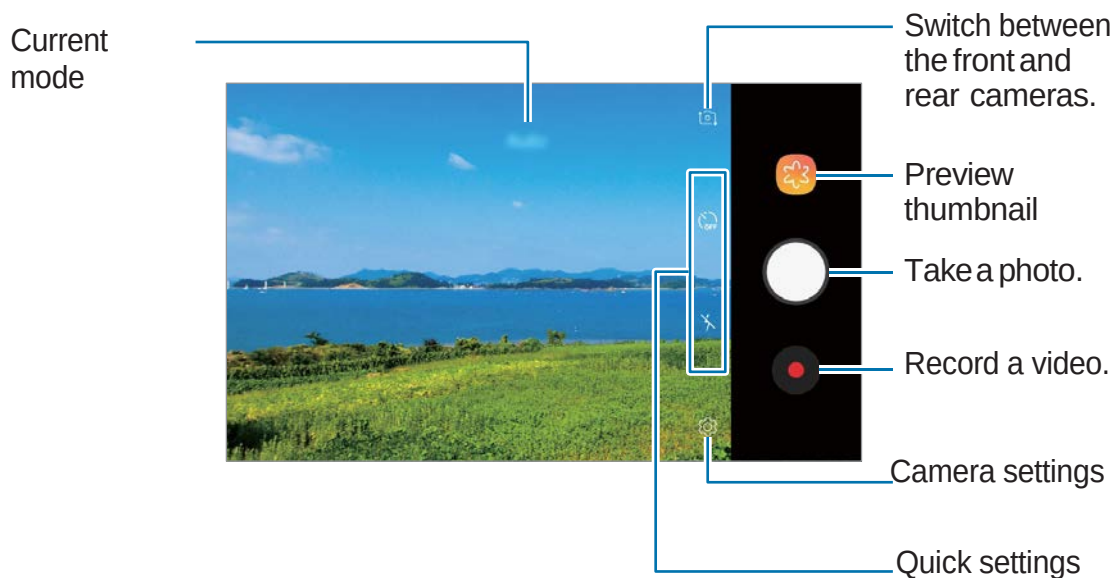


- Some methods may not be available depending on the region or service provider.
- Some camera features are not available when you launch the **Camera** app from the locked screen or when the screen is turned off while the screen lock method is set.
- If photos you take appear blurry, clean the camera lens and try again.

Basic shooting

Taking photos or recording videos

- 1 Tap the image on the preview screen where the camera should focus.
- 2 Tap  to take a photo or tap  to record a video.



- Spread two fingers apart on the screen to zoom in, and pinch to zoom out.
- To adjust the brightness of photos or videos, tap the screen. When the adjustment bar appears, drag  on the adjustment bar towards **+** or **—**.
- To capture an image from the video while recording, tap .
- To change the focus while recording a video, tap where you want to focus. To use auto focus mode, tap .



- The camera automatically shuts off when unused.
- Make sure that the lens is not damaged or contaminated. Otherwise, the device may not work properly.
- Your device's camera features a wide-angle lens. Minor distortion may occur in wide-angle photos or videos and does not indicate device performance problems.

Locking the focus (AF) and exposure (AE)

You can lock the focus or exposure on a selected area to prevent the camera from automatically adjusting based on changes to the subjects or light sources.

Tap and hold the area to focus, the AF/AE frame will appear on the area and the focus and exposure setting will be locked. The setting remains locked even after you take a photo.

Using Auto mode

Auto mode allows the camera to evaluate the surroundings and determine the ideal mode for the photo. You can also take self-portraits with the front camera.



On the preview screen, you can swipe upwards or downwards, or tap  to switch to the front or rear camera.

Customising camera settings

Options for current shooting mode

On the preview screen, use the following options.

-  : Activate or deactivate the flash.
-  : Select the length of the delay before the camera automatically takes a photo.

Camera settings

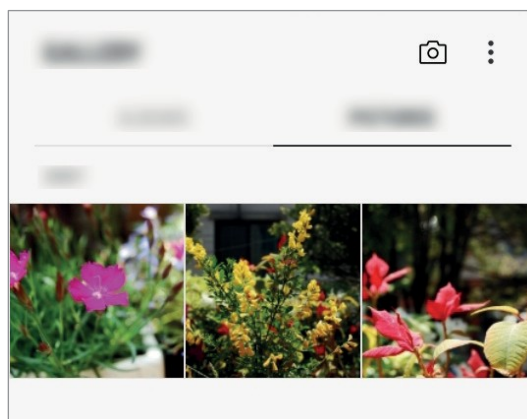
On the preview screen, tap .

- **Picture size (rear) / Picture size (front):** Select a resolution for photos. Using a higher resolution will result in higher quality photos, but they will take up more memory.
- **Video size (rear) / Video size (front):** Select a resolution for videos. Using a higher resolution will result in higher quality videos, but they will take up more memory.
- **Grid lines:** Display viewfinder guides to help composition when selecting subjects.
- **Location tags:** Attach a GPS location tag to the photo.
 -  GPS signal strength may decrease in locations where the signal is obstructed, such as between buildings or in low-lying areas, or in poor weather conditions.
 - Your location may appear on your photos when you upload them to the Internet. To avoid this, deactivate the location tag setting.
- **Volume key function:** Set the device to use the Volume key to control the shutter.
- **Storage location:** Select the memory location for storage.
- **Reset settings:** Reset the camera settings.

Gallery

Introduction

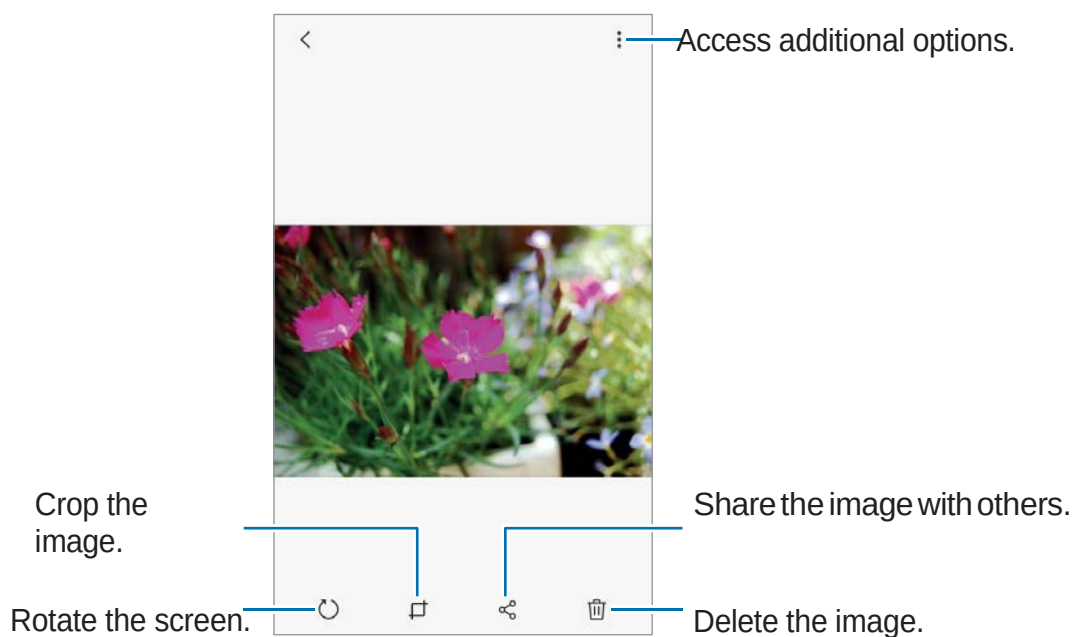
View images and videos stored in your device. You can also manage images and videos by album.



