


## People edge

Add favourite contacts to the People edge panel to quickly contact them and view notifications received from them.

- 1 Drag the Edge panel handle towards the centre of the screen.
- 2 Swipe to the left or right to open the People edge panel.

### Adding contacts to the People edge panel

Add frequently used contacts to the People edge panel and set them as your priority contacts.

Tap  and select a contact from your favourites list, or tap **SELECT CONTACTS**, select contacts, and then tap **DONE**.




Only contacts saved in **Contacts** can be added to the People edge panel.

### Editing the People edge panel

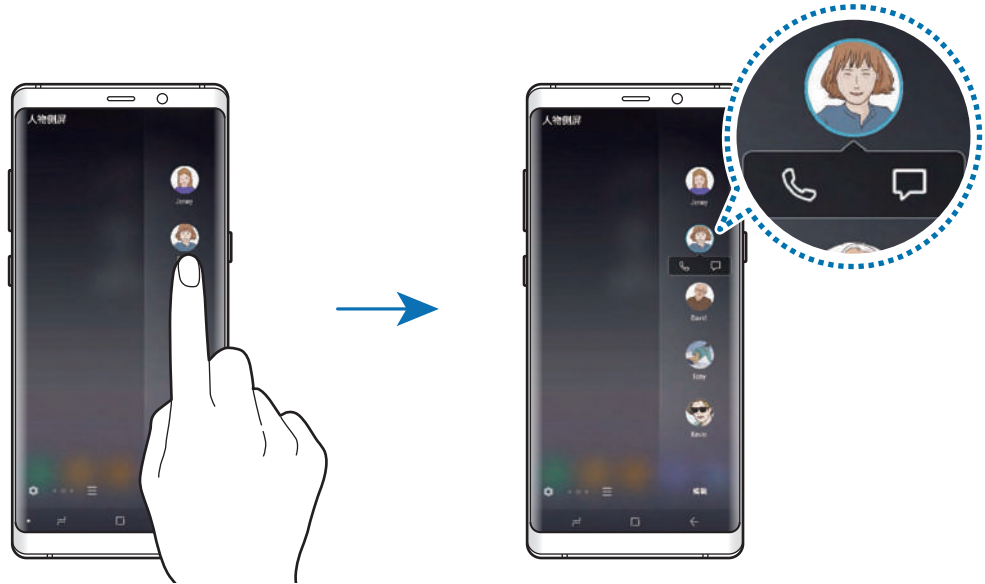
- To delete a contact, tap and hold a contact icon and drag it to **Remove** at the top of the screen.
- To change the order of contacts, tap and hold a contact icon and drag it to another location.



You can also edit the People edge panel by tapping  and then tapping **EDIT** under the People edge.

## Contacting people from the People edge panel

Open the People edge panel and tap a contact. The communication buttons will appear on the screen. Tap the desired button to call or send a message to the contact.



## Edge lighting

The edges of the screen light up when you receive notifications, such as new messages. The edges of the screen will also light up when you receive a call while the device's screen is facing downwards.

### Managing notifications to display as the edge lighting

- 1 Launch the **Settings** app, tap **Display** → **Edge screen** → **Edge lighting**.
- 2 Tap **Manage notifications** and tap the switches next to apps to receive notifications as the edge lighting.



Some notifications may not display as the edge lighting depending on notification types.


## Customising the edge lighting colour

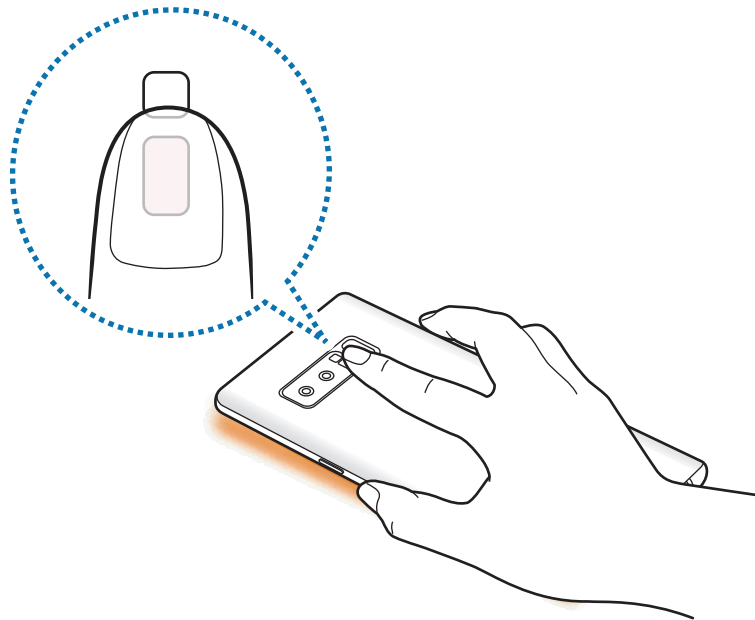
You can customise the colour, thickness, and transparency of the edge lighting as you want.

- 1 Launch the **Settings** app, tap **Display** → **Edge screen** → **Edge lighting**.
- 2 Tap **Edge lighting style** → **Color**.
- 3 Tap the colour picker, select the colour you want, and then tap **DONE**.
- 4 To adjust the thickness and transparency of the edge lighting, drag the **Width** and **Transparency** adjustment bar to the left or right.

## Quick reply

You can reject incoming calls using custom rejection messages. While the device's screen is facing downwards, hold your finger on the heart rate sensor on the back of the device for two seconds to reject calls.

To edit the default rejection message, launch the **Settings** app, tap **Display** → **Edge screen** → **Edge lighting** →  → **Quick reply**, and then tap the message text under **QUICK REPLY MESSAGE**.



## Multi window

### Introduction

Multi window lets you run two apps at the same time in the split screen view. You can also run multiple apps at the same time in the pop-up view.



Some apps may not support this feature.




Split screen view



Pop-up view

## Split screen view

- 1 Tap the Recents button to open the list of recently used apps.
- 2 Swipe upwards or downwards and tap  on a recent app window. The selected app will launch in the upper window.



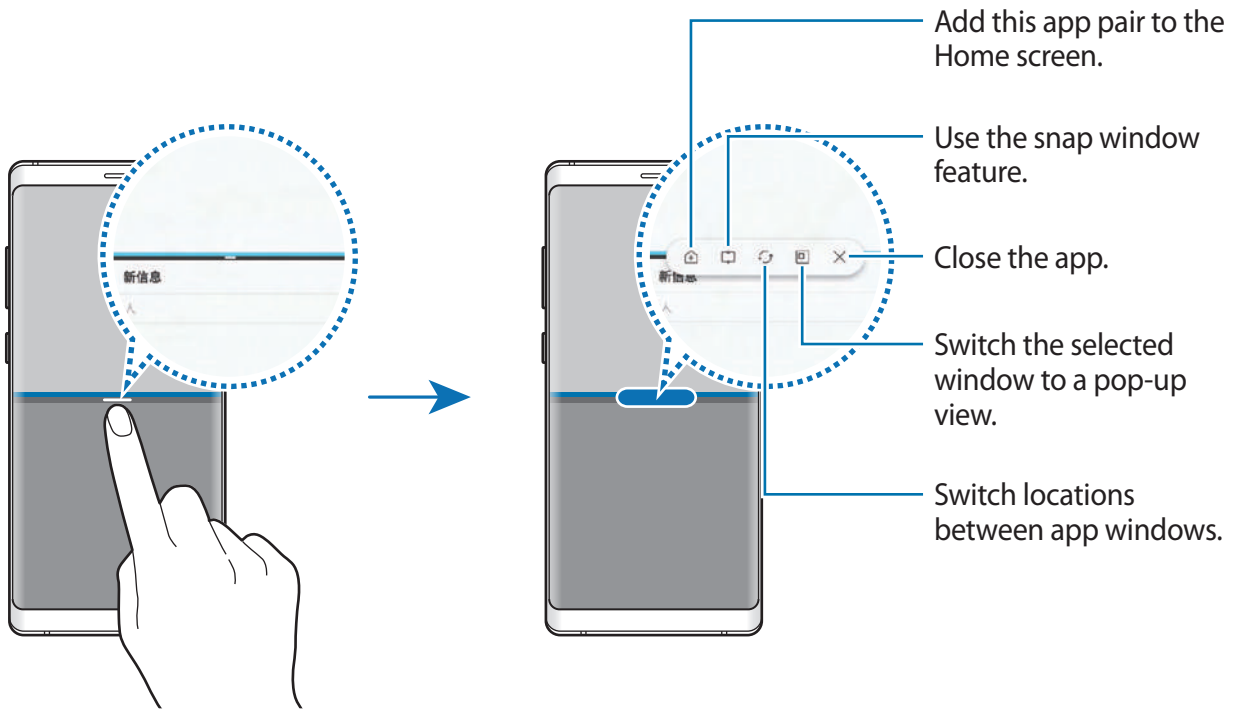
- 3 In the lower window, swipe upwards or downwards to select another app to launch. To launch apps not in the list of recently used apps, tap **APP LIST** and select an app.



If you add app pairs to the Apps edge panel, you can launch two apps in the split screen view with a single tap. For more information about adding app pairs, refer to [Adding app pairs](#).

## Using additional options

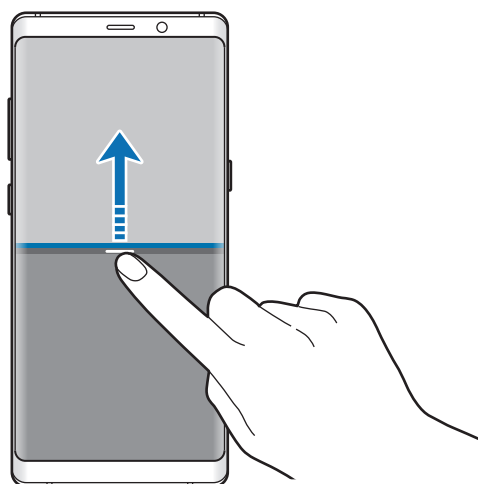
Tap the bar between the app windows to access additional options.




## Adjusting the window size


Drag the bar between the app windows up or down to adjust the size of the windows.

When you drag the bar between the app windows to the top or bottom edge of the screen, the window will be maximised.



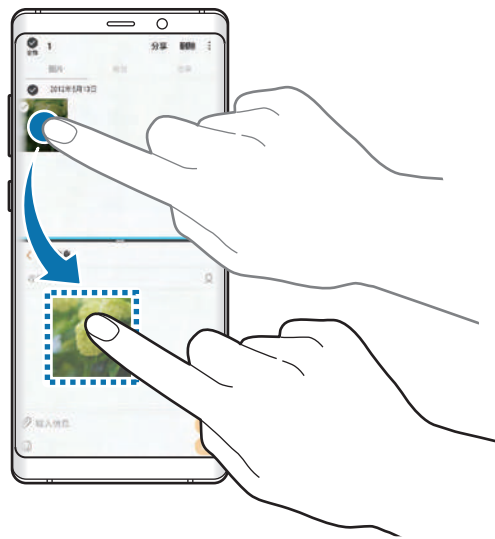
## Minimising the split screen view

Press the Home button to minimise the split screen view. The  icon will appear on the status bar. The app in the lower window will close and the app in the upper window will remain active in the minimised split screen view.

To close the minimised split screen view, tap .

## Sharing text or images between windows



Drag and drop text or copied images from one window to another. Tap and hold an item in the selected window and drag it to a location in another window.



Some apps may not support this feature.

## Snap window

You can select an area and pin it to the top of the screen and use other apps in the lower window.

- 1 Tap the Recents button to open the list of recently used apps.
- 2 Tap  and drag the frame to the area you want to pin it to.  
To adjust the size of the frame, drag  upwards or downwards.

### 3 Tap **DONE**.

The selected app window will be pinned at the top of the screen. To unpin the window, drag the bar between the app windows.

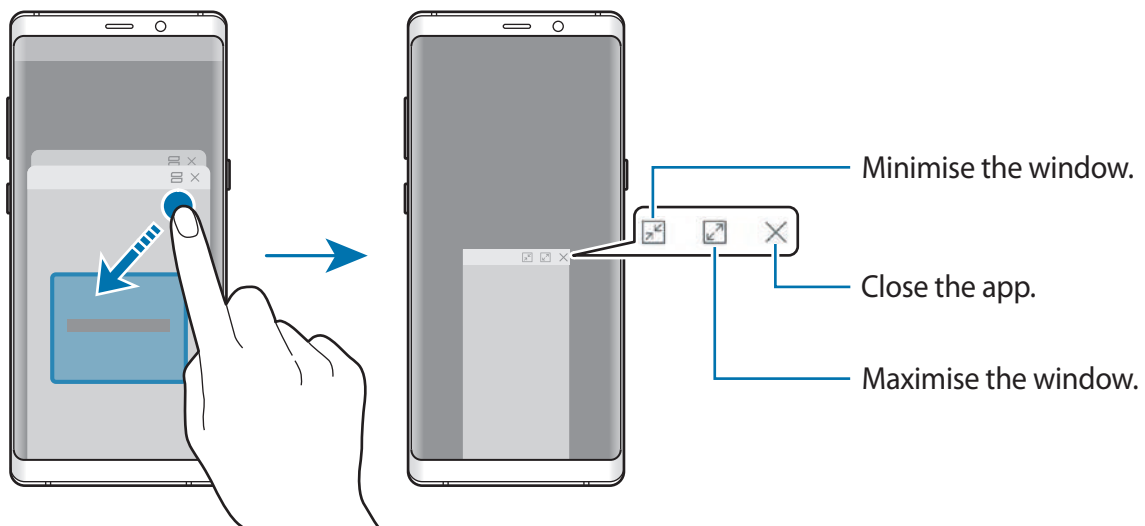
### 4 In the lower window, swipe upwards or downwards to select another app to launch.

## Pop-up view

### 1 Tap the Recents button to open the list of recently used apps.

### 2 Swipe upwards or downwards, tap and hold an app window, and then drag it to **Drop here for pop-up view**.

The app screen will appear in the pop-up view.



## Moving pop-up windows

To move a pop-up window, tap the window's toolbar and drag it to a new location.



# Smart Manager

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



## Using the quick optimisation feature

Launch the **Smart Manager** app and tap **FIX NOW** or **OPTIMIZE NOW**.

The quick optimisation feature improves device performance through the following actions.

- Clearing some memory.
- Deleting unnecessary files and closing apps running in the background.
- Managing abnormal battery usage.
- Scanning for crashed apps and malware.

## Battery

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

Launch the **Smart Manager** app and tap **Battery**.





- The usage time left shows the time remaining before the battery power runs out. Usage time left may vary depending on your device settings and operating conditions.
- You may not receive notifications from some apps that use power saving mode.

## Power saving mode

- **MID:** Activate power saving mode to extend the battery's usage time.
- **MAX:** In maximum power saving mode, the device decreases battery consumption by applying the dark theme and limiting the apps and features available. Network connections, except for the mobile network, will be deactivated.

## Managing the battery

You can save battery power by preventing apps that are running in the background from using battery power when they are not being used. Tick apps from the apps list and tap **OPTIMIZED**. Also, tap  → **Advanced settings** and set the **App power monitor** options.

You can set the device to charge the battery more quickly. Tap  → **Advanced settings** and tap the **Advanced cable charging** switch to activate it.

## Storage

Check the status of the used and available memory.

Launch the **Smart Manager** app and tap **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, select a category under **USER DATA**. Then, tick items to select and tap **DELETE** or **UNINSTALL**.

## Data usage

Check the device's data usage amount. You can customise the settings for the limitation.

Launch the **Smart Manager** app and tap **Data usage**.

## Memory

Launch the **Smart Manager** app and tap **Memory**.

To speed up your device by stopping apps running in the background, tick apps from the apps list, and tap **CLEAN NOW**.

## Device security

Check the device's security status. This feature scans your device for malware.

Launch the **Smart Manager** app and tap **Device security** → **SCAN PHONE**.

## Performance mode

Change the device's performance mode according to your usage, such as playing games or music, to get the best performance.

Launch the **Smart Manager** app and tap **Performance mode**.

- **Optimized (recommended):** Balance battery life and screen resolution for everyday use.
- **Game:** Enhance your gaming experience by making games run more smoothly.
- **Entertainment:** Apply ultra high quality sound, enhanced images, and maximum display settings to enjoy your music and videos more.
- **High performance:** Apply the highest quality display settings.



Battery power consumption will increase depending on the mode.

## Blocked calls/msgs

Reject calls or messages from specified phone numbers or reject messages containing specified text.

Launch the **Smart Manager** app and tap **Blocked calls/msgs**.

## Auto run apps

Turn off auto run for each app to prevent them from running in the background.

Launch the **Smart Manager** app and tap **Auto run apps**.

## App lock

Set a lock method to prevent others from accessing selected apps.

Launch the **Smart Manager** app and tap **App lock**.

## App management

Manage the app settings for notifications or permissions.


Launch the **Smart Manager** app, tap **App management**, and then tap the button under each feature.

- **Notifications:** Change the notification settings for each app.
- **App permissions:** Specify functions to use for each app.

# Samsung Pay

## Introduction

Register frequently used cards to Samsung Pay, a mobile payment service, to make payments quickly and securely. Samsung Pay supports magnetic secure transmission (MST) as well as near field communication (NFC) to allow payment through standard credit card readers.

You can view more information, such as cards that support this feature at [www.samsung.com.cn/samsungpay](http://www.samsung.com.cn/samsungpay). Alternatively, launch the **Samsung Pay** app and tap  →

### How to use.



- To use this feature, you must sign in to your Samsung account and register your biometric data. For more information, refer to [Samsung account](#), [Fingerprint recognition](#), and [Iris recognition](#).
- To register cards, the device must be connected to a Wi-Fi or mobile network.
- The procedures for the initial setup and card registration may vary depending on the region or service provider.

## Setting up Samsung Pay

When running this app for the first time or restart it after performing a data reset, follow the on-screen instructions to complete the initial setup.

- 1 Launch the **Samsung Pay** app.
- 2 Sign in to your Samsung account.
- 3 Read and agree to the terms and conditions.
- 4 Register your fingerprint or irises to use when making payments.
- 5 Create a PIN to use when making payments.



This PIN will be used to verify various actions in Samsung Pay, such as making payments and unlocking the app.

## Registering cards

You can easily register cards by capturing their images with the camera.

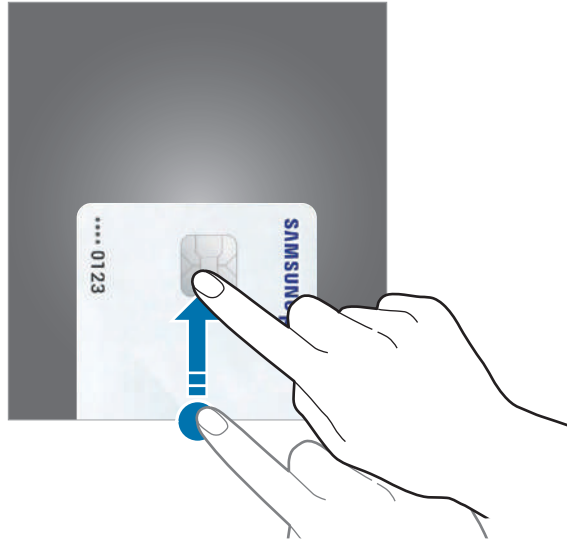


You can check the cards that support this feature from the Samsung Pay website ([www.samsung.com.cn/samsungpay](http://www.samsung.com.cn/samsungpay)).