Viewing images and videos

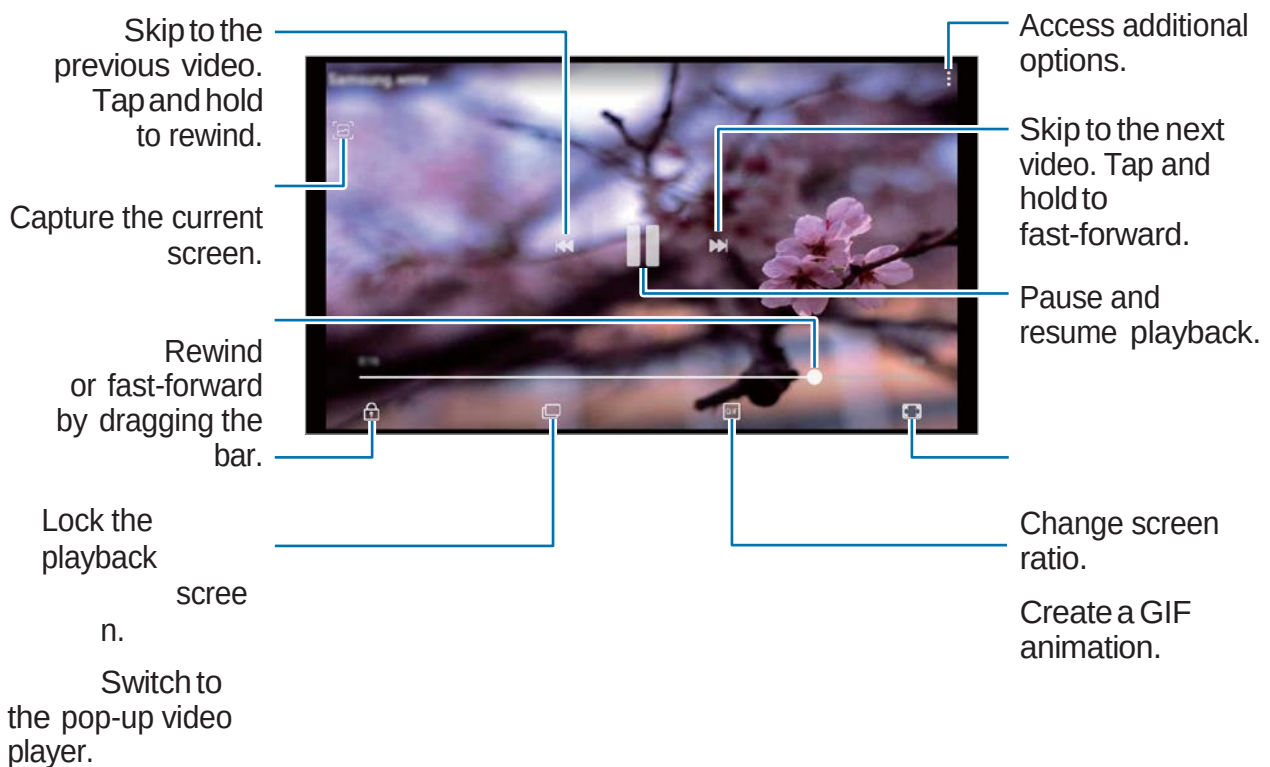
Viewing images

- 1 Launch the **Gallery** app and tap **PICTURES**.
- 2 Select an image.



Viewing videos

- 1 Launch the **Gallery** app and tap **PICTURES**.
- 2 Select a video to play. Video files show the icon on the preview thumbnail.
- 3 Tap ► to play the video.



Drag your finger up or down on the left side of the playback screen to adjust the brightness, or drag your finger up or down on the right side of the playback screen to adjust the volume.

To rewind or fast-forward, swipe to the left or right on the playback screen.

Viewing albums

You can view your images and videos sorted by folders or albums. Launch the **Gallery** app, tap **ALBUMS**, and then select an album.

Deleting images or videos

Deleting an image or a video

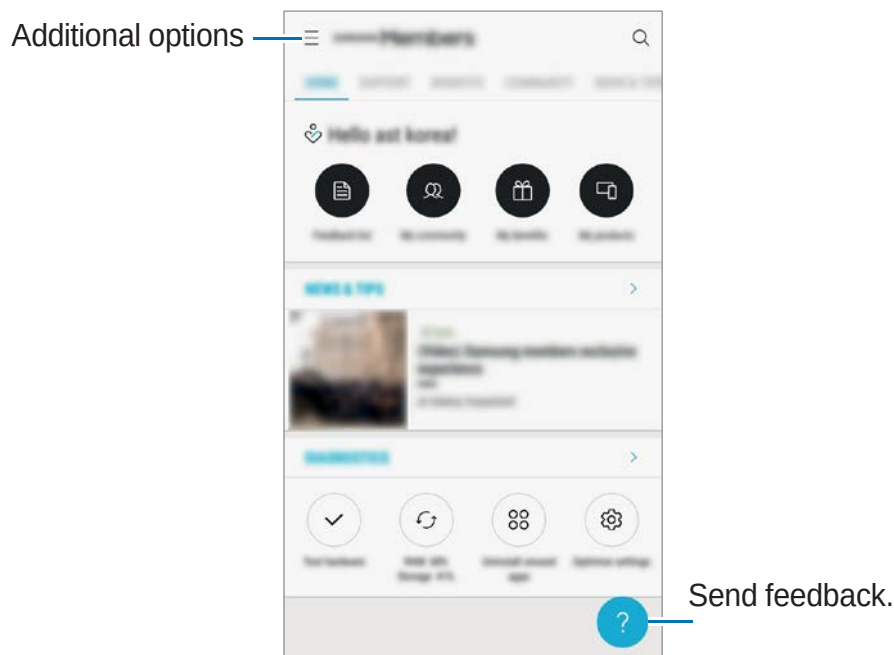
Select an image or a video and tap  at the bottom of the screen.

Deleting multiple images and videos

- 1 On the Gallery screen, tap and hold an image or a video to delete.
- 2 Tick the images or videos to delete.
- 3 Tap  → **Delete**.

Samsung Members

Samsung Members offers support services to customers, such as device problem diagnosis, and lets users submit questions and error reports. You can also share information with others in the Galaxy users' community or view the latest Galaxy news and tips. **Samsung Members** can help you solve any problems you might encounter while using your device.



- This app's availability and supported features may vary depending on the region or service provider.
- To submit your feedback or post your comments, you must sign in to your Samsung account. Refer to [Samsung account](#) for more information.