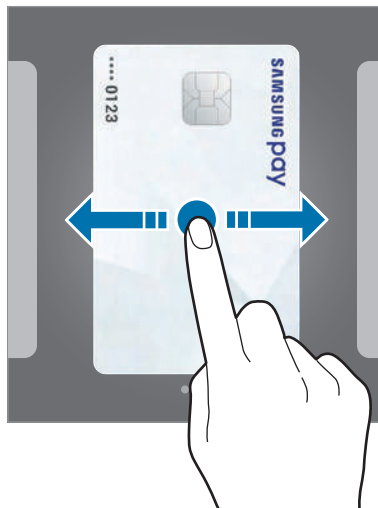
Launch the **Samsung Pay** app, tap **Add**, and then follow the on-screen instructions to complete your card registration.

## Making payments

- 1 Tap and hold a card image at the bottom of the screen and drag it upwards.  
Alternatively, launch the **Samsung Pay** app.



- 2 On the cards list, swipe to the left or right and select a card to use.



- 3 Scan your fingerprint or irises.  
Alternatively, enter the payment PIN you set when setting up the Samsung Pay.

- 4 Touch the back of your device to the card reader.  
When the card reader recognises the card information, the payment will be processed.




The verification method for payments may vary depending on the card readers.

## Cancelling payments

You can cancel payments by visiting the place where you made them.

On the cards list, swipe to the left or right to select the card you used. Follow the on-screen instructions to complete payment cancellation.

## Changing the Samsung Pay settings

On the Samsung Pay screen, tap  → **Settings**. Select the screen where the card image will appear to activate Samsung Pay on the Home screen or locked screen, or when the screen is turned off.

## Samsung Gear

Samsung Gear is an app that allows you to manage your Gear wearable device. When you connect your device to the Gear, you can customise the Gear's settings and apps.

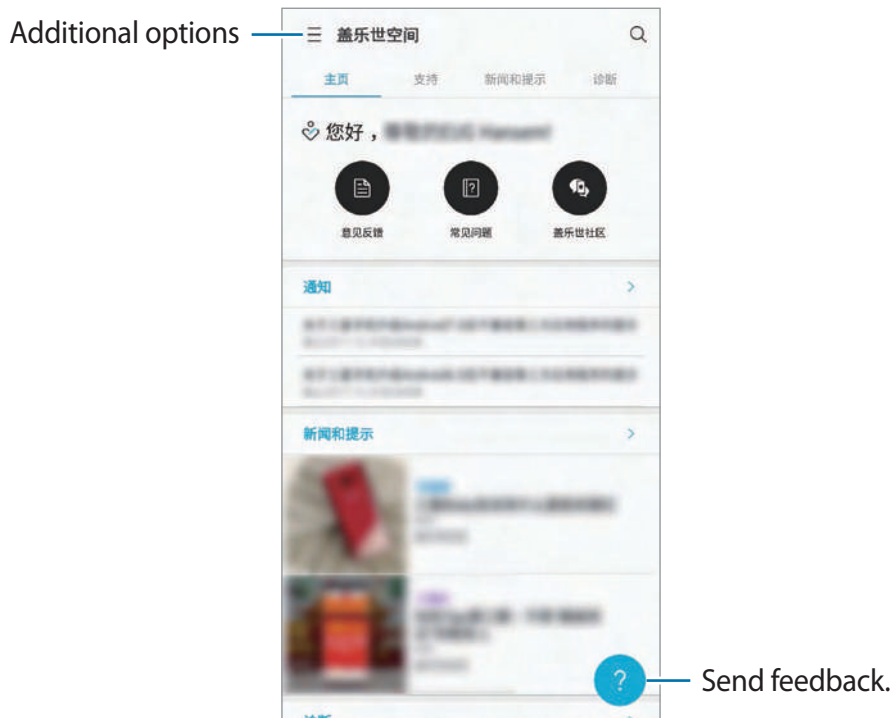
Open the **Samsung** folder and launch the **Samsung Gear** app.

Tap **START THE JOURNEY** to connect your device to the Gear. Follow the on-screen instructions to finish the setup. Refer to the Gear's user manual for more information about how to connect and use the Gear with your device.



## 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 view the latest Galaxy news and tips. **Samsung Members** can help you solve any problems you might encounter while using your device.






To submit your feedback or post your comments, you must register and sign in to your Samsung account. Refer to [Samsung account](#) for more information.

# Samsung Notes

## Introduction

Create notes by entering text from the keyboard or by writing or drawing on the screen with the S Pen. You can also insert images or voice recordings into your notes.

## Creating notes

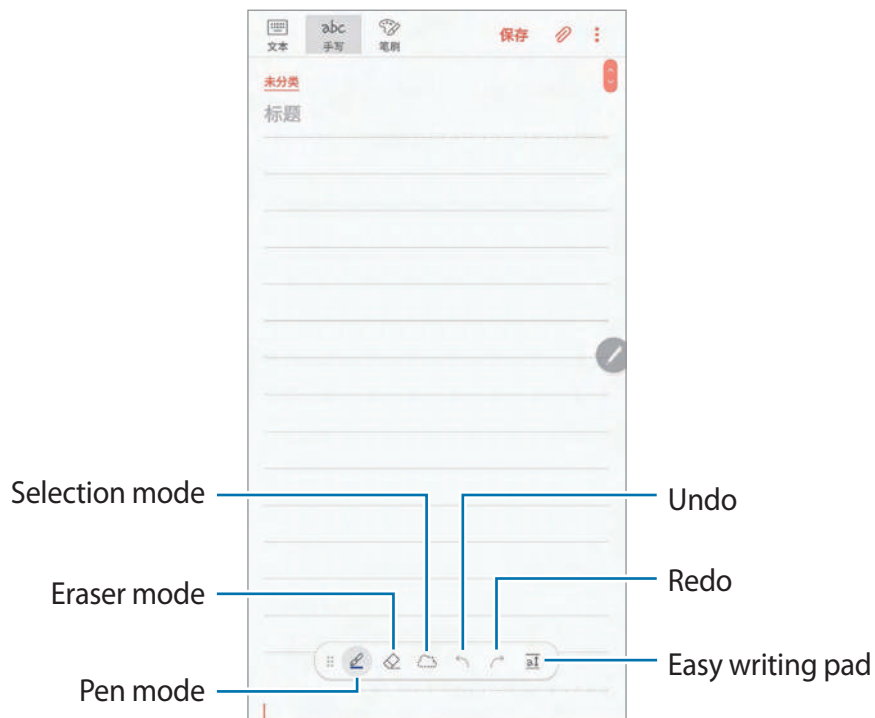
- 1 Launch the **Samsung Notes** app and tap **ALL** → .
- 2 Select an input method from the toolbar at the top of the screen and compose a note.  
Tap  → **Image** to insert an image by selecting from **Gallery** or by taking a photo.  
Tap  → **Voice** to record a voice recording and insert it into the note. Voice recording will start immediately.




- 3 When you are finished composing the note, tap **SAVE**.

## Composing notes in handwriting mode

On the note composer screen, tap **Pen** to write or draw with the S Pen.




## Changing the pen settings

When writing or drawing on the screen, tap  to change the pen type, line thickness, or pen colour.



## Using the eraser

When you want to erase handwriting from a note, tap  and select an area to erase. Alternatively, select an area while pressing and holding the S Pen button.

To change the eraser type, tap  once more.

- **Erase by line:** Erase the line you select.
- **Erase by area:** Erase only the area you select. You can adjust the size of the eraser by dragging the size adjustment bar.
- **ERASE ALL:** Clear the note.




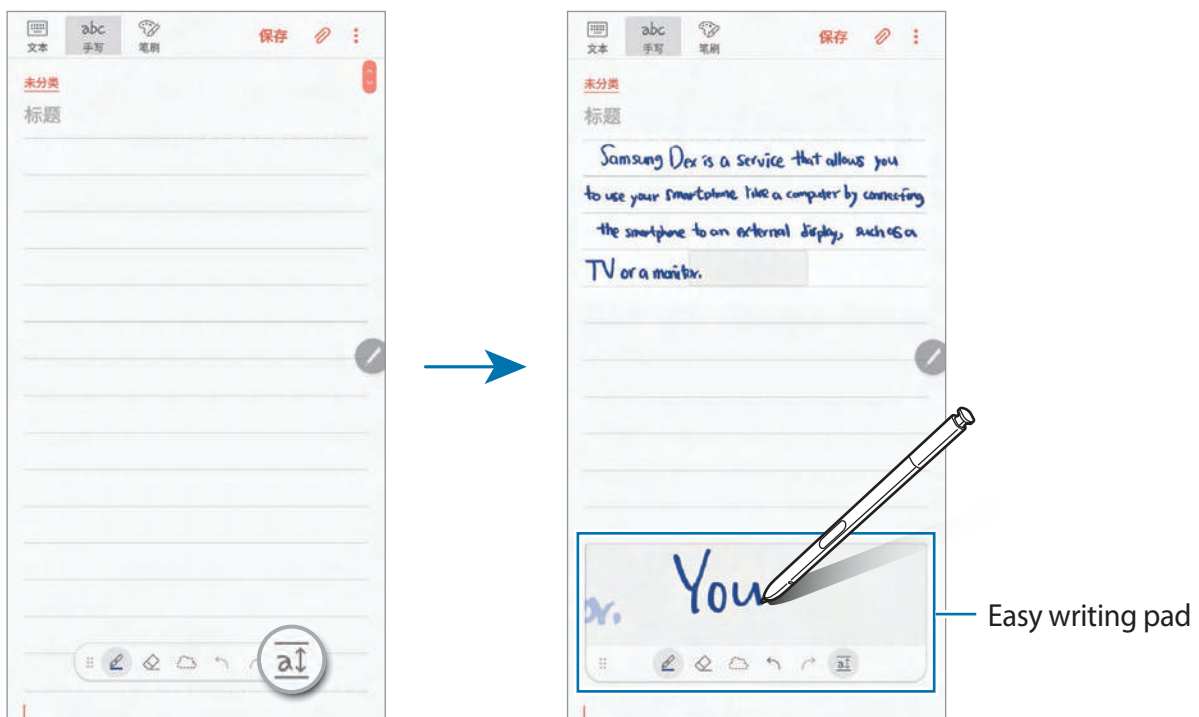
Even with a smaller eraser, you may still not be able to precisely erase the intended part.

## Using the easy writing pad

Use the easy writing pad to enter your handwriting more easily.

When you write or draw on the easy writing pad, your handwriting will be automatically adjusted and entered between the lines of the input field.

On the note composer screen, tap . The input field will be magnified and appear as the easy writing pad.



## Editing handwritten notes

Edit handwritten notes using various editing options, such as cutting, moving, resizing, or transforming.

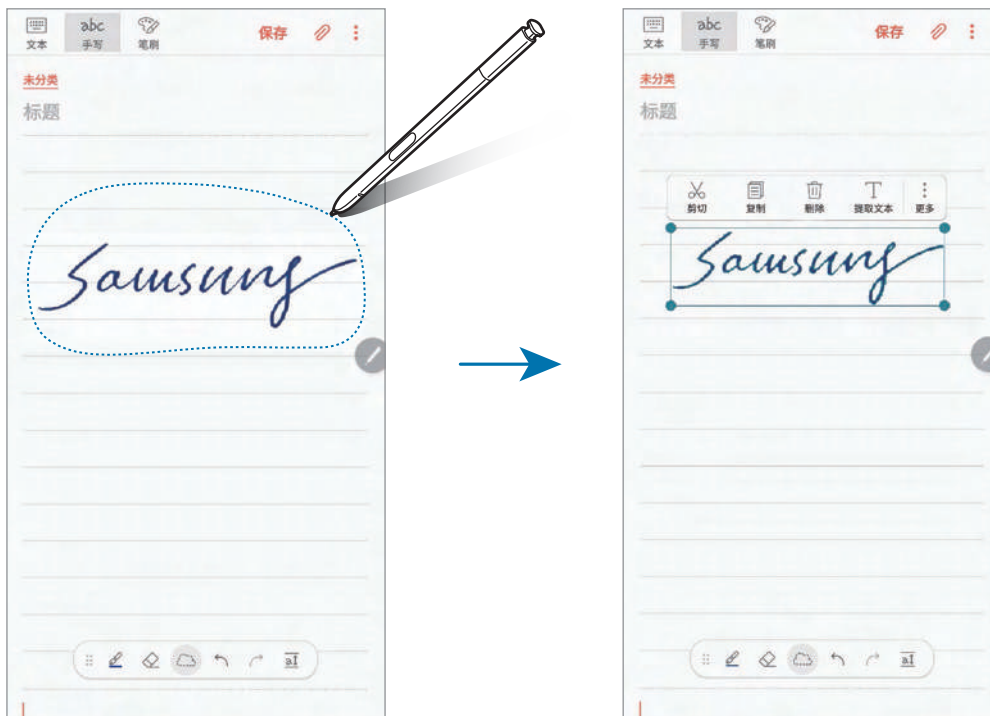
1 When there is handwriting on the note, tap .

To change the shape of the selection, tap  once more.

2 Tap or draw a line around the input to select.

To move the input to another location, select the input, and then drag it to a new location.

To change the size of the selection, tap the input and drag a corner of the frame that appears.



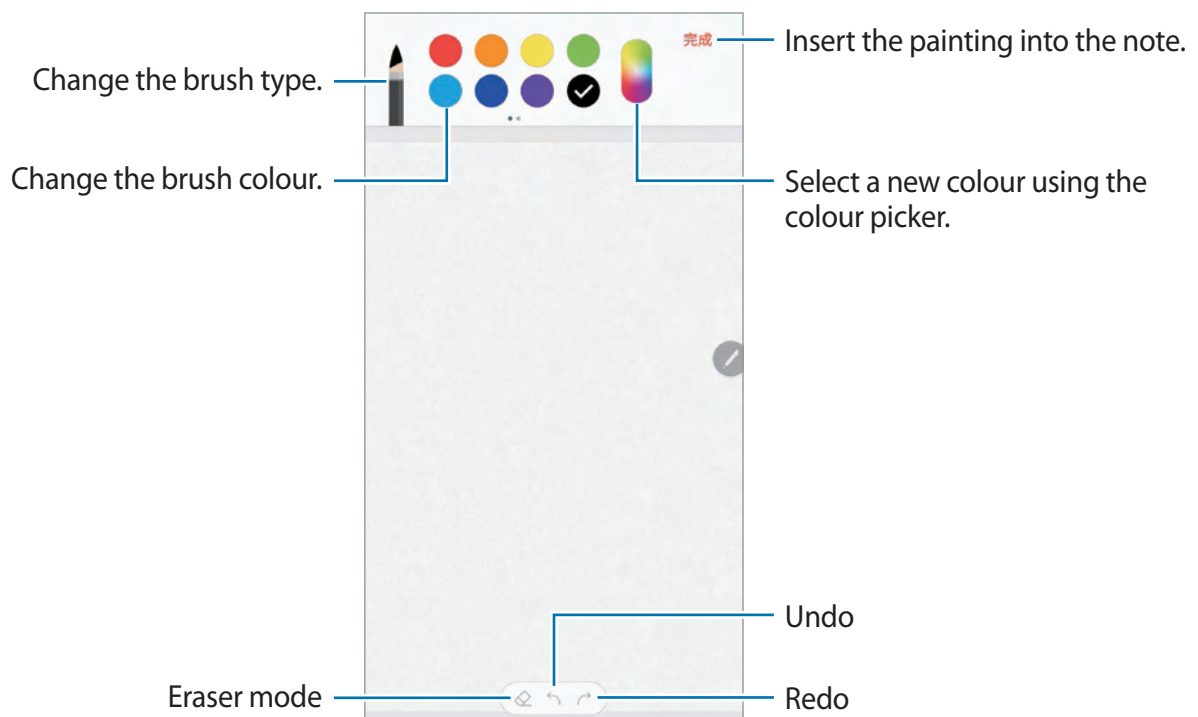
### 3 Edit the input using the available options.

- **Cut:** Cut out the input. To paste it to another location, tap and hold the location, and then tap **Paste**.
- **Copy:** Copy the input. To paste it to another location, tap and hold the location, and then tap **Paste**.
- **Delete:** Delete the input.
- **Extract text:** Extract text from the selected area. To paste or copy the text to a note, tap **PASTE TO NOTE** or **COPY**.
- **More** → **Move to front:** Send the input to the front.
- **More** → **Move to back:** Send the input to the back.



## Painting with brushes

On the note composer screen, tap **Brush** to paint with various brushes.



When you are finished, tap **DONE** to insert your painting into the note.



## Inserting images into a note


On the note composer screen, tap  → **Image**. Tap **CAMERA** →  to take a photo, or tap **GALLERY** or **OTHER** to select an image. The image will be inserted into your note.

## Inserting voice recordings into a note


On the note composer screen, tap  → **Voice** to make a voice recording. Tap  to stop recording. The voice recording will be inserted into your note.

## Pinning a note to the Home screen

Pin a note to the Home screen to quickly view it or open and edit it.


- 1 Launch the **Samsung Notes** app, tap **ALL** or **COLLECTIONS**, and then select a category.
- 2 Select a note and tap  → **Pin to Home screen**.

The note will be added to the Home screen.

On the Home screen, tap and hold a note to move or resize it. To replace the note with another one, tap  → **CHANGE NOTE**.

## Saving a note as a reminder

You can save a note as a reminder to view the note later.

- 1 Launch the **Samsung Notes** app, tap **ALL** or **COLLECTIONS**, and then select a category.
- 2 Select a note and tap  → **Send to Reminder**.

The note will be saved as a reminder.

## Deleting notes

- 1 Launch the **Samsung Notes** app, tap **ALL** or **COLLECTIONS**, and then select a category.
- 2 Tap and hold a note to delete.

To delete multiple notes, tick more notes to delete.

- 3 Tap .

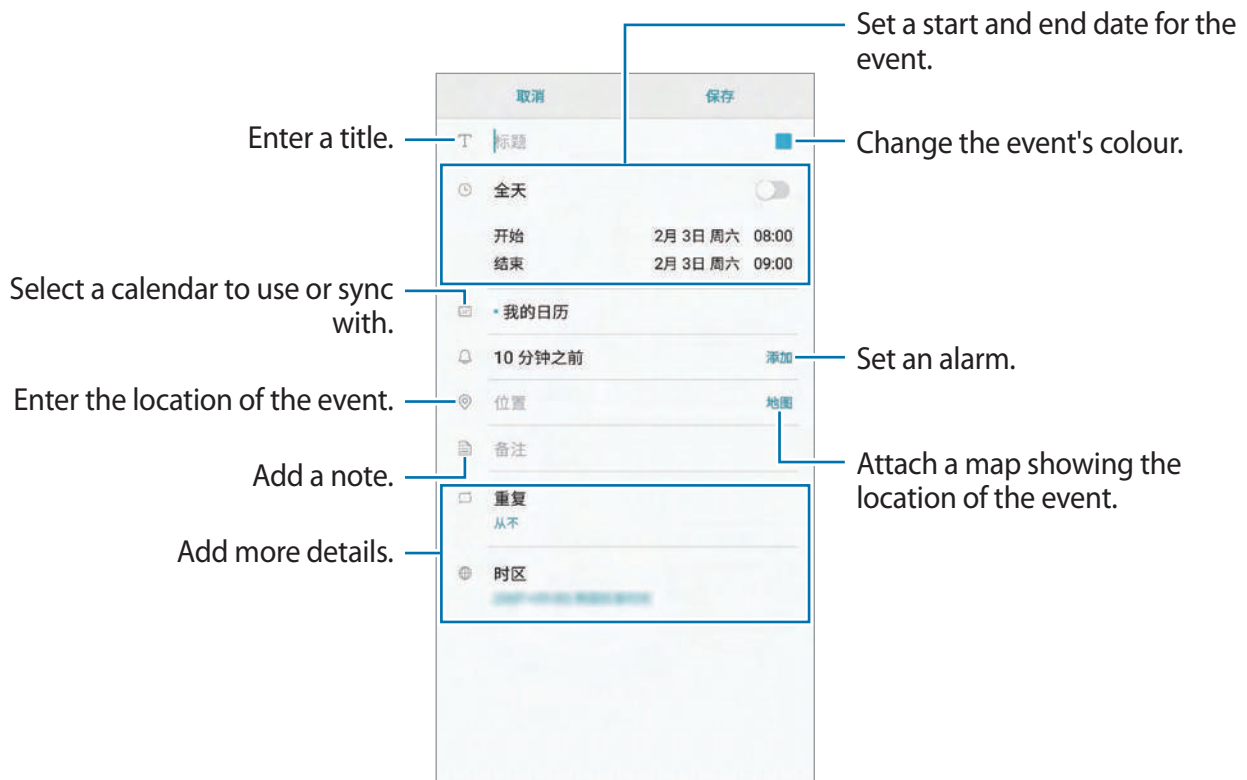
# Calendar

## 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.



## Creating tasks

- 1 Launch the **Calendar** app and tap **VIEW** → **Tasks**.
- 2 Tap **+** and enter task details.
- 3 Tap **SAVE** to save the task.