Calendar

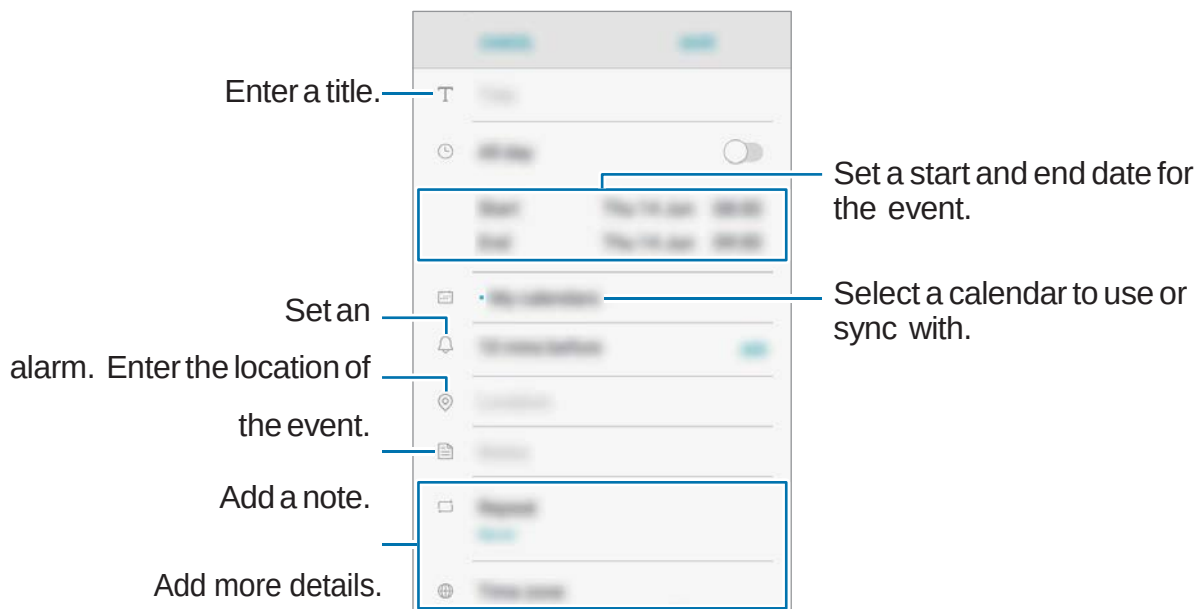
Introduction

Manage your schedule by entering upcoming events or tasks in your planner.

Creating events

1 Launch the **Calendar** app and tap  or double-tap a date.
If the date already has saved events or tasks in it, tap the date and tap .

2 Enter event details.



3 Tap **SAVE** to save the event.

Syncing events and tasks with your accounts

- 1 Launch the **Settings** app, tap **Accounts** → **Accounts** and select the account to sync with.
- 2 Tap **Sync account** and tap the **Sync Calendar** switch to activate it.
For the Samsung account, tap  → **Sync settings** and tap the **Calendar** switch to activate it.

To add accounts to sync with, launch the **Calendar** app and tap  → **Manage calendars** → **Add account**. Then, select an account to sync with and sign in. When an account is added, it will appear on the list.

Files Go

Access and manage various files stored in the device.

Launch the **Files Go** app.

View files that are stored in each storage. You can also view files in your device or a memory card by category.

To search for files or folders, tap .

Clock

Introduction

Set alarms, check the current time in many cities around the world, time an event, or set a specific duration.

ALARM

Launch the **Clock** app and tap **ALARM**.

Setting alarms

Tap  in the alarms list, set an alarm time, select the days on which the alarm will repeat, set other various alarm options, and then tap **SAVE**.

To open the keypad to enter an alarm time, tap the time input field.

To activate or deactivate alarms, tap the switch next to the alarm in the alarms list.

Stopping alarms

Tap **DISMISS** to stop an alarm. If you have previously enabled the snooze option, tap **SNOOZE** to repeat the alarm after a specified length of time.

Deleting alarms

Tap and hold an alarm, tick alarms to delete, and then tap **DELETE**.

WORLD CLOCK

Launch the **Clock** app and tap **WORLD CLOCK**.

Creating clocks

Tap  and enter a city name or select a city from the cities list.

Deleting clocks

Tap and hold a clock, tick clocks to delete, and then tap **DELETE**.

STOPWATCH

- 1 Launch the **Clock** app and tap **STOPWATCH**.
- 2 Tap **START** to time an event.
To record lap times while timing an event, tap **LAP**.
- 3 Tap **STOP** to stop timing.
To restart the timing, tap **RESUME**. To clear lap times, tap **RESET**.

TIMER

- 1 Launch the **Clock** app and tap **TIMER**.
- 2 Set the duration, and then tap **START**.
To open the keypad to enter the duration, tap the duration input field.
- 3 Tap **DISMISS** when the timer goes off.

Calculator

Perform simple or complex calculations.

Launch the **Calculator** app.

Rotate the device to landscape orientation to display the scientific calculator. If **Auto-rotate** is disabled, tap  to display the scientific calculator.

To see the calculation history, tap **HISTORY**. To close the calculation history panel, tap **KEYPAD**.

To clear the history, tap **HISTORY** → **CLEAR HISTORY**.

Radio

Listening to the FM radio

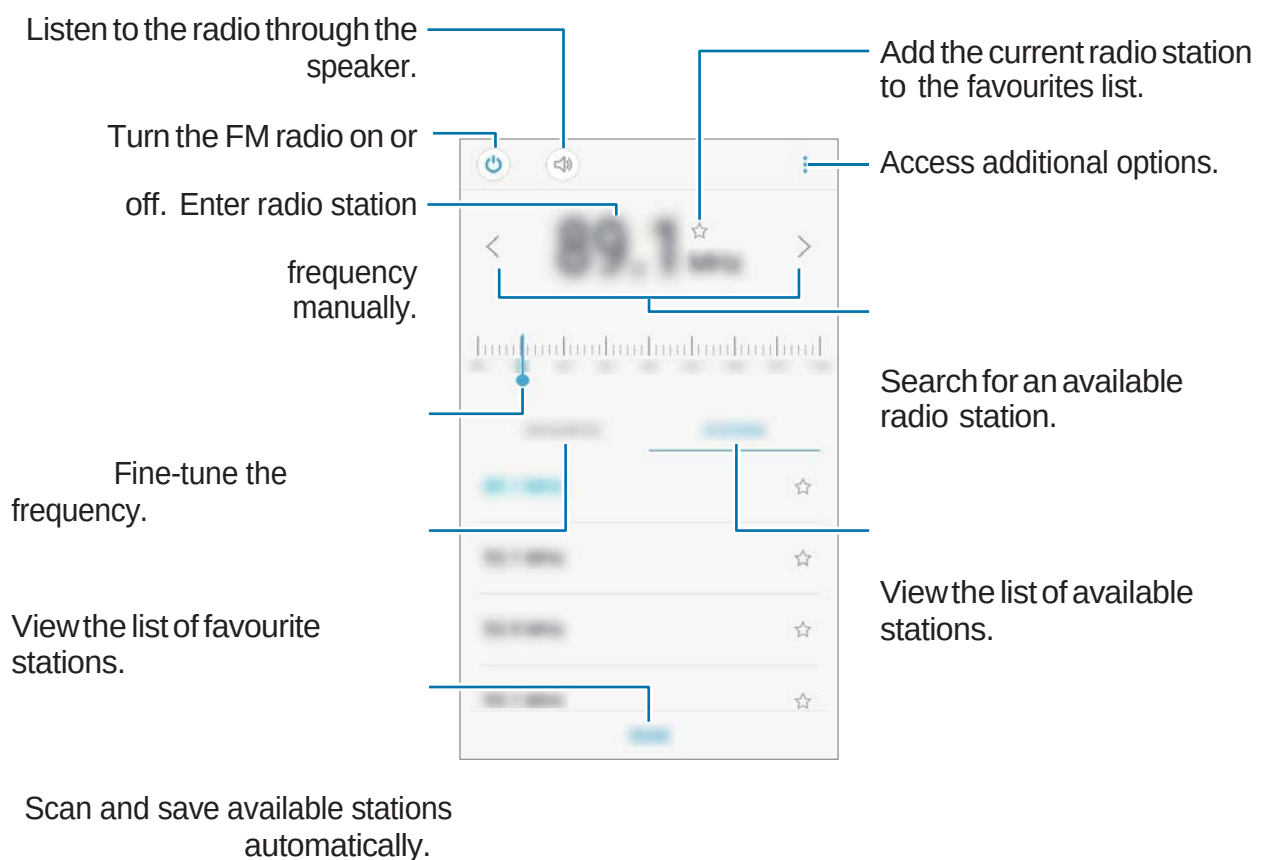
Launch the **Radio** app.