## Syncing events and tasks with your accounts

- 1 Launch the **Settings** app, tap **Cloud and accounts** → **Accounts**, 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.

## Samsung Health

### Introduction

Samsung Health helps you manage your wellness and fitness. Set fitness goals, check your progress, and keep track of your overall wellness and fitness.

### Starting Samsung Health

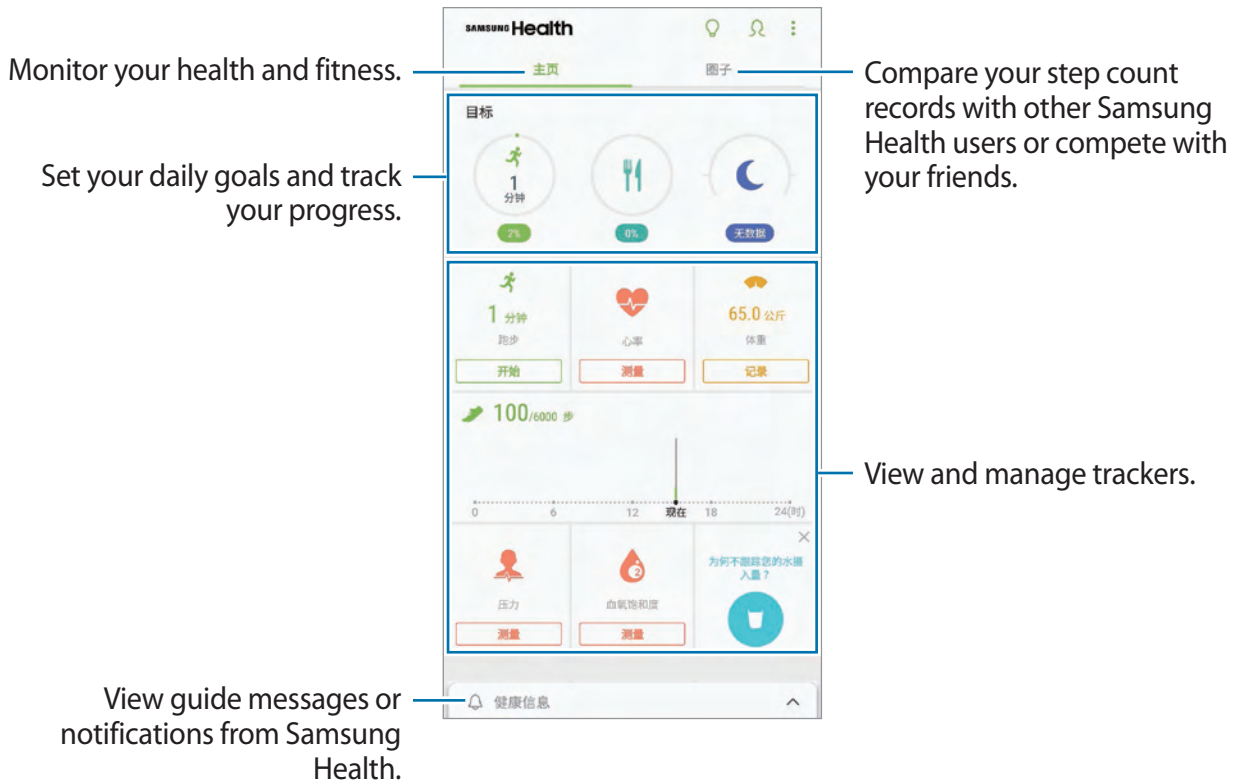
When running this app for the first time or restart it after performing a data reset, follow the on-screen instructions to complete the setup.

- 1 Open the **Samsung** folder and launch the **Samsung Health** app.
- 2 Follow the on-screen instructions to complete the setup.

## Using Samsung Health

You can view the key information from Samsung Health menus and trackers to monitor your wellness and fitness. You can also compare your step count records with other Samsung Health users and compete with your friends.

Open the **Samsung** folder and launch the **Samsung Health** app.



To add items to the Samsung Health screen, tap  → **Manage items**, and then select items.

- **GOALS:** Set your daily fitness goals and view your progress.
- **PROGRAMS:** Use customisable exercise programmes.
- **GENERAL TRACKERS:** Monitor your activities, food intake, and body measurements.
- **EXERCISE TRACKERS:** Add trackers of various exercises and monitor your activities.

## TOGETHER

Together allows you to set up step count goals and compete with your friends. You can invite friends to walk together, set target step counts, compete in challenges, and view your ranking on the **Steps leaderboard**.

On the Samsung Health screen, tap **TOGETHER**.

## Steps

The device counts the number of steps you take and measures the distance travelled.

On the Samsung Health screen, tap the steps tracker.



- You may experience a brief delay while the steps tracker monitors your steps and then displays your step count. You may also experience a brief delay before the pop-up window indicates that your goal has been reached.
- If you use the steps tracker while travelling by car or train, vibration may affect your step count.

## Heart rate

Measure and record your heart rate.



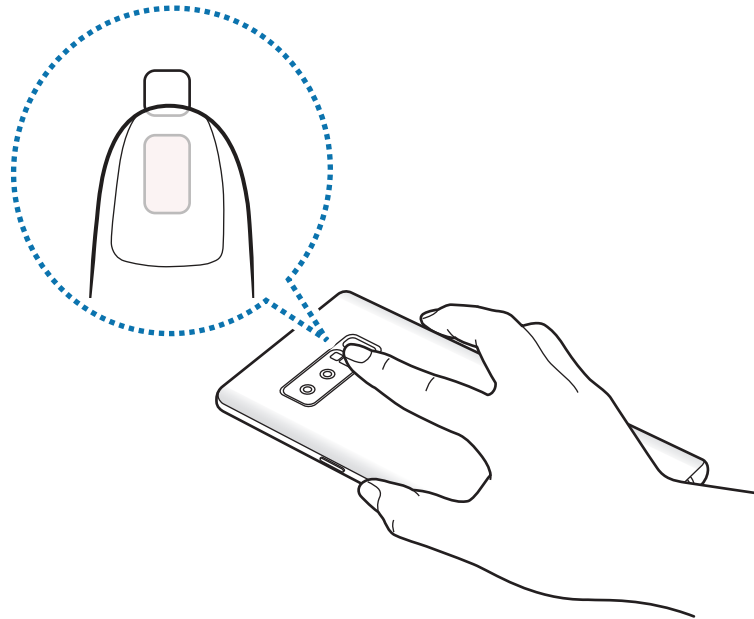
The heart rate tracker is intended for fitness and informational purposes only and is not intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease.

### **Be aware of following conditions before measuring your heart rate:**

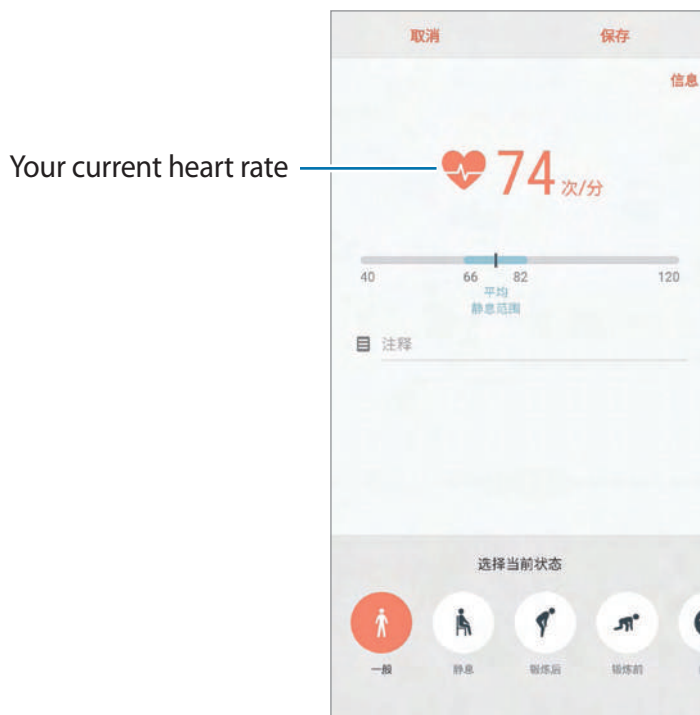
- Rest for 5 minutes before taking measurements.
- If the measurement is very different from the expected heart rate, rest for 30 minutes and then measure it again.
- During winter or in cold weather, keep yourself warm when measuring your heart rate.
- Smoking or consuming alcohol before taking measurements may cause your heart rate to be different from your normal heart rate.
- Do not talk, yawn, or breathe deeply while taking heart rate measurements. Doing so may cause your heart rate to be recorded inaccurately.
- Heart rate measurements may vary depending on the measurement method and the environment they are taken in.
- If the heart rate sensor is not working, make sure nothing is obstructing the sensor. If the heart rate sensor continues to have the same problem, visit a Samsung Service Centre.

- 1 On the Samsung Health screen, tap the heart rate tracker and tap **MEASURE** to start measuring your heart rate.

2 Place your finger on the heart rate sensor on the back of the device.



3 After a moment, your current heart rate will be displayed on the screen. Remove your finger from the sensor.



## Additional information

- Samsung Health is intended for fitness and wellness purposes only and is not intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease.
- The available functions, features and addable applications for Samsung Health may vary from country to country due to different local laws and regulations. You should check the features and applications available in your specific region before use.
- The purpose for data collection is limited to providing the service that you have requested, including providing additional information to enhance your wellness, sync data, data analysis and statistics or to develop and provide better services. (But if you sign in to your Samsung account from Samsung Health, your data may be saved on the server for data backup purposes.) Personal information may be stored until the completion of such purposes. You can delete personal data stored by Samsung Health by using the Reset data option in the Settings menu. To delete any data you have shared with social networks or transferred to storage devices, you must delete them separately.
- You may share and/or sync your data with additional Samsung services or compatible third party services that you select, as well as with any of your other connected devices. Access to Samsung Health information by such additional services or third party devices will only be permitted with your express approval.
- You assume full responsibility for the inappropriate use of data shared on social networks or transmitted to others. Use caution when sharing your personal data with others.
- If the device is connected to measuring devices, verify the communication protocol to confirm proper operation. If you use a wireless connection, such as Bluetooth, the device may be affected by electronic interference from other devices. Avoid using the device near other devices that transmit radio waves.
- Please read Terms and Conditions and Privacy Policy of Samsung Health carefully before using it.

## Samsung Assistant


Samsung Assistant helps you to organise your daily schedule. You can use recommended services and remember events by receiving reminder cards. You can also use convenient assistant services to do things, like make hotel reservations or track deliveries.

Open the **Samsung** folder and launch the **Samsung Assistant** app.



You can set up your profile to receive more specific reminder cards. Tap **MY PAGE** → **Profile** and customise settings, such as your favourite places, sleep time, and work time.

### Creating custom reminders

- 1 On the Samsung Assistant screen, tap **REMINDERS** → .
- 2 Select a reminder type and enter reminder details.
- 3 Tap **SAVE** to save the reminder.

You will receive the reminder card at the time or location you set.



If you receive a hotel or a flight booking confirmation by text message, a reservation reminder card will appear automatically in the **Samsung Assistant** app. You can receive flight status notifications on your day of departure. Other useful travel information will also appear on the reservation card on the **Samsung Assistant** app to provide convenient information.

### Viewing reminder cards

When you receive reminder cards, a card notification will appear on the notification panel.

- 1 Open the notification panel and select a card notification.  
The card will open in the **Samsung Assistant** app.
- 2 Swipe upwards or downwards on the card to view its information and recommended actions.

### Using assistant services

You can use convenient assistant services to do things, like making hotel reservations or tracking deliveries.

On the Samsung Assistant screen, tap **LIFE SERVICES** and select a service to use.

## Samsung Music

Listen to music stored on your device and stream online music from the Samsung music service.

Launch the **Samsung Music** app.

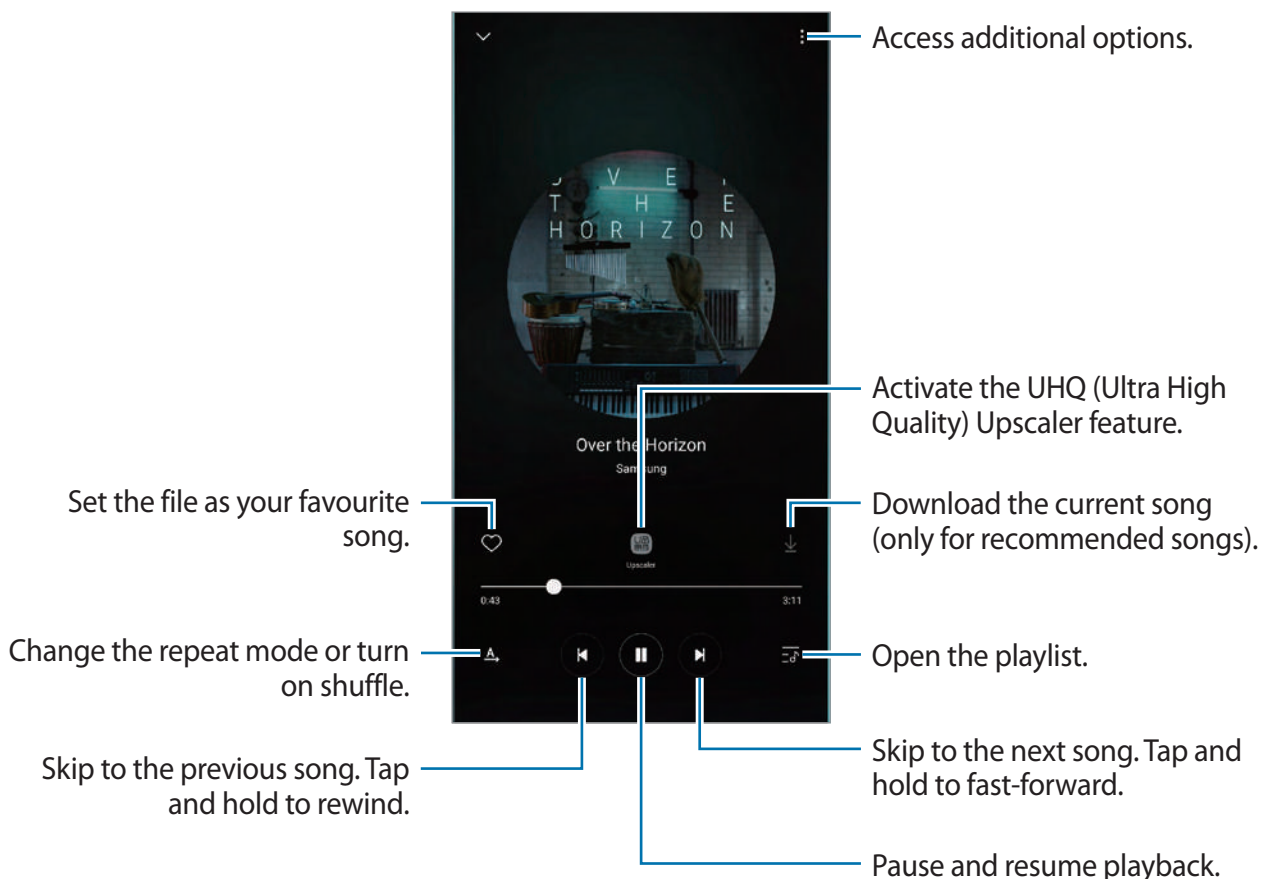
Tap one of the following options:

- **MY MUSIC:** Listen to music stored on your device.
- **RECOMMENDED:** Listen to recommended online music.
- **RADIO STATIONS:** Listen to music from online radio stations.

### Playing music

Tap **MY MUSIC** or **RECOMMENDED**, select a category, and then select a song to play.

Tap the album image at the bottom of the screen to open the music player screen.





## UHQA

Use the UHQ (Ultra High quality) Upscaler feature to improve the sound to UHQA (Ultra High Quality Audio) and get a sound closer to the original sound.

Connect an earphone to the device. While playing music, tap  to activate it.



Sound quality may vary depending on the connected earphone.

## Samsung Video

Watch videos stored on your device and stream online video content from various Video On Demand (VOD) services.

Launch the **Samsung Video** app.

Tap one of the following options:

- **CATEGORY:** View online videos by category.
- **RECOMMENDED:** View recommended online videos.
- **MY VIDEOS:** View your videos and customise the settings.


## Voice Recorder


### Introduction

Use different recording modes for various situations. The device can convert your voice to text and distinguish between sound sources.

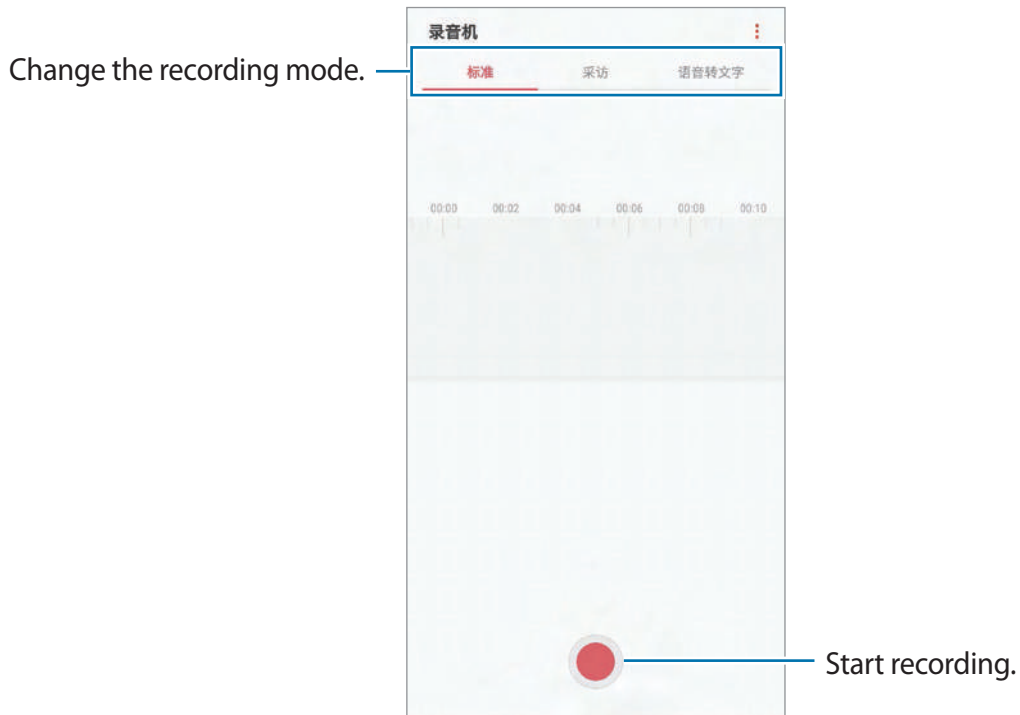
### Making voice recordings


- 1 Open the **Samsung** folder and launch the **Voice Recorder** app.