Before you use this app, you must connect a headset, which serves as the radio antenna.



The FM radio scans and saves available stations automatically when running for the first time.

Tap  to turn on the FM radio. Select the radio station you want from the stations list.



Scanning radio stations

Launch the **Radio** app.

Tap **STATIONS** → **SCAN**, and then select a scan option. The FM radio scans and saves available stations automatically.

Select the radio station you want from the stations list.

Sharing content

Share content by using various sharing options. The following actions are an example of sharing images.



You may incur additional charges when sharing files via the mobile network.

1 Launch the **Gallery** app and select an image.

2 Tap  and select a sharing method, such as Bluetooth and message.

When the image is sent to the recipients' devices, a notification will appear on their devices. Tap the notification to view or download the image.

Google apps

Google provides entertainment, social network, and business apps. You may require a Google account to access some apps.

To view more app information, access each app's help menu.



Some apps may not be available or may be labelled differently depending on the region or service provider.

Chrome

Search for information and browse webpages.

Gmail

Send or receive emails via the Google Mail service.

Maps Go

Find your location on the map, search the world map, and view location information for various places around you.

Play Music

Discover, listen to, and share music on your device. You can upload music collections stored on your device to the cloud and access them later.

YouTube Go

Watch or create videos and share them with others.

Google Go

Search quickly for items on the Internet or your device.

Assistant

Search quickly for items by using voice commands.

Settings

Introduction

Customise settings for functions and apps. You can make your device more personalised by configuring various setting options.

Launch the **Settings** app.

To search for settings by entering keywords, tap **Search** or .

Connections

Options

Change settings for various connections, such as the Wi-Fi feature and Bluetooth. On the Settings screen, tap **Connections**.

- **Wi-Fi:** Activate the Wi-Fi feature to connect to a Wi-Fi network and access the Internet or other network devices. Refer to [Wi-Fi](#) for more information.
- **Bluetooth:** Use Bluetooth to exchange data or media files with other Bluetooth-enabled devices. Refer to [Bluetooth](#) for more information.
- **Data usage:** Keep track of your data usage amount and customise the settings for the limitation. Set the device to automatically disable the mobile data connection when the amount of mobile data you have used reaches your specified limit.

You can also activate the data saver feature to prevent some apps running in the background from sending or receiving data. Refer to [Data saver](#) for more information.

- **Flight mode:** Set the device to disable all wireless functions on your device. You can use only non-network services.



Follow the regulations provided by the airline and the instructions of aircraft personnel. In cases where it is allowed to use the device, always use it in flight mode.

- **Mobile Hotspot and Tethering:** Use the device as a mobile hotspot to share the device's mobile data connection with other devices when the network connection is not available. Connections can be made via Wi-Fi, USB, or Bluetooth. Refer to [Mobile Hotspot and Tethering](#) for more information.
- **Mobile networks:** Configure your mobile network settings.
- **SIM card manager** (dual SIM models): Activate your SIM or USIM cards and customise the SIM card settings. Refer to [SIM card manager \(dual SIM models\)](#) for more information.
- **Location:** Change settings for location information permissions.
- **More connection settings:** Customise settings to control other features. Refer to [More connection settings](#) for more information.

Wi-Fi

Activate the Wi-Fi feature to connect to a Wi-Fi network and access the Internet or other network devices.



Turn off Wi-Fi to save the battery when not in use.

Connecting to a Wi-Fi network

- 1 On the Settings screen, tap **Connections** → **Wi-Fi**, and then tap the switch to activate it.
- 2 Select a network from the Wi-Fi networks list.
Networks that require a password appear with a lock icon. Enter the password and tap **CONNECT**.



- Once the device connects to a Wi-Fi network, the device will reconnect to that network each time it is available without requiring a password. To prevent the device connecting to the network automatically, select it from the list of networks and tap **FORGET**.
- If you cannot connect to a Wi-Fi network properly, restart your device's Wi-Fi feature or the wireless router.

Wi-Fi Direct

Wi-Fi Direct connects devices directly via a Wi-Fi network without requiring an access point.

1 On the Settings screen, tap **Connections** → **Wi-Fi**, and then tap the switch to activate it.

2 Tap **ADVANCED** → **VIEW MORE** → **Wi-Fi Direct**.

The detected devices are listed.

If the device you want to connect to is not in the list, request that the device turns on its Wi-Fi Direct feature.

3 Select a device to connect to.

The devices will be connected when the other device accepts the Wi-Fi Direct connection request.

Sending and receiving data

You can share data, such as contacts or media files, with other devices. The following actions are an example of sending an image to another device.

1 Launch the **Gallery** app and select an image.

2 Tap  → **Wi-Fi Direct** and select a device to transfer the image to.

3 Accept the Wi-Fi Direct connection request on the other device.

If the devices are already connected, the image will be sent to the other device without the connection request procedure.

Ending the device connection

1 On the Settings screen, tap **Connections** → **Wi-Fi**.

2 Tap **ADVANCED** → **VIEW MORE** → **Wi-Fi Direct**.

The device displays the connected devices in the list.

3 Tap the device name to disconnect the devices and tap **OK**.

Bluetooth

Use Bluetooth to exchange data or media files with other Bluetooth-enabled devices.



- Samsung is not responsible for the loss, interception, or misuse of data sent or received via Bluetooth.
- Always ensure that you share and receive data with devices that are trusted and properly secured. If there are obstacles between the devices, the operating distance may be reduced.
- Some devices, especially those that are not tested or approved by the Bluetooth SIG, may be incompatible with your device.
- Do not use the Bluetooth feature for illegal purposes (for example, pirating copies of files or illegally tapping communications for commercial purposes). Samsung is not responsible for the repercussion of illegal use of the Bluetooth feature.

Pairing with other Bluetooth devices

- 1 On the Settings screen, tap **Connections** → **Bluetooth**, and then tap the switch to activate it.

The detected devices will be listed.

- 2 Select a device to pair with.
If the device you want to pair with is not in the list, request that the device turns on its visibility option. Refer to the other device's user manuals.



Your device is visible to other devices while the Bluetooth settings screen is open.

- 3 Accept the Bluetooth connection request on your device to confirm.
The devices will be connected when the other device accepts the Bluetooth connection request.

Sending and receiving data

Many apps support data transfer via Bluetooth. You can share data, such as contacts or media files, with other Bluetooth devices. The following actions are an example of sending an image to another device.

- 1 Launch the **Gallery** app and select an image.
- 2 Tap  → **Bluetooth**, and then select a device to transfer the image to.
If your device has paired with the device before, tap the device name without confirming the auto-generated passkey.
If the device you want to pair with is not in the list, request that the device turns on its visibility option.
- 3 Accept the Bluetooth connection request on the other device.