2 Tap  to start recording. Speak into the microphone.

Tap  to pause recording.

While making a voice recording, tap **BOOKMARK** to insert a bookmark.



3 Tap  to finish recording.

4 Enter a file name and tap **SAVE**.

## Changing the recording mode

Open the **Samsung** folder and launch the **Voice Recorder** app.

Select a mode from the top of the voice recorder screen.

- **STANDARD**: This is the normal recording mode.
- **INTERVIEW**: The microphone is sensitive to sounds from two directions. In this mode, both the top and the bottom of the device pick up equal amounts of sound.
- **SPEECH-TO-TEXT**: The device records your voice and simultaneously converts it to on-screen text. For best results, keep the device near your mouth and speak loudly and clearly in a quiet place.



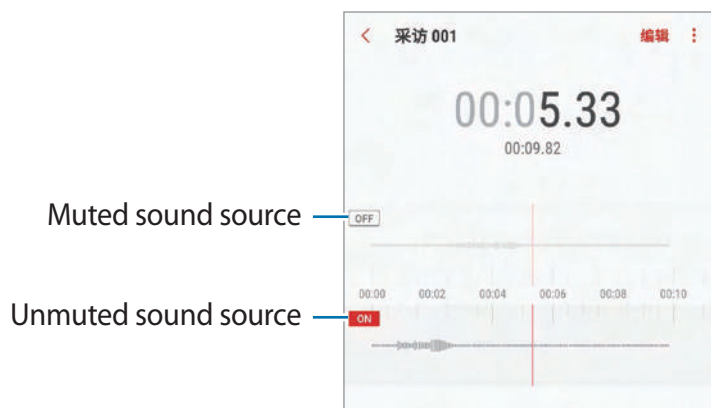
If the voice memo system language does not match the language you are speaking, the device will not recognise your voice. Before using this feature, tap the current language to set the voice memo system language.

## Playing selected voice recordings

When you review interview recordings, you can mute or unmute certain sound sources in the recording.

- 1 Open the **Samsung** folder and launch the **Voice Recorder** app.
- 2 Tap **LIST** and select a voice recording made in interview mode.
- 3 To mute certain sound sources, tap **ON** for the corresponding direction that sound is to be muted.

The icon will change to **OFF** and the sound will be muted.



## My Files

Access and manage various files stored in the device.

Open the **Samsung** folder and launch the **My Files** app.

View files that are stored in each storage.

To free up the device's storage, tap  → **Get more space**.

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 , enter a city name or select a city from the globe, and then tap **ADD**.

### 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**.

To use the unit conversion tool, tap . You can convert various values, such as area, length, or temperature, into other units.

## Radio


### Listening to the FM radio

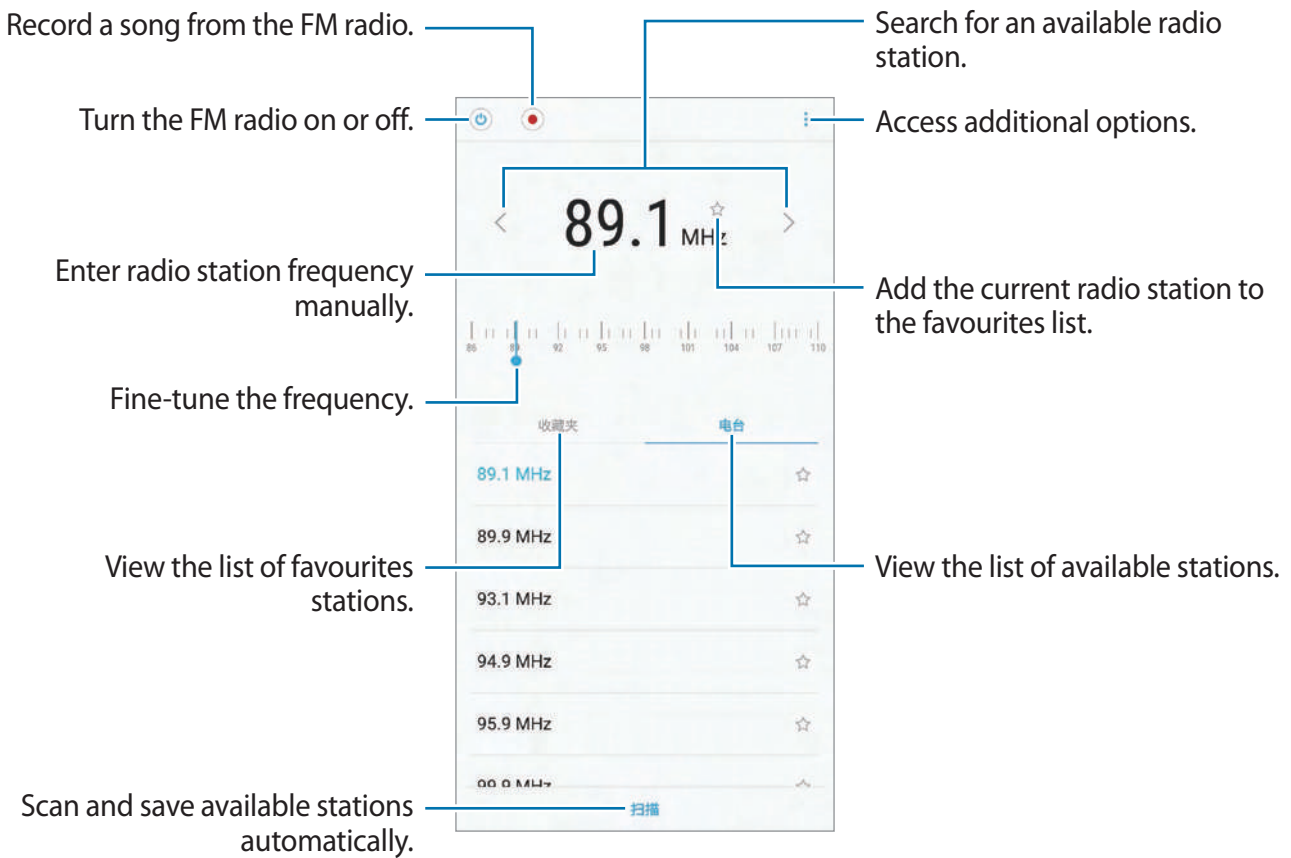
Open the **Samsung** folder and launch the **Radio** app.

Before you use this app, you must connect an earphone, 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.



## Playing through the speaker

You can listen to the radio through the speaker instead of the connected earphone.

Tap  → **Play through speaker.**

## Scanning radio stations

Open the **Samsung** folder and launch the **Radio** app.

Tap **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.

## Samsung Themes

Change the wallpaper settings for the Home screen and the locked screen or apply various themes to the device.

Launch the **Samsung Themes** app.

- **Wallpapers:** Change the wallpaper settings for the Home screen and the locked screen.
- **Themes:** Change the device's theme.
- **Icons:** Change the icon style.
- **AOD:** Select an image to display on the screen when it is turned off.

## Samsung Data Store

Purchase roaming data packages and use them as virtual SIM cards to get online without installing an actual SIM, USIM or UIM card when you are abroad.

### Before you start



- To use Samsung Data Store, you must register and sign in to your Samsung account. Refer to [Samsung account](#) for more information.
- To reserve data packages in Samsung Data Store, the device must be connected to a Wi-Fi or mobile network.
- Roaming data packages support data services only.

### Purchasing and reserving data packages

When you purchase data packages, the data packages will be reserved for you in the **Samsung Data Store** app. You can use the reserved data packages by activating them when you are abroad.

- 1 Open the **Samsung** folder and launch the **Samsung Data Store** app.
- 2 Tap **STORE**.
- 3 Enter your destination country or region in the search field.  
You can also select popular destinations or data packages on the Store screen.
- 4 Select a package you want and tap **BUY NOW**.



5 Select the data amount or the number of days by tapping  or .

6 Tap **CONTINUE** to purchase and reserve the selected package.



The reserved data package will expire after thirty days. You can check your order history by tapping **MY PAGE** → **Packages** → **VALID**.

## Activating data packages

When you are abroad, you can activate reserved data packages for use.

1 Open the **Samsung** folder and launch the **Samsung Data Store** app.

2 Tap **QUICK** → **Enable Package**.

3 Select the data package you want to use.

4 Follow the on-screen instructions to complete the activation.

## Deactivating data packages

When the data package is closed, the SIM card slot will be reactivated.

To manually deactivate the data package, open the **Samsung** folder, launch the **Samsung Data Store** app, and then tap **QUICK** → **Disable Package**.

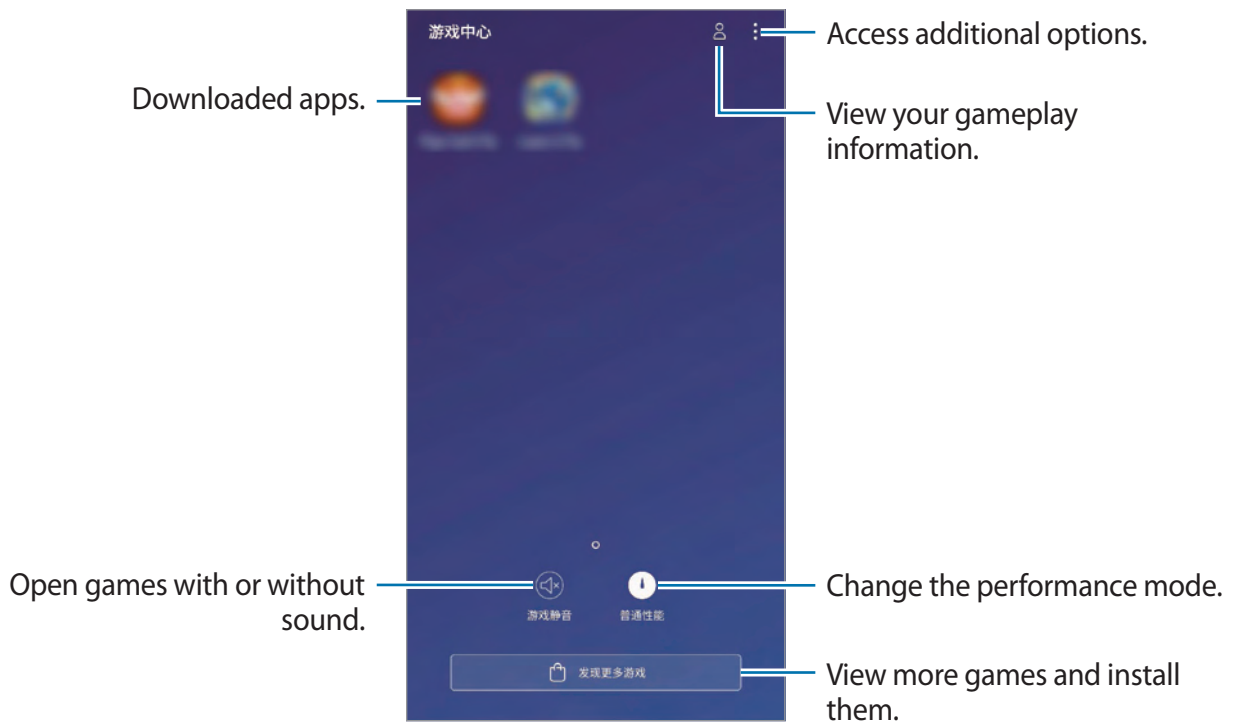


When you deactivate data packages manually, they will still continue timing and expire as scheduled.

# Game Launcher

## Introduction

Game Launcher gathers your games downloaded from **Galaxy Apps** into one place for easy access. You can set the device to game mode to play games more easily.



## Using Game Launcher

1 Open the **Samsung** folder and launch the **Game Launcher** app.

2 Tap a game from the games list.



Games downloaded from **Galaxy Apps** will be automatically shown on the game launcher screen. If you cannot see your games, tap **⋮** → **Add a game**.

## Changing the performance mode

You can change the game performance mode.


Open the **Samsung** folder, launch the **Game Launcher** app, tap **Normal performance**, and then tap the button repeatedly to select the mode you want.

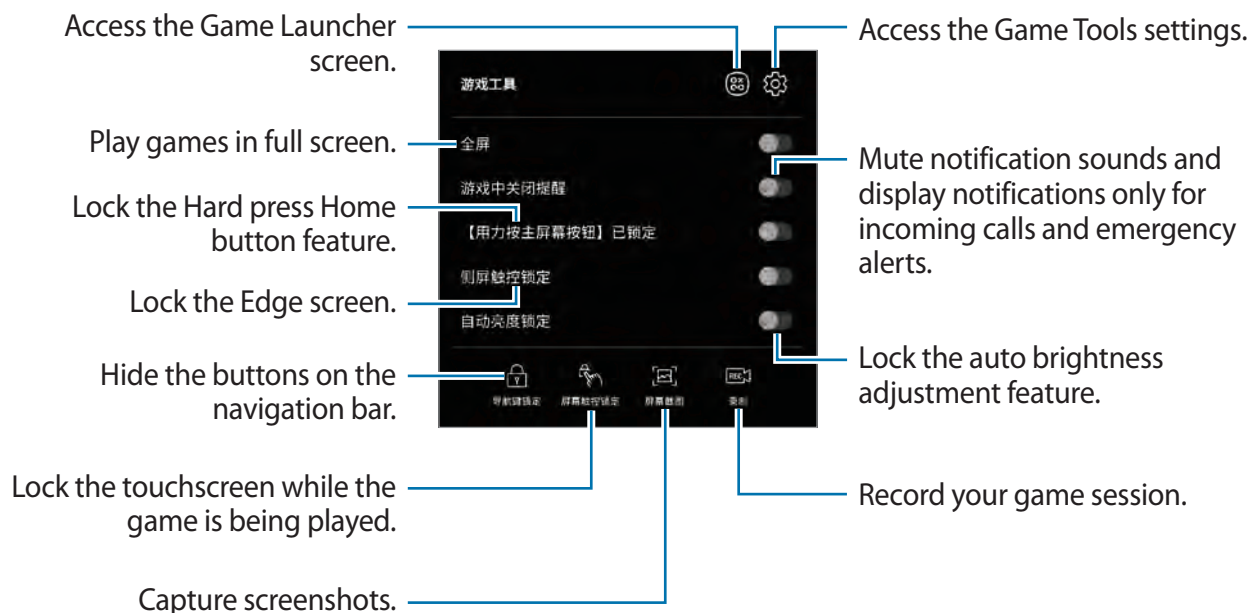
- **Normal performance:** Power saving mode or high performance mode is not used.
- **Save power:** This decreases the battery power consumption but it will reduce the system performance.
- **High performance:** This improves system performance but it will increase the battery power consumption.




Battery power efficiency may vary by game.

## Using Game Tools

You can use various options on the Game Tools panel while playing a game. To open the Game Tools panel, tap  on the navigation bar. If the navigation bar is hidden, drag upwards from the bottom of the screen to show it.



## Blocking notifications during games

Tap  and tap the **No alerts during game** switch to activate it. The device will mute notification sounds and display only notifications for incoming calls and emergency alerts, so that you can enjoy your games without being disturbed. If you receive an incoming call, a small notification will appear at the top of the screen.



## Dual Messenger

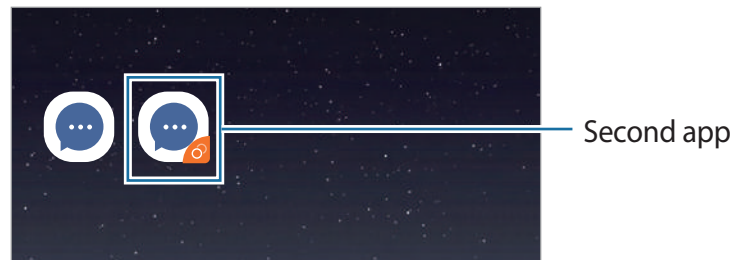
Install the second app and use two separate accounts for the same messenger app.

1 Launch the **Settings** app and tap **Advanced features** → **Dual Messenger**.

Supported apps will appear.

2 Tap the switch of an app to install the second app.

The second app will be installed. The second app's icon will be displayed with . When you receive notifications from the second app, the notifications will be displayed with  to distinguish them from the first app's notifications.



- The Dual Messenger feature may not be available depending on the app.
- Some features of the app may be limited for the second app.

### Uninstalling a second app

1 Launch the **Settings** app and tap **Advanced features** → **Dual Messenger**.

2 Tap the switch of the app you want to disable and tap **DISABLE** or **UNINSTALL**.

All data related to the second app will be deleted.



If you uninstall the first app, the second app will also be deleted.

# Samsung Connect

## Introduction

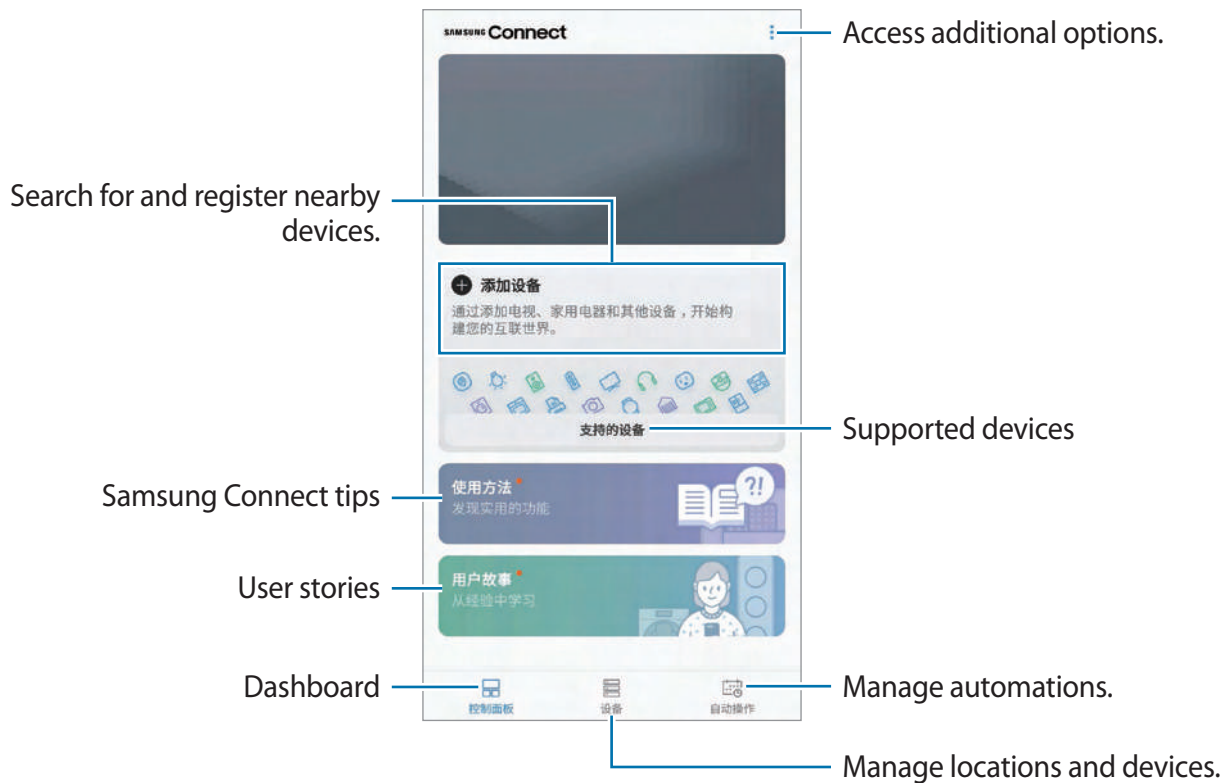
Connect to nearby devices, such as Bluetooth headsets or other smartphones, easily and quickly. You can also control and manage TVs, home appliances, and Internet of Things (IoT) products with your smartphone.