Unpairing Bluetooth devices

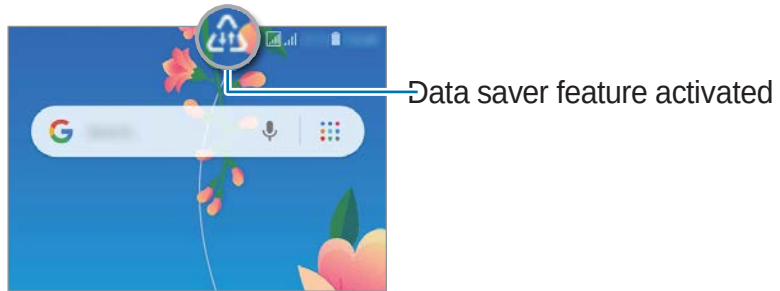
- 1 On the Settings screen, tap **Connections** → **Bluetooth**.
The device displays the paired devices in the list.
- 2 Tap  next to the device name to unpair.
- 3 Tap **Unpair**.

Data saver

Reduce your data usage by preventing some apps running in the background from sending or receiving data.

On the Settings screen, tap **Connections** → **Data usage** → **Data saver** and tap the switch to activate it.

When the data saver feature is activated, the  icon will appear on the status bar.



To select apps to use data without restriction, tap **Allow app while Data saver on** and select apps.

Mobile Hotspot and Tethering

Use the device as a mobile hotspot to share the device's mobile data connection with other devices when the network connection is not available. Connections can be made via Wi-Fi, USB, or Bluetooth.

On the Settings screen, tap **Connections** → **Mobile Hotspot and Tethering**.



You may incur additional charges when using this feature.

- **Mobile Hotspot:** Use the mobile hotspot to share the device's mobile data connection with computers or other devices.
- **Set up Wi-Fi hotspot:** Configure network settings for mobile hotspot.
- **Bluetooth tethering:** Use Bluetooth tethering to share the device's mobile data connection with computers or other devices via Bluetooth.
- **USB tethering:** Use USB tethering to share the device's mobile data connection with a computer via USB. When connected to a computer, the device is used as a wireless modem for the computer.

Using the mobile hotspot

Use your device as a mobile hotspot to share your device's mobile data connection with other devices.

- 1 On the Settings screen, tap **Connections** → **Mobile Hotspot and Tethering** → **Mobile Hotspot**.
- 2 Tap the switch to activate it.
The  icon appears on the status bar. Other devices can find your device in the Wi-Fi networks list.
To set a password for the mobile hotspot, tap **Set up Wi-Fi hotspot** and select the level of security. Then, enter a password and tap **SAVE**.
- 3 On the other device's screen, search for and select your device from the Wi-Fi networks list.
- 4 On the connected device, use the device's mobile data connection to access the Internet.

SIM card manager (dual SIM models)

Activate your SIM or USIM cards and customise the SIM card settings. Refer to [Using dual SIM or USIM cards \(dual SIM models\)](#) for more information.

On the Settings screen, tap **Connections** → **SIM card manager**.

- **Calls:** Select a SIM or USIM card for voice calls.
- **Text messages:** Select a SIM or USIM for messaging.
- **Mobile data:** Select a SIM or USIM card for data services.
- **Smart dual SIM:** Set the device to allow incoming calls from the other SIM or USIM card during a call.



When this feature is enabled, you may incur additional charges for call forwarding depending on the region or service provider.

More connection settings

Customise settings to control other features.

On the Settings screen, tap **Connections** → **More connection settings**.

- **Printing:** Configure settings for printer plug-ins installed on the device. You can search for available printers or add one manually to print files. Refer to [Printing](#) for more information.
- **VPN:** Set up and connect to virtual private networks (VPNs).

Printing

Configure settings for printer plug-ins installed on the device. You can connect the device to a printer via Wi-Fi or Wi-Fi Direct, and print images or documents.



Some printers may not be compatible with the device.

Adding printer plug-ins

Add printer plug-ins for printers you want to connect the device to.

- 1 On the Settings screen, tap **Connections** → **More connection settings** → **Printing** → **Add service**.
- 2 Search for a printer plug-in in **Play Store**.
- 3 Select a printer plug-in and install it.
- 4 Select the printer plug-in and tap the switch to activate it.
The device searches for printers that are connected to the same Wi-Fi network as your device.
- 5 Select a printer to add.



To add printers manually, tap  → **Add printer**.

Printing content

While viewing content, such as images or documents, access the options list, tap **Print** → **All printers...**, and then select a printer.



Printing methods may vary depending on the content type.

Sounds and vibration

Options

Change settings for various sounds on the device. On the Settings screen, tap **Sounds and vibration**.

- **Sound mode:** Set the device to use sound mode, vibration mode, or silent mode.
- **Ringtone:** Adjust the volume level for call ringtones.
- **Media:** Adjust the volume level for music and videos.
- **Notifications:** Adjust the volume level for notifications.
- **System:** Adjust the volume level for system sounds.
- **Vibrate while ringing:** Set the device to vibrate and play a ringtone for incoming calls.
- **Notification sounds:** Change the notification sound.
- **Do not disturb:** Set the device to mute incoming calls, notification sounds, and media, except for allowed exceptions.
- **Touch sounds:** Set the device to sound when you select an app or option on the touchscreen.
- **Screen lock sounds:** Set the device to sound when you lock or unlock the touchscreen.
- **Charging sound:** Set the device to sound when it is connected to a charger.
- **Vibration feedback:** Set the device to vibrate when you tap the buttons on the navigation bar and for other actions, such as tapping and holding items.
- **Dialling keypad tone:** Set the device to sound when you tap the buttons on the keypad.

Apps and notifications

Manage the device's apps and change the notification settings for each app. On the Settings screen, tap **Apps and notifications**.

- **All apps:** Access the list of the applications installed on the device and check application information.
- **Notifications:** Change the notification method for each app.
- **App permissions:** View the list of features and apps that have permission to use them. You can also edit the permission settings. Refer to [Setting app permissions](#) for more information.
- **Default apps:** Select a default setting for using apps.

Display

Options

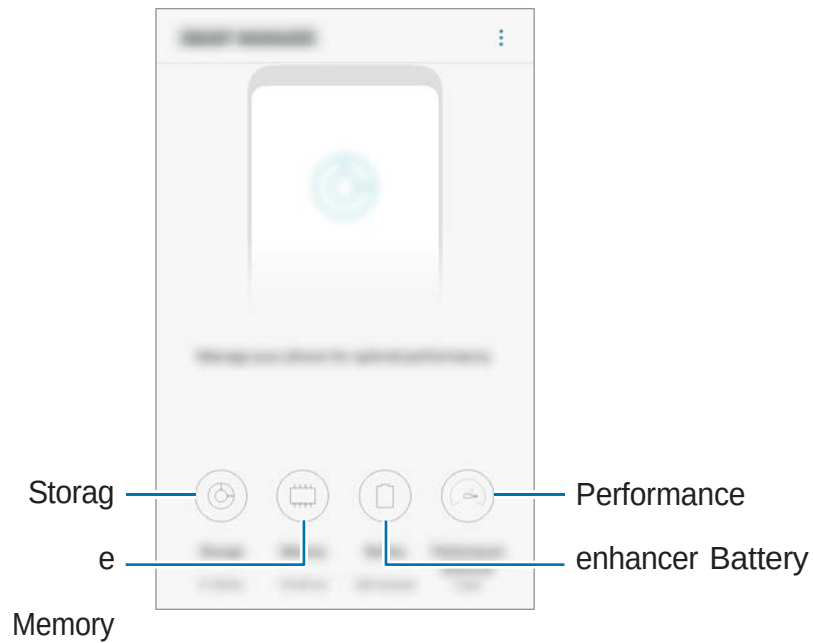
Change the display settings.

On the Settings screen, tap **Display**.

- **Brightness:** Adjust the brightness of the display.
- **Battery optimised display:** Set the device to save power by adjusting the brightness of the display automatically.
- **Font size:** Change the font size.
- **Wallpaper:** Select a background image for the Home screen and the locked screen.
- **Show battery percentage:** Set the device to display the remaining battery life.
- **Navigation bar:** Change the order of the buttons on the navigation bar.
- **Screen timeout:** Set the length of time the device waits before turning off the display's backlight.
- **Screensaver:** Set the device to launch a screensaver when the device is charging or connected to a dock.

Smart Manager

The Smart manager provides an overview of the status of your device's battery, storage, memory, and performance. You can also automatically optimise the device with a tap of your finger.



Storage

Check the status of the used and available memory.

On the Settings screen, tap **Smart Manager** → **Storage**.



- The actual available capacity of the internal memory is less than the specified capacity because the operating system and default apps occupy part of the memory. The available capacity may change when you update the device.
- You can view the available capacity of the internal memory in the **Specification** section for your device on the Samsung website.

Managing the memory

To delete residual files, such as cache, tap **CLEAN NOW**. To delete files or uninstall apps that you do not use any more, tap **USER DATA** and select a category. Then, tick items to select and tap **DELETE** or **UNINSTALL**.

Memory

On the Settings screen, tap **Smart Manager** → **Memory**.

To speed up your device by reducing the amount of memory you are using, tick apps from the apps list, and tap **CLEAN NOW**.

Battery

Check the remaining battery power to use the device. For devices with low battery levels, conserve battery power by activating power saving features.

On the Settings screen, tap **Smart Manager** → **Battery**.

- **BATTERY USAGE**: View the amount of battery power consumed by your device.
- **Power saving mode**: Activate power-saving mode and change the settings for power-saving mode. Refer to [Power saving mode](#) for more information.



You cannot receive notifications from apps that use power saving mode.

Performance enhancer

Manage the app settings for auto run. You can also change the device's performance mode according to your usage, such as playing games, to get the best performance.

On the Settings screen, tap **Smart Manager** → **Performance enhancer**.

Lock screen and security

Change the settings for securing the device.

On the Settings screen, tap **Lock screen and security**.



The available options may vary depending on the screen lock method selected.

- **Google Play Protect:** Set the device to check for harmful apps and behaviour and warn about potential harm and remove them.
- **Find My Device:** Activate or deactivate the Find My Mobile feature. Access the Find My Mobile website (findmymobile.samsung.com) to track and control your lost or stolen device.
- **Security update:** View the version of your device's security system and check for updates.
- **Secure startup:** Protect your device by setting it to require a screen unlock code when turning on the device. You must enter the unlock code to start the device and receive messages and notifications.
- **Other security settings:** Configure additional security settings.
- **Screen lock type:** Change the screen lock method.
- **Smart Lock:** Set the device to automatically unlock itself in certain situations.
- **Secure lock settings:** Change screen lock settings for the selected lock method.
- **Contact information:** Enter your information that is shown with the clock.
- **Notifications:** Set whether or not to show notification content on the locked screen and select which notifications to display.

Accounts

Register and manage accounts, such as your Samsung account or Google account. On the Settings screen, tap **Accounts**.

- **Accounts:** Add your Samsung and Google accounts, or other accounts, to sync with.
- **Backup:** Keep your personal information, app data, and settings safe on your device. You can back up your sensitive information. You must sign in to your Google account to back up data.

Accessibility

Configure various settings to improve accessibility to the device. On the Settings screen, tap **Accessibility**.

- **Font size:** Change the font size.
- **Magnification:** Magnify the screen and zoom in on a specific area.
- **Large mouse/touchpad pointer:** Enlarge the pointer when using an external mouse or touchpad.
- **Negative colours:** Reverse the display colours to improve visibility.
- **Colour adjustment:** Adjust the colour scheme for the screen when the device determines that you are colour blind or having difficulty reading content.
- **High contrast fonts:** Adjust the colour and outline of fonts to increase the contrast between the text and the background.
- **Mono audio:** Enable mono sound when listening to audio with one earbud.
- **Google subtitles (CC):** Set the device to display closed captions on content supported by Google and to change the closed caption settings.
- **Touch and hold delay:** Set the recognition time for tapping and holding the screen.
- **Click after pointer stops:** Set the device to select an item automatically when you place the pointer over it.
- **End call with Power button:** Set the device to end a call when you press the Power button.
- **Text-to-speech:** Change the settings for text-to-speech features used when Voice Assistant is activated, such as languages, speed, and more.
- **Accessibility shortcut:** Set the device to activate Switch Access or TalkBack when you press and hold the Volume Up key and the Volume Down key simultaneously.

Google

Configure settings for some features provided by Google.

On the Settings screen, tap **Google**.

User manual

View help information to learn how to use the device and apps or configure important settings.

On the Settings screen, tap **User manual**.

System

Customise your device's system settings or reset the device. On the Settings screen, tap **System**.

- **Language and input:** Select device languages and change settings, such as keyboards and voice input types. Some options may not be available depending on the selected language. Refer to [Adding device languages](#) for more information.
- **Date and time:** Access and alter the following settings to control how the device displays the time and date.



If the battery remains fully discharged or removed from the device, the time and date is reset.

- **Reset:** Reset your device's settings or perform a factory data reset. You can reset all your settings and network settings.
- **Software update:** View the device's software version and check for updates.
- **About phone:** Access your device's information.

Adding device languages

You can add languages to use on your device.

- 1 On the Settings screen, tap **System** → **Language and input** → **Language** → **Add language**.
- 2 Select a language to add.
- 3 To set the selected language as the default language, tap **SET AS DEFAULT**. To keep the current language setting, tap **KEEP CURRENT**.

The selected language will be added to your languages list. If you changed the default language, the selected language will be added to the top of the list.

To change the default language from your languages list, drag  next to a language and move it to the top of the list. If an app does not support the default language, the next supported language in the list will be used.

Appendix

Troubleshooting

Before contacting a Samsung Service Centre, please attempt the following solutions. Some situations may not apply to your device.

When you turn on your device or while you are using the device, it prompts you to enter one of the following codes:

- Password: When the device lock feature is enabled, you must enter the password you set for the device.
- PIN: When using the device for the first time or when the PIN requirement is enabled, you must enter the PIN supplied with the SIM or USIM card. You can disable this feature by using the Lock SIM card menu.
- PUK: Your SIM or USIM card is blocked, usually as a result of entering your PIN incorrectly several times. You must enter the PUK supplied by your service provider.
- PIN2: When you access a menu requiring the PIN2, you must enter the PIN2 supplied with the SIM or USIM card. For more information, contact your service provider.

Your device displays network or service error messages

- When you are in areas with weak signals or poor reception, you may lose reception. Move to another area and try again. While moving, error messages may appear repeatedly.
- You cannot access some options without a subscription. For more information, contact your service provider.

Your device does not turn on

When the battery is completely discharged, your device will not turn on. Fully charge the battery before turning on the device.

- The battery may not be inserted properly. Insert the battery again.
- Wipe both gold-coloured contacts and insert the battery again.

The touchscreen responds slowly or improperly

- If you attach a screen protector or optional accessories to the touchscreen, the touchscreen may not function properly.
- If you are wearing gloves, if your hands are not clean while touching the touchscreen, or if you tap the screen with sharp objects or your fingertips, the touchscreen may malfunction.
- The touchscreen may malfunction in humid conditions or when exposed to water.
- Restart your device to clear any temporary software bugs.
- Ensure that your device software is updated to the latest version.
- If the touchscreen is scratched or damaged, visit a Samsung Service Centre.

Your device freezes or encounters a fatal error

Try the following solutions. If the problem is still not resolved, contact a Samsung Service Centre.