- Connecting with nearby devices: Quickly search for nearby devices, such as Bluetooth headsets or wearable devices, and connect with them.
- Registering and controlling home appliances, TVs, and IoT products: Register smart refrigerators, washers, robot vacuums, TVs, and AVs on your smartphone, and view their status or control them from your smartphone's screen. You can group devices by location and set multiple devices to operate automatically at preset times.



- Your smartphone and other devices must be connected to a Wi-Fi or mobile network.
- To see the list of connectable devices, open the **Samsung** folder, launch the **Samsung Connect** app, and then tap **SUPPORTED DEVICES**.
- Available features may differ depending on the connected device.
- Connected devices' own errors or defects are not covered by the Samsung warranty. When errors or defects occur on the connected devices, contact the device's manufacturer.

Open the **Samsung** folder and launch the **Samsung Connect** app. The dashboard will appear.



## Connecting to nearby devices

Connect to nearby devices, such as Bluetooth headsets, easily and quickly.




Connection methods may vary depending on the type of connected devices or the shared content.

- 1 Open the **Samsung** folder and launch the **Samsung Connect** app.
- 2 On the dashboard, tap **Add device**.  
The device will automatically search for nearby devices.
- 3 Select a device from the list and connect to it by following the on-screen instructions.  
Once the connection is made, you can use the device or share the content.

## Using home appliances, TVs, and IoT products

View the status of your smart appliances, TVs, and IoT products from your smartphone's screen. You can group devices by location and add automations to control the devices easily and conveniently.

### Registering devices

- 1 Open the **Samsung** folder and launch the **Samsung Connect** app.
- 2 On the dashboard, tap **Add device**.
- 3 Select a device from the list.  
To manually register devices, tap  under **ADD DEVICE MANUALLY** and select a device type or tap **Search** to enter the device name or device's model name.
- 4 Follow the on-screen instructions to register devices.

### Viewing and controlling registered devices

You can view and control your registered devices. For example, you can check whether your TV is on or what is in your fridge.

- 1 Open the **Samsung** folder and launch the **Samsung Connect** app.
- 2 Tap **Devices**.  
The list of registered devices will appear.
- 3 View the status of devices on the list.  
To control the devices, select a device. The device controller supplied with the selected device will be downloaded and then you can control the device.

### Adding devices and scenes by locations

Add devices by locations, view the list of devices in a same location, and control them. You can also add a scene to a location to control multiple devices at the same time.

Open the **Samsung** folder, launch the **Samsung Connect** app, and then tap **Devices**.

## Adding locations

1 Tap **ALL DEVICES** → **Add location**.


2 Enter the location name.

3 Tap **SAVE**.

Your location will be added.

## Adding scenes

Add a scene and register devices to it to control multiple devices at the same time with a single tap of a button or with a voice command.

Select a location, tap  → **Add scene**, and set scene options. You can set the scene name, icon, and devices.

## Adding automations

You can also set an automation to perform actions automatically depending on the preset time or the status of devices.

For example, add an automation to turn on the audio automatically every day at 7:00 AM.

1 Open the **Samsung** folder and launch the **Samsung Connect** app and tap **Automations** → **ADD AUTOMATION**.

2 Tap **When do you want to use this automation?** and set the conditions.

3 Tap **What do you want this automation to do?** and set devices and actions to perform.

To receive a notification when an automation runs, tap **Notify me**, enter the message, and then tap **DONE**.




## 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 message and email.



When you have a communication or sharing history, the people you contacted will appear on the sharing options panel. To directly share content with them via the corresponding app, select a person's icon. If the feature is not activated, launch the **Settings** app, tap **Advanced features**, and then tap the **Direct share** switch to activate it.

### Using additional features

- **Link Sharing:** Share large files. Upload files to the Samsung storage server and share them with others via a Web link or a code. To use this feature, your phone number must be verified.
- **Share to device:** Share content with nearby devices via Wi-Fi Direct or Bluetooth, or with Samsung Connect supported devices. You can also view your device's displayed content on a large screen by connecting your device to a screen mirroring-enabled TV or monitor.

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.

## Samsung DeX

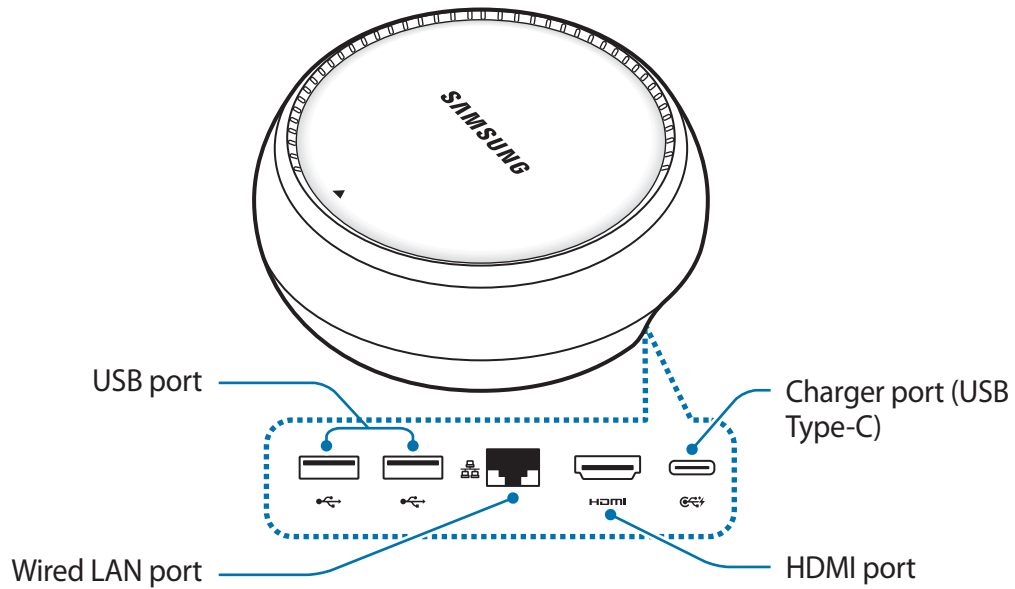
Samsung DeX is a service that allows you to use your smartphone like a computer by connecting the smartphone to an external display, such as a TV or monitor. You can use your smartphone's features on a large screen conveniently by connecting an external display, keyboard, and mouse.



- For more information about using the DeX Station, refer to the DeX Station's user manual.
- All accessories, including the DeX Station, are sold separately.
- Besides DeX Station, new accessories which support Samsung DeX may be added. Refer to the Samsung DeX website ([www.samsungdex.com](http://www.samsungdex.com)) for more information.

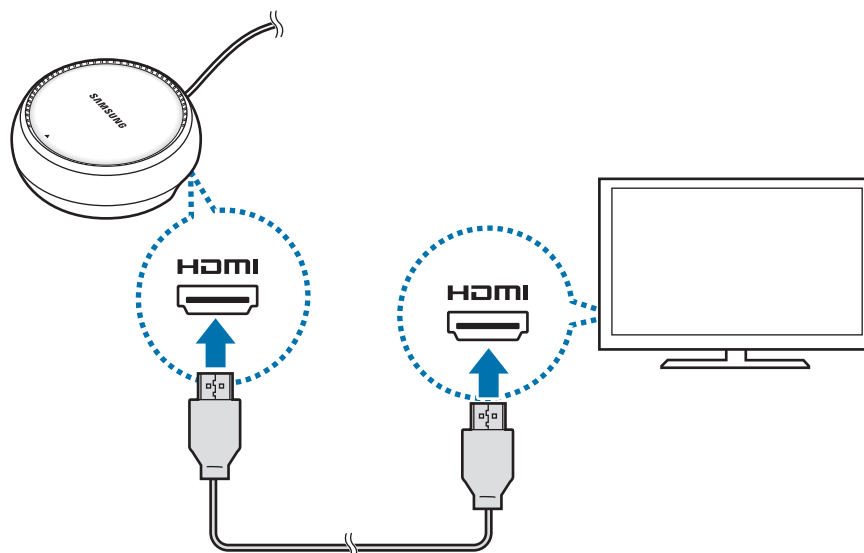


## DeX Station device layout



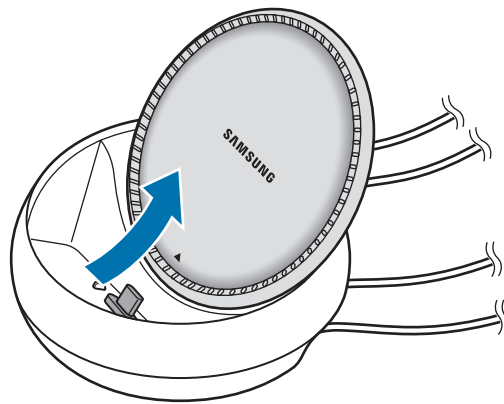
## Connecting devices


- 1 Connect the charger to the DeX Station's charger port (USB Type-C).
- 2 Connect one end of the HDMI cable to the DeX Station's HDMI port, and plug the other end of the cable into a TV or monitor's HDMI port.



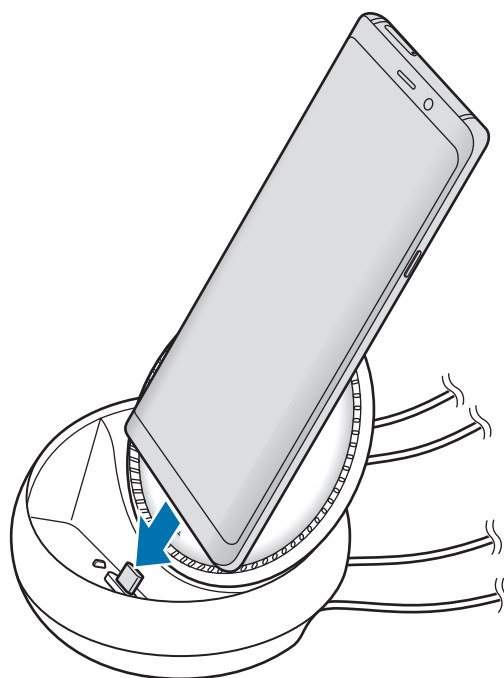
- 3 To use a wired network, connect the wired LAN to the wired LAN port.  
You can use your smartphone's wireless data or a Wi-Fi network if you do not connect to the wired LAN.


- 4 Press ▲ on the front of the cover to use the cover as a smartphone support.  
You can now see the smartphone connector.



-  Be careful not to hurt your fingers when changing the angle of the smartphone support.

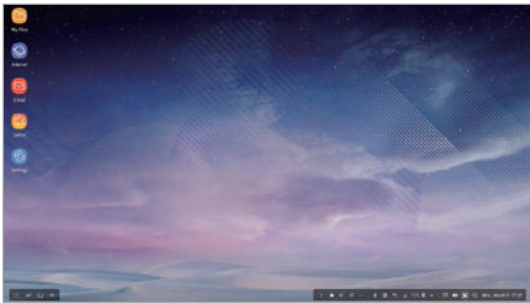
- 5 Connect your smartphone's multipurpose jack to the smartphone connector on the DeX Station.



-  If you connect your smartphone with a case attached, it may not correctly connect to the DeX Station or run Samsung DeX properly depending on your device's case.

6 On your smartphone's screen, select the screen mode you want to use. You can choose from Samsung DeX mode or screen mirroring mode.

- **START SAMSUNG DeX:** Your smartphone's screen will turn off and appear on the connected TV or monitor in Samsung DeX mode.
- **SWITCH TO SCREEN MIRRORING:** The same screen as your smartphone will appear on the connected TV or monitor.



Samsung DeX mode



Screen mirroring mode



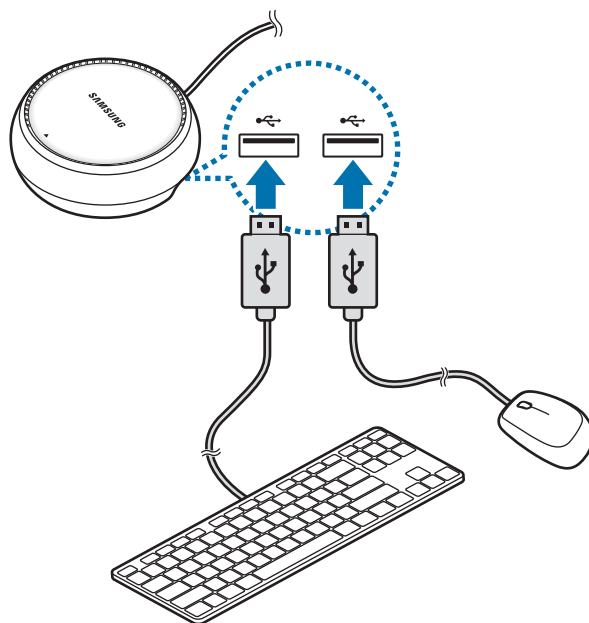
The screen mode you first select will be applied for subsequent connections. Refer to [Changing screen mode](#) for more information.

## Connecting a keyboard and mouse

To use Samsung DeX mode, connect a keyboard and mouse to the DeX Station's USB ports.



When you connect a keyboard, the virtual keyboard will not appear when you select the text input field.



You can also use a wireless keyboard/mouse or Bluetooth keyboard/mouse. Refer to the respective device's manual for more information.

## Using Samsung DeX

On the mode selection screen, tap **START SAMSUNG DeX**.

Your smartphone's screen will turn off and a virtual smartphone screen will appear on the connected TV or monitor. You can multitask by running multiple apps simultaneously. You can also check your smartphone's notifications and status.



- If you want to control the Samsung DeX screen, you must connect a mouse. Refer to [Connecting a keyboard and mouse](#) for more information.
- When starting or ending Samsung DeX, running apps may be closed.
- Some apps or features may not be available when using Samsung DeX.
- To adjust the screen settings, use the connected TV or monitor's display settings.
- **Favourite apps:** Add frequently used apps to the Home screen and launch them quickly.
- **Apps button:** View and run your smartphone's apps. To install apps that are optimised for Samsung DeX, tap **Apps for Samsung DeX**.
- **Taskbar:** View the apps that are currently running.
- **Status bar:** View your smartphone's notifications and status. Status icons may appear differently depending on your smartphone's status. When you click ▲, the quick setting buttons will appear. You can activate or deactivate certain smartphone features using the quick setting buttons.
- **Quick access toolbar:** Use quick tools, such as volume control or search.

### Enjoying games vividly on a large screen

You can play your smartphone's games on a large screen and install recommended games. On the connected TV or monitor, launch the **Game Launcher** app.

## Answering calls


While using Samsung DeX, you can answer calls from your smartphone on the connected TV or monitor. Select the call answering option on the connected TV or monitor to answer a call. Your smartphone's speaker will be used during the calls.



If you do not want to use the speakerphone, remove your smartphone from the DeX Station. It may take a few seconds to display the call screen on the smartphone.

## Changing screen mode

### Switching to screen mirroring mode

On the connected TV or monitor, launch the **Settings** app and tap **Connections** → **More connection settings** → **HDMI mode** → **Screen mirroring**. Alternatively, on the status bar, select  → **SWITCH TO SCREEN MIRRORING**.

### Switching to Samsung DeX mode

On your smartphone, launch the **Settings** app and tap **Connections** → **More connection settings** → **HDMI mode** → **Samsung DeX**. Alternatively, open the notification panel and tap **Samsung DeX is available**.

## Ending the connection

To disconnect your smartphone from the connected monitor, remove your smartphone from the DeX Station.

## Connecting to an external display

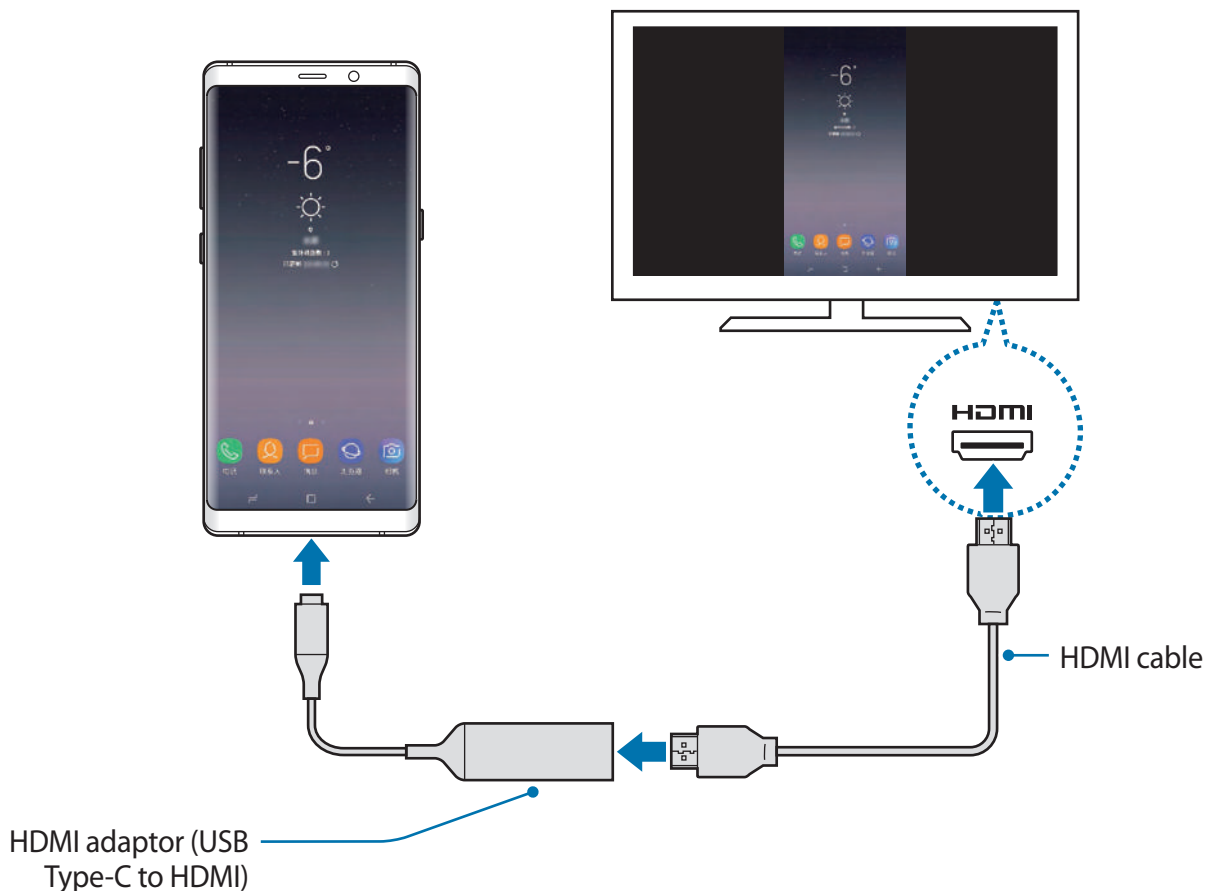
You can connect your smartphone to an external display, such as a TV or monitor, and view presentations or movies on the connected display. Connect your smartphone to an external display using an HDMI cable and HDMI adaptor (USB Type-C to HDMI). You can view your smartphone's content on the connected screen.



- HDMI cables and adaptors (USB Type-C to HDMI) are sold separately.
- Use only a Samsung-approved HDMI adaptor (USB Type-C to HDMI). Performance problems and malfunctions caused by using unapproved accessories are not covered by the warranty.

- 1 Connect an HDMI adaptor (USB Type-C to HDMI) to your smartphone.
- 2 Connect an HDMI cable to the HDMI adaptor (USB Type-C to HDMI) and to a TV or monitor's HDMI port.

Your smartphone's screen will appear on the connected screen.





# Settings

## Introduction

Customise device settings. 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**.

- **WLAN:** Activate the Wi-Fi feature to connect to a Wi-Fi network and access the Internet or other network devices. Refer to [WLAN](#) for more information.
- **Bluetooth:** Use Bluetooth to exchange data or media files with other Bluetooth-enabled devices. Refer to [Bluetooth](#) for more information.
- **Phone visibility:** Allow other devices to find your device to share content with you. When this feature is activated, your device will be visible to other devices when they search for available devices using their Transfer files to device option.
- **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.
- **Airplane mode:** Set the device to disable all wireless functions on your device. You can use only non-network services.



Make sure the device is turned off during takeoff and landing.

- **NFC and payment:** Set the device to allow you to read near field communication (NFC) tags that contain information about products. You can also use this feature to make payments and buy tickets for transportation or events after downloading the required apps. Refer to [NFC and payment](#) for more information.
- **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:** Activate your SIM, USIM or UIM cards and customise the SIM card settings. Refer to [SIM card manager](#) 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.

## WLAN

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** → **WLAN**, 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.

## WLAN Direct

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

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

**2** Tap **WLAN 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  → **WLAN 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** → **WLAN**.

**2** Tap **WLAN Direct**.

The device displays the connected devices in the list.

**3** Tap the device name to disconnect the devices.

## 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.

## Dual audio


You can connect up to two Bluetooth audio devices to your smartphone. Connect two Bluetooth headsets or speakers to use them at the same time.



To use this feature, the Bluetooth audio devices you want to connect must support the **Media audio** feature.

- 1 On the Settings screen, tap **Connections** → **Bluetooth**, and then tap the switch to activate it.  
The detected devices will be listed.
- 2 Tap  → **Dual audio**, tap the switch to activate it, and then tap the Back button.
- 3 Select a device to pair with.  
If the device you want to pair with is not in the list, turn on its visibility option or enter Bluetooth pairing mode on the device. Refer to the device's user manuals for more information.
- 4 Tap  next to the connected device and tap the **Media audio** switch to activate it.
- 5 Select another device from the list and activate its **Media audio** feature.

## 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**.

## NFC and payment

Your device allows you to read near field communication (NFC) tags that contain information about products. You can also use this feature to make payments and buy tickets for transportation or events after downloading the required apps.

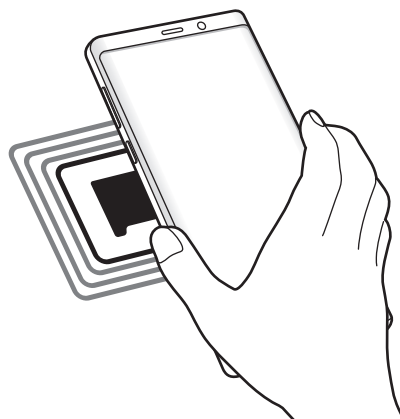


The device contains a built-in NFC antenna. Handle the device carefully to avoid damaging the NFC antenna.

## Reading information from NFC tags

Use the NFC feature to send images or contacts to other devices, and read product information from NFC tags.

- 1 On the Settings screen, tap **Connections** and tap the **NFC and payment** switch to activate it.
- 2 Place the NFC antenna area on the back of your device near an NFC tag.  
The information from the tag appears.



Ensure that the device's screen is turned on and unlocked. Otherwise, the device will not read NFC tags or receive data.

## Making payments with the NFC feature

Before you can use the NFC feature to make payments, you must register for the mobile payment service. To register or get more information about the service, contact your service provider.

- 1 On the Settings screen, tap **Connections** and tap the **NFC and payment** switch to activate it.
- 2 Touch the NFC antenna area on the back of your device to the NFC card reader.

To set the default payment app, open the Settings screen and tap **Connections** → **NFC and payment** → **Tap and pay** → **PAYMENT**, and then select an app.



The payment services list may not include all available payment apps.

## Sending data with the NFC feature

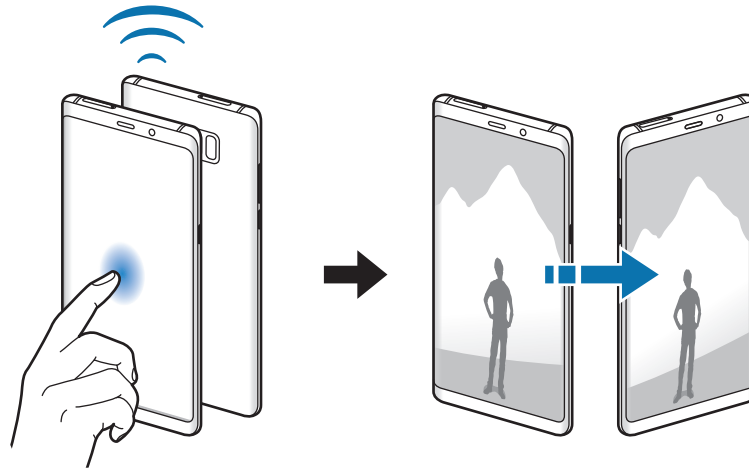
Allow data exchange when your device's NFC antenna touches the other device's NFC antenna.

- 1 On the Settings screen, tap **Connections** → **NFC and payment** and tap the switch to activate it.
- 2 Tap the **Android Beam** switch to activate it.
- 3 Select an item and touch the other device's NFC antenna to your device's NFC antenna.

4 When **Touch to beam.** appears on the screen, tap your device's screen to send the item.



If both devices try to send data simultaneously, the file transfer may fail.



## 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.
- **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  → **Configure Mobile 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

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

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

- **Calls:** Select a SIM, USIM or UIM card for voice calls.
- **Text messages:** Select a SIM, USIM or UIM for messaging.
- **Mobile data:** Select a SIM, USIM or UIM card for data services.
- **NFC payment services:** Select a SIM, USIM or UIM card for NFC payment services.
- **Confirm SIM card for calls:** Set the device to display the SIM, USIM or UIM card selection pop-up window when returning a call or calling from a message. The pop-up window will appear only if the SIM, USIM or UIM card used for the previous call or message is different from your preferred SIM, USIM or UIM card.
- **Dual SIM always on:** Set the device to allow incoming calls from the other SIM or USIM card during a call. If you insert a UIM card, this feature is disabled.



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**.

- **Nearby device scanning:** Set the device to scan for nearby devices to connect to.
- **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.
- **MirrorLink:** Use the MirrorLink feature to control your device's MirrorLink apps on the vehicle's head unit monitor. Refer to [MirrorLink](#) for more information.
- **Download booster:** Set the device to download files larger than 30 MB, faster via Wi-Fi and mobile networks simultaneously. Refer to [Download booster](#) for more information.
- **VPN:** Set up virtual networks (VPNs) on your device to connect to a school or company's private network.
- **Ethernet:** When you connect an Ethernet adaptor, you can use a wired network and configure network settings.

## 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 Search for a printer plug-in in **Galaxy Apps**.
- 2 Select a printer plug-in and install it.
- 3 On the Settings screen, tap **Connections** → **More connection settings** → **Printing**.

- 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.

## MirrorLink

You can display your device's screen on the vehicle's head unit monitor.

Connect your device to a vehicle to control your device's MirrorLink apps on the vehicle's head unit monitor.

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



Your device is compatible with vehicles that support MirrorLink version 1.1 or higher.

## Connecting your device to a vehicle via MirrorLink

When using this feature for the first time, connect the device to a Wi-Fi or mobile network.

- 1 Pair your device with a vehicle via Bluetooth.

Refer to [Pairing with other Bluetooth devices](#) for more information.

- 2 Connect your device to the vehicle using a USB cable.

When they are connected, access your device's MirrorLink apps on the head unit monitor.

## Ending the MirrorLink connection

Unplug the USB cable from your device and the vehicle.

## Download booster

Set the device to download files larger than 30 MB, faster via Wi-Fi and mobile networks simultaneously. A stronger Wi-Fi signal will provide a faster download speed.

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



- You may incur additional charges when downloading files via the mobile network.
- When you download large files, the device may heat up. If the device exceeds a set temperature, the feature will turn off.
- If network signals are unstable, the speed and performance of this feature may be affected.
- If the Wi-Fi and mobile network connections have significantly different data transfer speeds, the device may use only the fastest connection.
- This feature supports Hypertext Transmission Protocol (HTTP) 1.1 and Hypertext Transmission Protocol Secure (HTTPS). The feature cannot be used with other protocols, such as FTP.

## Sounds and vibration

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.
- **Vibrate while ringing:** Set the device to vibrate and play a ringtone for incoming calls.
- **Use Volume keys for media:** Set the device to adjust the media volume level when you press the Volume key.
- **Volume:** Adjust the volume level for call ringtones, music and videos, system sounds, and notifications.
- **Vibration intensity:** Adjust the force of the vibration notification.
- **Ringtone:** Change the ringtones for calls or notifications.
- **Vibration pattern:** Select a vibration pattern.

- **Notification sounds:** Change the notification sound settings.
- **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.
- **Dialing keypad tones:** Set the device to sound when you tap the buttons on the keypad.
- **Keyboard sound:** Set the device to sound when a key is touched.
- **Keyboard vibration:** Set the device to vibrate when a key is touched.
- **Sound quality and effects:** Configure additional sound settings.
- **Separate app sound:** Set the device to play media sound from a specific app on the connected Bluetooth speaker or headset separate from the sound of other apps. For example, you can listen to the Navigation app through your device's speaker while listening to playback from the Music app through the vehicle's Bluetooth speaker.

## Notifications

Change the notification settings for each app.

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

To display icon badges, tap the **App icon badges** switch to activate it. To customise the settings, tap **App icon badges**.

To customise notification settings, tap **ADVANCED** and select an app.

# Display

## Options

Change the display and the Home screen settings.

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

- **Brightness:** Adjust the brightness of the display.
- **Auto brightness:** Set the device to keep track of your brightness adjustments and apply them automatically in similar lighting conditions.
- **Blue light filter:** Activate the blue light filter and change the filter settings. Refer to [Blue light filter](#) for more information.
- **Font and screen zoom:** Change the screen zoom setting or font size and style.
- **Screen mode:** Change the screen mode to adjust the display's colour and contrast. Refer to [Changing the screen mode or adjusting the display colour](#) for more information.
- **Screen resolution:** Change the screen resolution. Refer to [Screen resolution](#) for more information.
- **Home screen:** Change the size of the grid to display more or fewer items on the Home screen and more.
- **Full screen apps:** Select apps to use with the full screen aspect ratio.
- **Easy mode:** Switch to easy mode to display larger icons and apply a simpler layout to the Home screen.
- **Icon frames:** Set whether to display shaded backgrounds to make icons stand out.
- **Edge screen:** Change the settings for the Edge screen. Refer to [Edge screen](#) for more information.
- **LED indicator:** Set the device to turn on the LED indicator when you charge the battery, when you have notifications, or when you make voice recordings while the screen is turned off.

- **Status bar:** Customise the settings for displaying notifications or indicators on the status bar.
- **Navigation bar:** Change the navigation bar settings. Refer to [Navigation bar \(soft buttons\)](#) for more information.
- **Screen timeout:** Set the length of time the device waits before turning off the display's backlight.
- **Block accidental touches:** Set the device to prevent the screen from detecting touch input when it is in a dark place, such as a pocket or bag.
- **Screen saver:** Set the device to launch a screensaver when the device is charging. Refer to [Screen saver](#) for more information.

## Blue light filter

Reduce eye strain by limiting the amount of blue light emitted by the screen.



While you are watching HDR videos from HDR-exclusive video services, the blue light filter may not be applied.

- 1 On the Settings screen, tap **Display** → **Blue light filter**, and then tap the **Turn on now** switch to activate it.
- 2 Drag the adjustment bar to adjust the filter's opacity.
- 3 To set the schedule to apply the blue light filter to the screen, tap the **Turn on as scheduled** switch to activate it and select an option.
  - **Sunset to sunrise:** Set the device to apply the blue light filter at night and turn it off in the morning, based on your current location.
  - **Custom schedule:** Set a specific time to apply the blue light filter.

## Changing the screen mode or adjusting the display colour

Select a screen mode suitable for viewing movies or images, or adjust the display colour to your preference. If you select the **Adaptive display** mode, you can adjust the display colour balance by colour value.

### Changing the screen mode

On the Settings screen, tap **Display** → **Screen mode** and select a mode you want.

- **Adaptive display:** This optimises the colour range, saturation, and sharpness of your display. You can also adjust the display colour balance by colour value.
- **AMOLED cinema:** This is suitable for watching videos.
- **AMOLED photo:** This is suitable for viewing images.
- **Basic:** This is set as default and is suitable for general use.



- You can adjust the display colour only in **Adaptive display** mode.
- **Adaptive display** mode may not be compatible with third-party apps.
- You cannot change the screen mode while applying the blue light filter.

### Optimising the full screen colour balance

Optimise the display colour by adjusting the colour tones to your preference.

When you drag the colour adjustment bar towards **Cool**, the blue colour tone will increase. When you drag the bar towards **Warm**, the red colour tone will increase.

- 1 On the Settings screen, tap **Display** → **Screen mode** → **Adaptive display**.
- 2 Adjust the colour adjustment bar under **Full screen color balance**.  
The colour balance of the screen will be optimised.

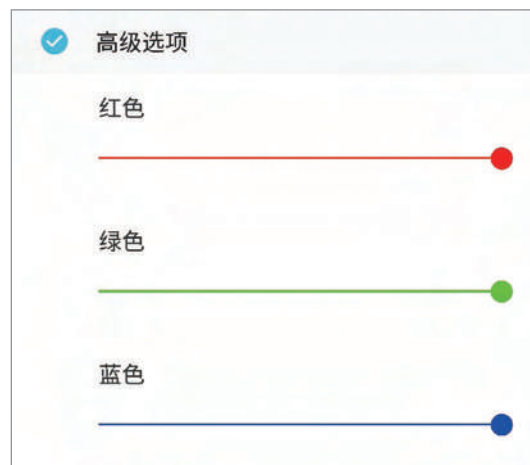




## Adjusting the screen tone by colour value

Increase or lower certain colour tones by adjusting the **Red**, **Green**, or **Blue** value individually.

- 1 On the Settings screen, tap **Display** → **Screen mode** → **Adaptive display**.
- 2 Tick **Advanced options**.
- 3 Adjust the **Red**, **Green**, or **Blue** colour bar to your preference.  
The screen tone screen will be adjusted.



## Screen resolution

Change the screen resolution. It is set to FHD+ by default. Higher resolutions make the display more vivid, however they will consume more battery power.

- 1 On the Settings screen, tap **Display** → **Screen resolution**.
- 2 Drag the adjustment bar to adjust the screen resolution, and then tap **APPLY**.  
Some currently running apps may close when you change the resolution.


## Screen saver

You can set to display images as a screensaver when the screen turns off automatically. The screensaver will be displayed when the device is charging.

1 On the Settings screen, tap **Display** → **Screen saver** and tap the switch to activate it.

2 Select an option.

If you select **Photo frame**, a slideshow with selected images will start. If you select **Photo Table**, selected images will appear as small cards and overlap.

3 Tap  to select albums for displaying images.

4 When you are finished, tap the Back button.

To preview the selected option, tap **PREVIEW**.



When you tap the screen while your screensaver is displayed, the screen will turn on.

## Advanced features

Activate advanced features and change the settings that control them.

On the Settings screen, tap **Advanced features**.



Excessive shaking or an impact to the device may cause an unintended input for some features using sensors.

- **S Pen:** Change the settings for using the S Pen. Refer to [S Pen features](#) for more information about **Air command**, **Air view**, and **Screen off memo**.
- **Smart stay:** Set the device to prevent the display from turning off while you are looking at it.
- **Floating messages:** Set the device to notify new messages with a floating icon. You can check and reply to messages instantly while watching videos or playing games in full screen.
- **App lock:** Set a lock method to prevent others from accessing selected apps.
- **Call/message spam filter:** Set the device to identify unsaved phone numbers when you receive incoming calls or messages. You can also set the device to reject calls or messages from specific phone number types or to update database automatically when connected a Wi-Fi network.

- **Hongbao assistant:** Set the device to notify you when you receive a hongbao via WeChat. This feature will help you quickly open hongbaos.
- **One-handed mode:** Activate one-handed operation mode for your convenience when using the device with one hand.
- **Finger sensor gestures:** Set the device to open or close the notification panel when you swipe upwards or downwards on the fingerprint recognition sensor. This feature is not available when the sensor is detecting your fingerprint.
- **Quick launch Camera:** Set the device to launch the camera by pressing the Power key twice quickly.
- **Device assistance app:** Select a device assistance app to launch when you press and hold the Home button. The device assistance app will gather information from the current screen and provide related information, apps, and features.
- **Multi window:** Select a Multi window launch method.
- **Smart capture:** Set the device to capture the current screen and scrollable area, and crop and share the screenshot immediately.
- **Palm swipe to capture:** Set the device to capture a screenshot when you swipe your hand to the left or right across the screen. You can view the captured images in **Gallery**.



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

- **Record screen:** Change the settings for recording videos of the screen.



It is not possible to record the screen while using some apps and features.

- **Direct call:** Set the device to make a voice call by picking up and holding the device near your ear while viewing message or contact details.
- **Smart alert:** Set the device to alert you if you have missed calls or new messages when you pick up the device.



This feature may not work if the screen is turned on or the device is not on a flat surface.

- **Easy mute:** Set the device to mute incoming calls or alarms by using palm motions or facing the device's screen downwards.
- **Swipe to call or send messages:** Set the device to make a call or send a message when you swipe to the right or left on a contact or a phone number.

- **Dual Messenger:** Install the second app and use two separate accounts for the same messenger app. Refer to [Dual Messenger](#) for more information.
- **Send SOS messages:** Set the device to send help messages by pressing the Power key three times. You can also send sound recordings along with the message to the recipients.
- **Direct share:** Set the device to display the people you contacted on the sharing options panel to allow you to share content directly.
- **Video enhancer:** Enhance the image quality of your videos to enjoy brighter and more vivid colours.



This feature may not be available in some apps.

## Apps

Manage the device's apps and change their settings. You can view the apps' usage information, change their notification or permission settings, or uninstall or disable unnecessary apps.

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

## Wallpapers and themes

Change the wallpaper settings for the Home screen and the locked screen or apply various themes to the device.

On the Settings screen, tap **Wallpapers and themes**.

- **Wallpapers:** Change the wallpaper settings for the Home screen and the locked screen.
- **Themes:** Change the device's theme.
- **Icons:** Change the icon style.
- **AOD:** Select an image to display on the Always On Display.

# Lock screen and security

## Options


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.