Restarting the device

If your device freezes or hangs, you may need to close apps or turn off the device and turn it on again.

Forcing restart

If your device is frozen and unresponsive, press and hold the Power key and the Volume Down key simultaneously for more than 7 seconds to restart it.

Resetting the device

If the methods above do not solve your problem, perform a factory data reset.

Launch the **Settings** app and tap **System** → **Reset** → **Factory data reset** → **RESET** → **DELETE ALL**. Before performing the factory data reset, remember to make backup copies of all important data stored in the device.

Calls are not connected

- Ensure that you have accessed the right cellular network.
- Ensure that you have not set call barring for the phone number you are dialling.
- Ensure that you have not set call barring for the incoming phone number.

Others cannot hear you speaking on a call

- Ensure that you are not covering the built-in microphone.
- Ensure that the microphone is close to your mouth.
- If using an earphone, ensure that it is properly connected.

Sound echoes during a call

Adjust the volume by pressing the Volume key or move to another area.

A cellular network or the Internet is often disconnected or audio quality is poor

- Ensure that you are not blocking the device's internal antenna.
- When you are in areas with weak signals or poor reception, you may lose reception. You may have connectivity problems due to issues with the service provider's base station. Move to another area and try again.
- When using the device while moving, wireless network services may be disabled due to issues with the service provider's network.

The battery icon is empty

Your battery is low. Charge the battery.

The battery does not charge properly (For Samsung-approved chargers)

- Ensure that the charger is connected properly.
- If the battery terminals are dirty, the battery may not charge properly or the device may turn off. Wipe both gold-coloured contacts and try charging the battery again.

The battery depletes faster than when first purchased

- When you expose the device or the battery to very cold or very hot temperatures, the useful charge may be reduced.
- Battery consumption will increase when you use certain features or apps, such as GPS, games, or the Internet.
- The battery is consumable and the useful charge will get shorter over time.

Error messages appear when launching the camera

Your device must have sufficient available memory and battery power to operate the camera app. If you receive error messages when launching the camera, try the following:

- Charge the battery.
- Free some memory by transferring files to a computer or deleting files from your device.
- Restart the device. If you are still having trouble with the camera app after trying these tips, contact a Samsung Service Centre.

Photo quality is poorer than the preview

- The quality of your photos may vary, depending on the surroundings and the photography techniques you use.
- If you take photos in dark areas, at night, or indoors, image noise may occur or images may be out of focus.

Error messages appear when opening multimedia files

If you receive error messages or multimedia files do not play when you open them on your device, try the following:

- Free some memory by transferring files to a computer or deleting files from your device.
- Ensure that the music file is not Digital Rights Management (DRM)-protected. If the file is DRM-protected, ensure that you have the appropriate licence or key to play the file.
- Ensure that the file formats are supported by the device. If a file format is not supported, such as DivX or AC3, install an app that supports it. To confirm the file formats that your device supports, visit www.samsung.com.
- Your device supports photos and videos captured with the device. Photos and videos captured by other devices may not work properly.
- Your device supports multimedia files that are authorised by your network service provider or providers of additional services. Some content circulated on the Internet, such as ringtones, videos, or wallpapers, may not work properly.

Bluetooth is not working well

If another Bluetooth device is not located or there are connection problems or performance malfunctions, try the following:

- Ensure that the device you wish to connect with is ready to be scanned or connected to.
- Ensure that your device and the other Bluetooth device are within the maximum Bluetooth range (10 m).
- On your device, launch the **Settings** app, tap **Connections**, and then tap the **Bluetooth** switch to re-activate it.
- On your device, launch the **Settings** app, tap **System** → **Reset** → **Reset network settings** → **RESET SETTINGS** to reset network settings. You may lose registered information when performing the reset.

If the tips above do not solve the problem, contact a Samsung Service Centre.

A connection is not established when you connect the device to a computer

- Ensure that the USB cable you are using is compatible with your device.
- Ensure that you have the proper driver installed and updated on your computer.
- If you are a Windows XP user, ensure that you have Windows XP Service Pack 3 or higher installed on your computer.

Your device cannot find your current location

GPS signals may be obstructed in some locations, such as indoors. Set the device to use Wi-Fi or a mobile network to find your current location in these situations.

Data stored in the device has been lost

Always make backup copies of all important data stored in the device. Otherwise, you cannot restore data if it is corrupted or lost. Samsung is not responsible for the loss of data stored in the device.

A small gap appears around the outside of the device case

- This gap is a necessary manufacturing feature and some minor rocking or vibration of parts may occur.
- Over time, friction between parts may cause this gap to expand slightly.

There is not enough space in the device's storage

Delete unnecessary data, such as cache, using the Smart manager or manually delete unused apps or files to free up storage space.

Health and safety information

Exposure to Radio Frequency (RF) Signals

Certification Information (SAR)

Your wireless phone is a 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 mobile phones 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 phones 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 phone 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 phone while operating can be well below the maximum value. This is because the phone 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 phone 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 phone are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

For body worn operation, this model phone has been tested and meets the FCC RF exposure guidelines when used with a Samsung accessory designated for this product or when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body.

Non-compliance with the above restrictions may result in violation of FCC RF exposure guidelines.

SAR information on this and other model phones can be viewed on-line at <http://www.fcc.gov/oet/ea/fccid/>. Please use the phone FCC ID number for search, A3LSMJ260F. Sometimes it may be necessary to remove the battery pack to find the number. Once you have the FCC ID number for a particular phone, follow the instructions on the website and it should provide values for typical or maximum SAR for a particular phone. Additional product specific SAR information can also be obtained at <http://www.fcc.gov/encyclopedia/specific-absorption-rate-sar-cellular-telephones>

Consumer Information on Wireless Phones

The U.S. Food and Drug Administration (FDA) has published a series of Questions and Answers for consumers relating to radio frequency (RF) exposure from wireless phones. The FDA publication includes the following information:

What kinds of phones are the subject of this update?

The term wireless phone refers here to hand-held wireless phones with built-in antennas, often called “cell,” “mobile,” or “PCS” phones. These types of wireless phones can expose the user to measurable radio frequency energy (RF) because of the short distance between the phone and the user’s head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person’s RF exposure decreases rapidly with increasing distance from the source. The so-called “cordless phones,” which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures well within the FCC’s compliance limits.

Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

What is FDA’s role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radio frequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- “Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- “Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- “Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- “National Institute for Occupational Safety and Health

- “Environmental Protection Agency
- “Federal Communications Commission
- “Occupational Safety and Health Administration
- “National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the primary subject of the safety questions discussed in this document.

What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radio frequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phones RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but ten or more years' follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of

epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radio frequency energy (RF).

FDA has been a leading participant in the World Health Organization international Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues.

FDA and Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

What steps can I take to reduce my exposure to radio frequency energy from my wireless phone?

If there is a risk from these products - and at this point we do not know that there is - it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radio frequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- "If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body.

Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radio frequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in

the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

Do hands-free kits for wireless phones reduce risks from exposure to RF emissions?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with wireless phones for convenience and comfort. These systems reduce the absorption of RF energy in the head because the phone, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the phone is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Wireless phones marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

Do wireless phone accessories that claim to shield the head from RF radiation work?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special phone cases, while others involve nothing more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike "hand-free" kits, these so-called "shields" may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal Trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

What about wireless phone interference with medical equipment?

Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI. FDA has tested wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a compatible phone and a compatible hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will

conduct testing to assess the interference and work to resolve the problem. Additional information on the safety of RF exposures from various sources can be obtained from the following organizations:

- FCC RF Safety Program:
<http://www.fcc.gov/oet/rfsafety/>
- Environmental Protection Agency (EPA):
<http://www.epa.gov/radiation/>
- Occupational Safety and Health Administration's (OSHA):
<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>
- National Institute for Occupational Safety and Health (NIOSH):
<http://www.cdc.gov/niosh/>
- World Health Organization (WHO):
<http://www.who.int/peh-emf/>
- International Commission on Non-Ionizing Radiation Protection:
<http://www.icnirp.de>
- National Radiation Protection Board (UK):
<http://www.hpa-radiationservices.org.uk/rpa>
- Updated 4/3/2002: US Food and Drug Administration
<http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/default.htm>

Road Safety

Your wireless phone gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility accompanies the benefits of wireless phones, one that every user must uphold.

When driving a car, driving is your first responsibility. When using your wireless phone behind the wheel of a car, practice good common sense and remember the following tips:

1. Get to know your wireless phone and its features, such as speed dial and redial. If available, these features help you to place your call without taking your attention off the road.
2. When available, use a hands-free device. If possible, add an additional layer of convenience and safety to your wireless phone with one of the many hands free accessories available today.
3. Position your wireless phone within easy reach. Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voice mail answer it for you.
4. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice and even heavy traffic can be hazardous.
5. Do not take notes or look up phone numbers while driving. Jotting down a "to do" list or flipping through your address book takes attention away from your primary responsibility, driving safely.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Make people you are talking with aware you are driving and suspend conversations that have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!
9. Use your wireless phone to help others in emergencies. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special non-emergency wireless assistance number when necessary. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured, or a vehicle you know to be stolen, call roadside assistance or other special non-emergency number.

“The wireless industry reminds you to use your phone safely when driving.”

For more information, please call 1-888-901-SAFE, or visit our web-site www.wow-com.com

Provided by the Cellular Telecommunications & Internet Association.

Operating Environment

Remember to follow any special regulations in force in any area and always switch your phone off whenever it is forbidden to use it, or when it may cause interference or danger. When connecting the phone or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products. As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position.

Using Your Phone Near Other Electronic Devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Consult the manufacturer to discuss alternatives.

Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15 cm (6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker.

These recommendations are consistent with the independent research and recommendations of Wireless Technology Research.

Persons with pacemakers:

- should always keep the phone more than 15 cm (6 inches) from their pacemaker when the phone is switched on.
- should not carry the phone in a breast pocket.
- should use the ear opposite the pacemaker to minimize potential interference.

If you have any reason to suspect that interference is taking place, switch your phone off immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information. Switch your phone off in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Switch your phone off in any facility where posted notices require you to do so.

Potentially Explosive Environments

Switch your phone off when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Users are advised to switch the phone off while at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Emergency Calls

This phone, like any wireless phone, operates using radio signals, wireless and landline networks as well as user programmed functions, which cannot guarantee connection in all conditions. Therefore, you should never rely solely on any wireless phone for essential communications (medical emergencies, for example).

Remember, to make or receive any calls the phone must be switched on and in a service area with adequate signal strength. Emergency calls may not be possible on all wireless phone networks or when certain network services and/ or phone features are in use. Check with local service providers.

To make an emergency call:

1. If the phone is not on, switch it on.
2. Key in the emergency number for your present location (for example, 911 or other official emergency number). Emergency numbers vary by location.
3. Press .

If certain features are in use (call barring, for example), you may first need to deactivate those features before you can make an emergency call. Consult this

document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible. Remember that your phone may be the only means of communication at the scene of an accident; do not cut off the call until given permission to do so.

Restricting Children's access to your Phone

Your phone is not a toy. Children should not be allowed to play with it because they could hurt themselves and others, damage the phone or make calls that increase your phone bill.

DRAFT, Not FINAL

FCC Notice and Cautions

FCC Notice



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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

The phone may cause TV or radio interference if used in close proximity to receiving equipment. The FCC can require you to stop using the phone if such interference cannot be eliminated.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

Cautions

Changes or modifications made in the radio phone, not expressly approved by Samsung, will void the user's authority to operate the equipment.

The use of any unauthorized accessories may be dangerous and void the phone warranty if said accessories cause damage or a defect to the phone.

Although your phone is quite sturdy, it is a complex piece of equipment and can be broken. Avoid dropping, hitting, bending or sitting on it.

Other Important Safety Information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the phone, its parts or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch your phone off before boarding an aircraft. The use of wireless phone in aircraft is illegal and may be dangerous to the aircraft's operation.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Product Performance

Getting the Most Out of Your Signal Reception

The quality of each call you make or receive depends on the signal strength in your area. Your phone informs you of the current signal strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal.

If you're inside a building, being near a window may give you better reception.

Understanding the Power Save Feature

If your phone is unable to find a signal after 15 minutes of searching, a Power Save feature is automatically activated. If your phone is active, it periodically rechecks service availability or you can check it yourself by pressing any key.

Anytime the Power Save feature is activated, a message displays on the screen. When a signal is found, your phone returns to standby mode.

Maintaining Your Phone's Peak Performance

For the best care of your phone, only authorized personnel should service your phone and accessories. Faulty service may void the warranty.

There are several simple guidelines to operating your phone properly and maintaining safe, satisfactory service.

- Place the mobile phone's acoustic output next to your ear for proper orientation.
- Do not tamper or alter the phone's antenna.
- Don't use the phone if the antenna is damaged.
- Speak directly into the phone's receiver.
- Avoid exposing your phone and accessories to rain or liquid spills. If your phone does get wet, immediately turn the power off and remove the battery. If it is inoperable, call Customer Care for service.

Availability of Various Features/Ring Tones

Many services and features are network dependent and may require additional subscription and/or usage charges. Not all features are available for purchase or use in all areas. Downloadable Ring Tones may be available at an additional cost. Other conditions and restrictions may apply. See your service provider for additional information.

Battery Standby and Talk Time

Standby and talk times will vary depending on phone usage patterns and conditions. Battery power consumption depends on factors such as network configuration, signal strength, operating temperature, features selected, frequency of calls, and voice, data, and other application usage patterns.

Battery Precautions

- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the phone near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.
- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0 °C (32 °F).
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.
- Dispose of used batteries in accordance with local regulations. In some areas, the disposal of batteries in household or business trash may be prohibited. For safe disposal options for Li-Ion batteries, contact your nearest Samsung authorized service center. Always recycle. Do not dispose of batteries in a fire.

Care and Maintenance

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfill any warranty obligations and

allow you to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not use the phone with a wet hand. Doing so may cause an electric shock to you or damage to the phone.
- Do not use or store the phone in dusty, dirty areas, as its moving parts may be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When the phone warms up to its normal operating temperature, moisture can form inside the phone, which may damage the phone's electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the phone. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint the phone. Paint can clog the device's moving parts and prevent proper operation.
- Do not put the phone in or on heating devices, such as a microwave oven, a stove or a radiator. The phone may explode when overheated.
- When the phone or battery gets wet, the label indicating water damage inside the phone changes color. In this case, phone repairs are no longer guaranteed by the manufacturer's warranty, even if the warranty for your phone has not expired.
- If your phone has a flash or light, do not use it too close to the eyes of people or animals. This may cause damage to their eyes.
- Use only the supplied or an approved replacement antenna. Unauthorized antennas or modified accessories may damage the phone and violate regulations governing radio devices.
- If the phone, battery, charger or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.



Correct disposal of this product

(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be

disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it 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 this item for environmentally safe recycling.

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



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return 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 reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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