- **Screen lock type:** Change the screen lock method.
- **Smart Lock:** Set the device to unlock itself when trusted locations or devices are detected. Refer to [Smart Lock](#) for more information.
- **Secure lock settings:** Change screen lock settings for the selected lock method.
- **Face Recognition:** Set the device to unlock the screen by recognising your face. Refer to [Face recognition](#) for more information.
- **Iris Scanner:** Register your irises to the device to secure the device or sign in to your Samsung account. Refer to [Iris recognition](#) for more information.
- **Fingerprint Scanner:** Register your fingerprint to the device to secure the device or sign in to your Samsung account. Refer to [Fingerprint recognition](#) for more information.
- **Always On Display:** Set the device to display an image or information while the screen is turned off. Refer to [Always On Display](#) for more information.
- **Clock and FaceWidgets:** Change the settings of the items displayed on the Always On Display or the locked screen.
- **Notifications:** Set whether or not to show notifications on the Always On Display or the lock screen and select which notifications to display.
- **App shortcuts:** Select apps to display shortcuts to them on the locked screen.
- **Find My Mobile:** Activate or deactivate the Find My Mobile feature. Access the Find My Mobile website ([findmymobile.samsung.cn](http://findmymobile.samsung.cn)) 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 Folder:** Create a secure folder to protect your private content and apps from others. Refer to [Secure Folder](#) for more information.

- **App permission monitor:** Set to receive notifications when the permissions you select are used by apps that you are not using. You can manage the settings of each app and view their permission usage history.
- **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.
- **Encrypt SD card:** Set the device to encrypt files on a memory card.
  -  If you reset your device to the factory defaults with this setting enabled, the device will not be able to read your encrypted files. Disable this setting before resetting the device.
- **Other security settings:** Configure additional security settings.

## Smart Lock

You can set the device to unlock itself and remain unlocked when trusted locations or devices are detected.

For example, if you have set your home as a trusted location, when you get home your device will detect the location and automatically unlock itself.



- This feature will be available to use after you set a screen lock method.
- If you do not use your device for four hours or when you turn on the device, you must unlock the screen using the pattern, PIN, or password you set.

- 1 On the Settings screen, tap **Lock screen and security** → **Smart Lock**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Select an option and follow the on-screen instructions to complete the setting.

## Face recognition

You can set the device to unlock the screen by recognising your face.

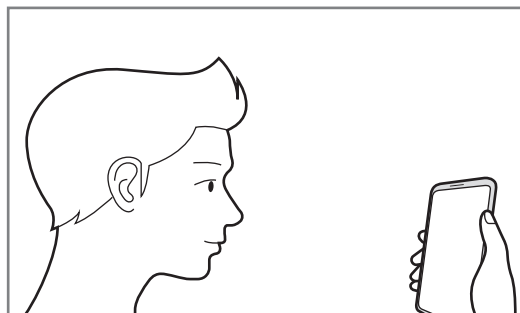


- Your device could be unlocked by someone or something that looks like your image.
- Face recognition is less secure than Pattern, PIN, or Password.
- Consider the following when using face recognition:
  - Consider the conditions when registering, such as wearing glasses, hats, masks, beards, or heavy makeup
  - Ensure that you are in a well-lit area and that the camera lens is clean when registering
  - Ensure your image is not blurry for better match results
- If you use your face as a screen lock method, your face cannot be used to unlock the screen when turning on the device. To use the device, you must unlock the screen using a pattern, PIN, or password you set when registering the face. Be careful not to forget your pattern, PIN, or password.

## Registering your face

For better face registration, register your face indoors and out of direct sunlight.

- 1 On the Settings screen, tap **Lock screen and security** → **Face Recognition**.
- 2 Unlock the screen using the preset screen lock method.  
If you have not set a screen lock method, create one.
- 3 Read the on-screen instructions and tap **CONTINUE**.
- 4 Hold the device with the screen facing towards you and look at the screen.



5 Position your face inside the circle on the screen.

The camera will scan your face.

When a face lock screen appears, tap **TURN ON** to use your face to unlock the screen.



If unlocking the screen with your face is not working properly, tap **Remove face data** to remove your registered face and register your face again.

## Unlocking the screen with face recognition

You can unlock the screen with your face instead of using a pattern, PIN, or password.

1 On the Settings screen, tap **Lock screen and security** → **Face Recognition**.

2 Unlock the screen using the preset screen lock method.

3 Tap the **Face unlock** switch to activate it.



If you want to reduce the possibility of recognising faces in photos or videos, tap the **Faster recognition** switch to deactivate it. This may decrease the face recognition speed.

4 On the locked screen, look at the screen.

When your face is recognised, you can unlock the screen without using any additional screen lock method. If your face is not recognised, use the preset screen lock method.



## Iris recognition

The iris recognition feature uses the unique characteristics of your irises, such as their shape and pattern, to strengthen the security of your device. Your iris data can be used for various authentication purposes. After registering your irises, you can set the device to use your irises for the following features:

- Samsung account verification
- Web sign-in
- Samsung Pay
- Screen lock
- Secure Folder



- This feature may not be available depending on the region or service provider.
- If you use your iris as a screen lock method, your irises cannot be used to unlock the screen when turning on the device. To use the device, you must unlock the screen using a pattern, PIN, or password you set when registering the irises. Be careful not to forget your pattern, PIN, or password.
- If your irises are not recognised, unlock the device using the pattern, PIN, or password you set when registering the irises, and then re-register your irises. If your pattern, PIN, or password is forgotten, you will not be able to use the device if you do not reset it. Samsung is not responsible for any data loss or inconvenience caused by forgotten unlock codes.



## Precautions for using iris recognition

Before using the iris recognition camera and LED, keep the following precautions in mind.

- To protect your eyes, keep the screen at least 20 cm away from your face when using iris recognition.
- Do not attach unofficial screen protectors (privacy protection films, tempered glass protectors, etc.) to your device. The iris recognition LED may not turn off even when you are very close to it.
- Do not use iris recognition with infants. Doing so may damage their eyesight.
- Anyone who experiences dizziness, seizures, loss of awareness, blackouts, or other symptoms linked to an epileptic condition, or a family history of such symptoms or conditions, should see a doctor before using iris recognition.
- The iris scanner is not intended for use as a medical device; biometric data collected and stored locally by the iris scanner is not intended for any diagnostic, therapeutic, or preventative medical purposes.

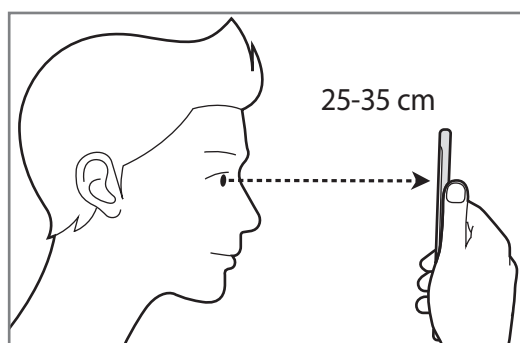
Alternative security options are available on your device. Please follow all the instructions for the use of this feature.

## For better iris recognition

The phone may not recognise your irises if:

- something prevents the camera from getting a good view of your irises (e.g. glasses, glare, low eyelids, recent eye surgery, or a medical condition).
- something gets in the way of the camera or the LED (e.g. a screen protector, dirt, damage to the camera).
- the lighting is very different from when you recorded your irises (e.g., too bright room).
- the phone is tilted too much or is moving.

Hold your device about 25-35 cm away from your face with the screen facing towards you.

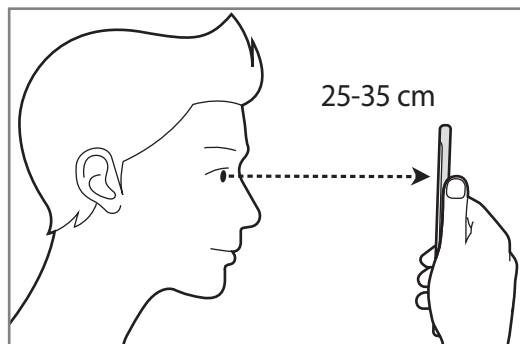


## Registering irises

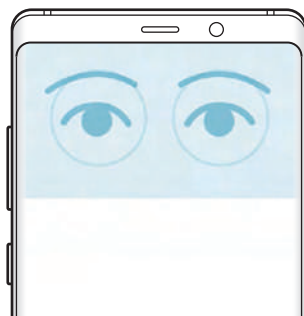


The device can save the iris data of one person only. You cannot register more than one set of irises.

- 1 On the Settings screen, tap **Lock screen and security** → **Iris Scanner**.
- 2 Unlock the screen using the preset screen lock method.  
If you have not set a screen lock method, create one.
- 3 Read the on-screen instructions and tap **CONTINUE**.  
To register only one iris of your eyes, tap **Register just 1 iris**.
- 4 Hold the device with the screen facing towards you and look at the screen.



- 5 Position your eyes inside the circles on the screen and open your eyes wide.  
The iris recognition camera will scan your irises.



- 6 When an iris lock screen appears, tap **TURN ON** to use your irises to unlock the screen.  
When you swipe in any direction on the locked screen, the iris recognition screen will appear.  
Look at the screen to scan your irises.

## Deleting irises

You can delete the registered irises.

- 1 On the Settings screen, tap **Lock screen and security** → **Iris Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **Remove iris data**.

Once the registered irises are deleted, all the related features will also be deactivated.

## Verifying the Samsung account password

Use your irises to verify your Samsung account password. You can use your irises instead of entering your password, for example, when you purchase content from **Galaxy Apps**.

- 1 On the Settings screen, tap **Lock screen and security** → **Iris Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap the **Samsung account** switch to activate it.
- 4 Sign in to your Samsung account.

## Using irises to sign in to accounts

You can use your irises to sign in to webpages that support password saving.



This feature is only available for webpages that you access via the **Internet** app.

- 1 On the Settings screen, tap **Lock screen and security** → **Iris Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap the **Web sign-in** switch to activate it.
- 4 Open a webpage that you want to sign in to with your irises.

5 Enter your user name and password, and then tap the webpage's sign in button.

6 Tick **Sign in using biometrics next time** and tap **REMEMBER**.

You can use your irises to verify your account and password to sign in to the webpage.

## Using irises with Samsung Pay

You can use irises with Samsung Pay to make payments quickly and securely. Refer to [Samsung Pay](#) for more information.

## Unlocking the screen with irises

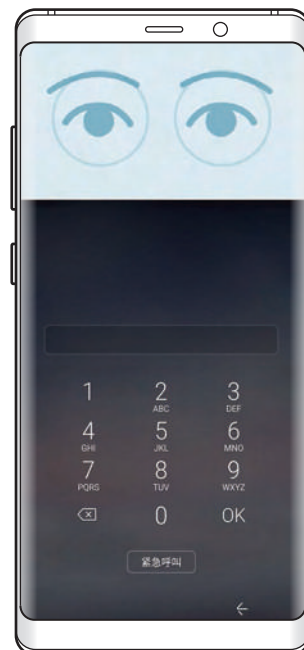
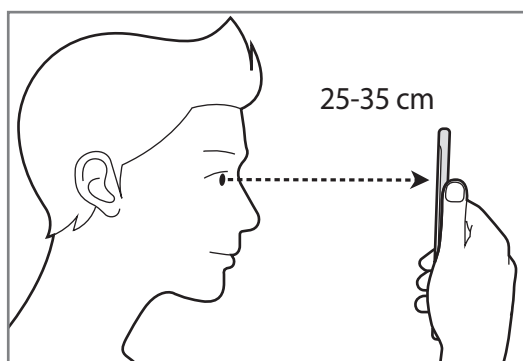
You can unlock the screen with your irises instead of using a pattern, PIN, or password.

1 On the Settings screen, tap **Lock screen and security** → **Iris Scanner**.

2 Unlock the screen using the preset screen lock method.

3 Tap the **Iris unlock** switch to activate it.

4 On the locked screen, swipe in any direction and position your eyes inside the circles on the screen to scan your irises.



To unlock the screen using iris recognition, without swiping on the locked screen, tap **Iris unlock when screen turns on** switch to activate it.

## Fingerprint recognition

In order for fingerprint recognition to function, your fingerprint information needs to be registered and stored in your device. After registering, you can set the device to use your fingerprint for the features below:

- Samsung account verification
- Web sign-in
- Samsung Pay
- Screen lock
- Secure Folder



- This feature may not be available depending on the region or service provider.
- Fingerprint recognition uses the unique characteristics of each fingerprint to enhance the security of your device. The likelihood of the fingerprint sensor confusing two different fingerprints is very low. However, in rare cases where separate fingerprints are very similar the sensor may recognise them as identical.
- If you use your fingerprint as a screen lock method, your fingerprint cannot be used to unlock the screen when turning on the device. To use the device, you must unlock the screen using a pattern, PIN, or password you set when registering the fingerprint. Be careful not to forget your pattern, PIN, or password.
- If your fingerprint is not recognised, unlock the device using the pattern, PIN, or password you set when registering the fingerprint, and then re-register your fingerprints. If your pattern, PIN, or password is forgotten, you will not be able to use the device if you do not reset it. Samsung is not responsible for any data loss or inconvenience caused by forgotten unlock codes.

## For better fingerprint recognition

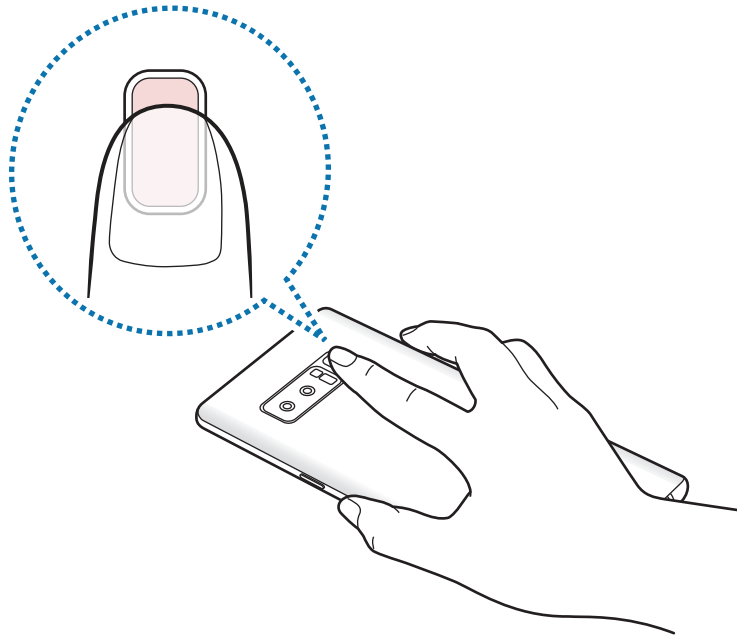
When you scan your fingerprints on the device, be aware of the following conditions that may affect the feature's performance:

- The fingerprint recognition sensor recognises fingerprints. Ensure that the fingerprint recognition sensor is not scratched or damaged by metal objects, such as coins, keys, and necklaces.
- Covering the fingerprint recognition area with protective films, stickers, or other accessories may decrease the fingerprint recognition rate. If the fingerprint recognition area is initially covered with a protective film, remove it before using the fingerprint recognition sensor.
- Ensure that the fingerprint recognition area and your fingers are clean and dry.
- The device may not recognise fingerprints that are affected by wrinkles or scars.
- The device may not recognise fingerprints from small or thin fingers.
- If you bend your finger or use a fingertip, the device may not recognise your fingerprints. Make sure to cover the entire fingerprint recognition sensor with your finger.
- To improve recognition performance, register fingerprints of the hand used most often to perform tasks on the device.
- In dry environments, static electricity can build up in the device. Avoid using this feature in dry environments or before using the feature, discharge static electricity by touching a metal object.

## Registering fingerprints

- 1 On the Settings screen, tap **Lock screen and security** → **Fingerprint Scanner**.
- 2 Unlock the screen using the preset screen lock method.  
If you have not set a screen lock method, create one.

- 3 Place your finger on the fingerprint recognition sensor.



- 4 After the device detects your finger, lift it up and place it on the fingerprint recognition sensor again.

Repeat this action until the fingerprint is registered. When you are finished registering your fingerprints, tap **DONE**.

When a fingerprint lock screen appears, tap **TURN ON** to use your fingerprint to unlock the screen.

## Deleting fingerprints

You can delete registered fingerprints.

- 1 On the Settings screen, tap **Lock screen and security** → **Fingerprint Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **EDIT**.
- 4 Tick fingerprints to delete and tap **REMOVE**.



## Verifying the Samsung account password

Use fingerprints to verify your Samsung account password. You can use a fingerprint instead of entering your password, for example, when you purchase content from **Galaxy Apps**.

- 1 On the Settings screen, tap **Lock screen and security** → **Fingerprint Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap the **Samsung account** switch to activate it.
- 4 Sign in to your Samsung account.

## Using fingerprints to sign in to accounts

You can use your fingerprints to sign in to webpages that support password saving.



This feature is only available for webpages that you access via the **Internet** app.

- 1 On the Settings screen, tap **Lock screen and security** → **Fingerprint Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap the **Web sign-in** switch to activate it.
- 4 Open a webpage that you want to sign in to with a fingerprint.
- 5 Enter your user name and password, and then tap the webpage's sign in button.
- 6 Tick **Sign in using biometrics next time** and tap **REMEMBER**.

You can use your fingerprint to verify your account and password to sign in to the webpage.

## Using fingerprints with Samsung Pay

You can use fingerprints with Samsung Pay to make payments quickly and securely. Refer to [Samsung Pay](#) for more information.

## Unlocking the screen with fingerprints

You can unlock the screen with your fingerprint instead of using a pattern, PIN, or password.

- 1 On the Settings screen, tap **Lock screen and security** → **Fingerprint Scanner**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap the **Fingerprint unlock** switch to activate it.
- 4 On the locked screen, place your finger on the fingerprint recognition sensor and scan your fingerprint.


## Secure Folder

Secure Folder protects your private content and apps, such as photos and contacts, from being accessed by others. You can keep your private content and apps secure even when the device is unlocked.



Secure Folder is a separate, secured storage area. The data in Secure Folder cannot be transferred to other devices via unapproved sharing methods, such as USB or Wi-Fi Direct. Attempting to customise the operating system or modifying software will cause Secure Folder to be automatically locked and inaccessible. Before saving data in Secure Folder, make sure to back up a copy of the data in another secure location.

## Setting up Secure Folder


- 1 Launch the **Secure Folder** app.  
Alternatively, launch the **Settings** app and tap **Lock screen and security** → **Secure Folder**.
- 2 Tap **START**.
- 3 Tap **SIGN IN** and sign in to your Samsung account.
- 4 Read and agree to the terms and conditions and tap **AGREE**.
- 5 Tap **DONE** to finish registering your Samsung account.
- 6 Select a lock method to use for Secure Folder and follow the on-screen instructions to complete the setup.  
To change the name or icon of Secure Folder, tap **Secure Folder** →  → **Customize icon**.



- When you launch the **Secure Folder** app, you must unlock the app using your preset lock method.
- If you forget your Secure Folder unlock code, you can reset it using your Samsung account. Tap the reset button at the bottom of the locked screen, and enter your Samsung account password.

## Setting auto lock for Secure Folder

Set the device to automatically lock Secure Folder when it is not being used.

- 1 Launch the **Secure Folder** app and tap  → **Settings** → **Auto lock Secure Folder**.
- 2 Select a lock option.



To manually lock your Secure Folder, tap **Lock**.

## Moving content to Secure Folder

Move content, such as photos and contacts, to Secure Folder. The following actions are an example of moving an image from the default storage to Secure Folder.

- 1 Launch the **Secure Folder** app and tap **Add files**.
- 2 Tap **Images**, tick images to move, and then tap **DONE**.
- 3 Tap **MOVE**.  
The selected items will be deleted from the original folder and moved to Secure Folder.  
To copy items, tap **COPY**.



The method for moving content may vary depending on the content type.

## Moving content from Secure Folder

Move content from Secure Folder to the corresponding app in the default storage. The following actions are an example of moving an image from Secure Folder to the default storage.

- 1 Launch the **Secure Folder** app and tap **Gallery**.
- 2 Select an image and tap **⋮** → **Move out of Secure Folder**.  
The selected items will be moved to **Gallery** in the default storage.

## Adding apps

Add an app to use in Secure Folder.

- 1 Launch the **Secure Folder** app and tap **Add apps**.
- 2 Tick one or more apps installed on the device and tap **ADD**.  
To install apps from **Galaxy Apps**, tap **DOWNLOAD FROM GALAXY APPS**.

## Removing apps from Secure Folder

Tap **Edit apps**, tick apps, and then tap **Uninstall**.

## Adding accounts

Add your Samsung and other accounts, to sync with the apps in Secure Folder.

- 1 Launch the **Secure Folder** app and tap **⋮** → **Settings** → **Accounts** → **Add account**.
- 2 Select an account service.
- 3 Follow the on-screen instructions to complete the account setup.

## Hiding Secure Folder

You can hide the Secure Folder shortcut from the Home screen.

Launch the **Secure Folder** app, tap **⋮** → **Settings**, and then tap the **Show Secure Folder** switch to deactivate it.

Alternatively, drag the status bar downwards to open the notification panel. Then, swipe downwards on the notification panel and tap **Secure Folder** to deactivate the feature.


## Backing up and restoring Secure Folder

Back up content and apps in Secure Folder to Samsung Cloud using your Samsung account and restore them later.

### Backing up data


- 1 Launch the **Secure Folder** app and tap **⋮** → **Settings** → **Backup and restore**.
- 2 Tap **Add account** and register and sign in to your Samsung account.
- 3 Tap **Back up Secure Folder data**.
- 4 Tick items you want to back up and tap **BACK UP NOW**.  
Data will be backed up to Samsung Cloud.

## Restoring data

- 1 Launch the **Secure Folder** app and tap  → **Settings** → **Backup and restore**.
- 2 Tap **Restore**.
- 3 Select a device and the data types you want to restore and tap **RESTORE NOW**.  
Backed up data will be restored to your device.

## Uninstalling Secure Folder

You can uninstall Secure Folder, including the content and apps in it.

Launch the **Secure Folder** app and tap  → **Settings** → **More settings** → **Uninstall**.

To back up content before uninstalling Secure Folder, tick **Move media files out of Secure Folder** and tap **UNINSTALL**. To access data backed from Secure Folder, open the **Samsung** folder, launch the **My Files** app, and then tap **Internal storage** → **Secure Folder**.



Notes saved in **Samsung Notes** will not be backed up.

# Cloud and accounts

## Options

Sync, back up, or restore your device's data using Samsung Cloud. You can also register and manage accounts, such as your Samsung account, or transfer data to or from other devices via Smart Switch.

On the Settings screen, tap **Cloud and accounts**.



Regularly back up your data to a safe location, such as Samsung Cloud or a computer, so that you can restore it if the data is corrupted or lost due to an unintended factory data reset.

- **Samsung Cloud:** Manage the content that you want to store securely in Samsung Cloud. Check the usage status of your Samsung Cloud storage, and sync, back up, and restore your data. Refer to [Samsung Cloud](#) for more information.
- **Accounts:** Add your Samsung account and other accounts to sync with.

- **Backup and restore:** Keep your personal information, app data, and settings safe on your device. You can back up your sensitive information and access it later. You must sign in to your Samsung account to back up or restore data. Refer to [Backup and restore](#) for more information.
- **Smart Switch:** Launch Smart Switch and transfer data from your previous device. Refer to [Smart Switch](#) for more information.

## Backup and restore

Keep your personal information, app data, and settings safe on your device. You can back up your sensitive information and access it later. You must sign in to your Samsung account to back up or restore data.

### Using a Samsung account

On the Settings screen, tap **Cloud and accounts** → **Backup and restore** → **Back up data** for the Samsung account, select the items you want to back up, and then tap **BACK UP**.

Data will be backed up to Samsung Cloud. Refer to [Samsung Cloud](#) for more information.

To restore backup data from Samsung Cloud using a Samsung account, tap **Restore data**. Select a device and the data types you want to restore and tap **RESTORE**. The selected data will be restored to your device.

## Accessibility



Configure various settings to improve accessibility to the device. Refer to [Accessibility](#) for more information.

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

## General management

Customise your device's system settings or reset the device.

On the Settings screen, tap **General management**.


- **Battery:** Check the remaining battery power and time to use the device. For devices with low battery levels, conserve battery power by activating power saving features.
- **Storage:** Check the status of the used and available memory.
  -  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.
- **Memory:** Check the memory's status. You can speed up your device by reducing the amount of memory you are using.
- **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 settings to control how the device displays the time and date.
  -  If the battery remains fully discharged, the time and date is reset.
- **Contact us:** Ask questions or view frequently asked questions. Refer to [Samsung Members](#) for more information.
- **Report diagnostic information:** Set the device to automatically send the device's diagnostic and usage information to Samsung.
- **Samsung advertising ID:** View or reset your Samsung Advertising ID.
- **Marketing information:** Set whether to receive Samsung marketing information, such as special offers, membership benefits, and newsletters.
- **Reset:** Reset your device's settings or perform a factory data reset. You can reset all your settings and network settings.



## Adding device languages

You can add languages to use on your device.


- 1 On the Settings screen, tap **General management** → **Language and input** → **Language** → **Add language**.

To view all the languages that can be added, tap  → **All languages**.

- 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. Then, tap **APPLY**. If an app does not support the default language, the next supported language in the list will be used.

## Software update

Update your device's software via the firmware over-the-air (FOTA) service. You can also schedule software updates.

On the Settings screen, tap **Software update**.



The device supports only authorised operating system updates. Do not update an unauthorised operating system. Doing so may make your personal information vulnerable to leakage or theft.



If emergency software updates are released for your device's security and to block new types of security threats, they will be installed automatically without your agreement.

- **Download updates manually:** Check for and install updates manually.
- **Download updates automatically:** Set the device to download updates automatically when connected to a Wi-Fi network.
- **Scheduled software updates:** Set the device to install updates at a specified time.
- **Last update information:** View information about the last software update.

## Security updates information

Security updates are provided to strengthen the security of your device and protect your personal information. For security updates for your model, visit [security.samsungmobile.com](https://security.samsungmobile.com).



The website supports only some languages.

## 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**.

## About phone

Access your device's information.

On the Settings screen, tap **About phone**.

To change your device's name, tap **EDIT**.

- **Status:** View various device information, such as the SIM card status, Wi-Fi MAC address, and serial number.
- **Legal information:** View legal information related to the device, such as safety information and the open source licence.
- **Software information:** View the device's software information, such as its operating system version and firmware version.
- **Preloaded apps:** View the preloaded apps list.
- **Battery information:** View the device's battery status and information.

# Appendix

## Accessibility

### About Accessibility

Improve accessibility with features that make the device easier to use for users who have impaired vision, hearing, and reduced dexterity.

Launch the **Settings** app and tap **Accessibility**.

### Voice Assistant (Voice feedback)

#### Activating or deactivating Voice Assistant

When you activate Voice Assistant, the device will start voice feedback. When you tap the selected feature once, the device will read the text on the screen aloud. Tapping the feature twice will activate the feature.

Launch the **Settings** app, tap **Accessibility** → **Vision** → **Voice Assistant**, and then tap the switch to activate it.

To deactivate Voice Assistant, tap the switch and tap anywhere on the screen twice quickly.

When you activate Voice Assistant for the first time, the tutorial will start after activation. You can replay it by tapping **Voice Assistant help**.



Some features are not available while you are using Voice Assistant.

## Controlling the screen with finger gestures

You can use various finger gestures to control the screen while you are using Voice Assistant.

### One finger gestures

- Tapping: Read aloud the item under your finger. To explore the screen, place a finger on the screen and move it on the screen.
- Tapping twice: Open the selected item. While selected items are read aloud, when you hear the item you want, release your finger from the item. Then, tap anywhere on the screen twice quickly.
- Double-tapping and holding the screen: Move an item or access an available option.
- Swiping to the left: Move to the previous item.
- Swiping to the right: Move to the next item.
- Swiping upwards or downwards: Change the most recent contextual menu settings.
- Swiping to the left then right in one motion: Scroll up the screen.
- Swiping to the right then left in one motion: Scroll down the screen.
- Swiping upwards then downwards in one motion: Move to the first item on the screen.
- Swiping downwards then upwards in one motion: Move to the last item on the screen.

### Two finger gestures

- Tapping twice: Start, pause, or resume playback.
- Tapping three times: Check the current time, remaining battery power, and more. To change items that are read aloud, launch the **Settings** app and tap **Accessibility** → **Vision** → **Voice Assistant** → **SETTINGS** → **Status bar information**.
- Tapping four times: Activate or deactivate voice feedback.
- Swiping to the left: Move to the next page.
- Swiping to the right: Return to the previous page.
- Swiping upwards: Scroll down the list.
- Swiping downwards: Scroll up the list.

- Swiping in any direction on the locked screen: Unlock the screen.
- Swiping downwards from the top of the screen: Open the notification panel.

### Three finger gestures

- Tapping: Start reading items aloud from the top.
- Tapping twice: Start reading from the next item.
- Tapping three times: Read the last selected text and copy it to the clipboard.
- Swiping to the left or right: Open the contextual menu and scroll through the options.
- Swiping upwards or downwards: Change the text reading and selecting granularity.
- Swiping upwards then downwards in one motion: Return to the previous screen.
- Swiping downwards then upwards in one motion: Return to the Home screen.

### Four finger gestures

- Tapping: Return to the previous screen.
- Tapping twice: Return to the Home screen.
- Tapping three times: Open the list of recent apps.

### Using the contextual menu

While you are using Voice Assistant, swipe to the left or right with three fingers. The contextual menu will appear and the device will read the options aloud. Swipe to the left or right with three fingers to scroll through the options. When you hear the option you want, swipe upwards or downwards to use the option or adjust the settings for the option. For example, when you hear **Speech volume**, you can adjust the volume by swiping upwards or downwards.

## Adding and managing image labels

You can assign labels to images on the screen. The device reads aloud the labels when the images are selected. Add labels to unlabelled images by tapping the screen twice with three fingers and holding.

To manage the labels, launch the **Settings** app and tap **Accessibility** → **Vision** → **Voice Assistant** → **SETTINGS** → **Manage custom labels**.

## Configuring settings for Voice Assistant

Configure settings for Voice Assistant for your convenience.

Launch the **Settings** app and tap **Accessibility** → **Vision** → **Voice Assistant** → **SETTINGS**.

- **Speech volume:** Select the volume level for voice feedback.
- **Text-to-speech:** Change the settings for text-to-speech features used when Voice Assistant is activated, such as languages, speed, and more.
- **Pitch changes:** Set the device to read aloud text with an altered pitch while using a keyboard.
- **Read keyboard input aloud:** Set the device to read aloud the item under your finger while using a keyboard.
- **Speak while screen off:** Set the device to read aloud notifications when the screen is turned off.
- **Mute with proximity sensor:** Set the device to pause voice feedback when you place your hand over the sensor at the top of the device.
- **Shake for continuous reading:** Set the device to read aloud the text displayed on the screen when you shake the device. You can select from various shaking speeds.
- **Read caller ID aloud:** Set the device to read the caller's name aloud when you have an incoming call.
- **Phonetic alphabet:** Set the device to say a word that starts with the letter you tap and hold on the keyboard.

- **Usage hints:** Set the device to read usage hints aloud when you select an item by swiping.
- **Vibration feedback:** Set the device to vibrate when you control the screen, such as selecting an item.
- **Sound feedback:** Set the device to emit a sound when you control the screen, such as selecting an item.
- **Focus on speech audio:** Set the device to turn the media volume down when the device reads an item aloud.
- **Sound feedback volume:** Adjust the volume that sound is played when you touch the screen to control it. This feature is available when **Sound feedback** is activated.
- **Large cursor:** Set the device to thicken the border of the square cursor that appears when you tap items.
- **Cursor color:** Select a colour of the square cursor that appears when you tap items.
- **Quick menu:** Select contextual menu options to display when you swipe to the left or right with three fingers.
- **Manage custom labels:** Manage the labels you added.
- **Keyboard shortcuts:** Set key shortcuts to use when using an external keyboard.
- **Status bar information:** Select items to read aloud when you tap the screen three times with two fingers.
- **Developer options:** Set options for app development.

## Using the device with the screen turned off

For privacy, you can set the device to function normally with the screen off. The screen will not turn on when you press keys or tap the screen. Currently activated features do not turn off when the screen is off.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Dark screen** switch to activate it. You can activate or deactivate this feature by pressing the Power key twice quickly.

## Entering text using the keyboard

To display the keyboard, tap the text input field, and then tap anywhere on the screen twice quickly.

To activate the rapid key input feature, launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Rapid key input** switch to activate it.

When you touch the keyboard with your finger, the device reads aloud the character keys under your finger. When you hear the character you want, release your finger from the screen to select it. The character is entered and the device reads the text aloud.

If **Rapid key input** is not activated, release your finger from the character you want, and then tap anywhere on the screen twice quickly.

## Entering additional characters

Tap and hold a key on the keyboard to enter additional characters available for the key. A pop-up window appears above the key showing available characters. To select a character, drag your finger on the pop-up window until you hear the character you want, and release it.


## Vision

### Adding voice recordings to voice labels

You can use voice labels to distinguish objects of similar shape by attaching labels to them. You can record and assign a voice recording to an NFC-enabled voice label. The voice recording is played back when you place your device near the label.



Turn on the NFC feature before using this feature.

- 1 Launch the **Settings** app and tap **Accessibility** → **Vision** → **Voice Label**.  
The voice recorder will launch.
- 2 Tap  to start recording. Speak into the microphone.



**3** When you are finished recording, tap **DONE** to stop.

**4** Hold the back of your device over the voice label.

The information in the voice recording will be written to the voice label.

## Changing the screen zoom and font

Change the screen zoom setting or font size and style.

Launch the **Settings** app and tap **Accessibility** → **Vision** → **Font and screen zoom**.

## Using the high contrast font

Adjust the colour and outline of fonts to increase the contrast between the text and the background.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **High contrast fonts** switch to activate it.

## Using the high contrast keyboard

Increase the size of the Samsung keyboard and change the key colours to increase the contrast between the text and the background.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **High contrast keyboard** switch to activate it.

## Displaying button shapes

Display button shapes with frames to make them stand out.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Show button shapes** switch to activate it.

## Using a magnifier

Activate a magnifier to zoom in on the screen to view a larger version of the content.



Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Magnifier window** switch to activate it. The magnifier will appear on the screen.

Drag the handle at the bottom of the magnifier to move the magnifier to where you want to zoom in on the screen.

## Magnifying the screen


Magnify the screen and zoom in on a specific area.

Launch the **Settings** app and tap **Accessibility** → **Vision** → **Magnification**.

- **Triple tap screen to magnify:** Zoom in by tapping the screen three times. To return to the normal view, tap the screen three times again.
- **Tap button to magnify:** Zoom in by tapping  on the navigation bar, and then tapping where you want to magnify the screen. To return to the normal view, tap .

To explore the screen, drag two or more fingers across the magnified screen.

To adjust zoom ratio, pinch two or more fingers on the magnified screen or spread them apart.

You can also temporarily magnify the screen by tapping the screen three times and holding. Or, tap , and then tap and hold the screen. While holding the screen, drag your finger to explore the screen. Release your finger to return to the normal view.



- Keyboards on the screen cannot be magnified.
- When this feature is activated, the performance of some apps may be affected.

## Enlarging mouse or touchpad pointers

Enlarge the pointer when using an external mouse or touchpad.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Large mouse/touchpad pointer** switch to activate it.

## Reversing the display colours

Improve screen visibility to help users recognise text on the screen more easily.

Launch the **Settings** app, tap **Accessibility** → **Vision**, and then tap the **Negative colors** switch to activate it.

## Color adjustment

Adjust how colours are displayed on the screen if you have difficulty in distinguishing colours. The device changes the colours into more recognisable colours.

Launch the **Settings** app, tap **Accessibility** → **Vision** → **Color adjustment**, and then tap the switch to activate it. Select an option.

To adjust the intensity of colour, drag the adjustment bar under **INTENSITY**.

If you select **Personalized color**, you can personalise the colour of the screen. Follow the on-screen instructions to complete the colour adjustment procedure.

## Hearing

### Sound detectors

Set the device to vibrate when it detects your doorbell or a baby crying.



While this feature is enabled, the voice recognition will not operate.

### Baby crying detector

Launch the **Settings** app, tap **Accessibility** → **Hearing** → **Sound detectors**, and then tap the **Baby crying detector** switch to activate it. The device will vibrate when it detects sound and the alert will be saved as a log.

### Doorbell detector

- 1 Launch the **Settings** app, tap **Accessibility** → **Hearing** → **Sound detectors**, and then tap the **Doorbell detector** switch to activate it.
- 2 Tap ● to make a recording of your doorbell.  
The device will detect and record the doorbell.
- 3 Tap ● and ring your doorbell to check if it is recorded correctly. When the device detects the doorbell sound, tap **OK**.  
To change the doorbell sound, tap **Change doorbell sound**.  
The device will vibrate when it detects sound and the alert will be saved as a log.

### Setting light notification

Set the device to blink the flash or the screen when an alarm sounds or when you have notifications, such as incoming calls or new messages.

Launch the **Settings** app, tap **Accessibility** → **Hearing** → **Flash notification**, and then tap the switches next to the options you want to activate.

## Turning off all sounds

Set the device to mute all device sounds, such as media sounds, and the caller's voice during a call.

Launch the **Settings** app, tap **Accessibility** → **Hearing**, and then tap the **Mute all sounds** switch to activate it.

## Caption settings

Launch the **Settings** app, tap **Accessibility** → **Hearing** → **Samsung subtitles (CC)**, and then tap the switch to activate it.

Select an option for configuring the caption settings.

## Adjusting the sound balance

Set the device to adjust the sound balance when using an earphone.

- 1 Connect an earphone to the device and wear it.
- 2 Launch the **Settings** app and tap **Accessibility** → **Hearing**.
- 3 Drag the adjustment bar under **Left/right sound balance** to the left or right and adjust the sound balance.

## Mono audio

Mono output combines stereo sound into one signal that is played through all earphone speakers. Use this if you have a hearing impairment or if a single earbud is more convenient.

Launch the **Settings** app, tap **Accessibility** → **Hearing**, and then tap the **Mono audio** switch to activate it.

## Dexterity and interaction

### Universal switch

You can control the touchscreen by connecting an external switch, by tapping the screen, or by using head movements and face gestures.

Launch the **Settings** app, tap **Accessibility** → **Dexterity and interaction** → **Universal switch**, and then tap the switch to activate it. If the universal switches are not registered on the device, tap **ADD SWITCH** and set switches to control the device.



To activate the universal switch feature, at least one switch must be registered on the device.

To set switches to control the device, tap **SETTINGS** → **Switches**.

To deactivate this feature, press the Power key and the Volume Up key simultaneously.

### Assistant menu

#### Displaying the assistive shortcut icon

Set the device to display the assistive shortcut icon for accessing apps, features, and settings. You can easily control the device by tapping the assistive menus in the icon.

**1** Launch the **Settings** app and tap **Accessibility** → **Dexterity and interaction** → **Assistant menu**.

**2** Tap the switch to activate it.

The assistive shortcut icon appears at the bottom right of the screen.

To adjust the assistant shortcut icon's transparency level, drag the adjustment bar under **Transparency**.

#### Accessing assistive menus








The assistive shortcut icon appears as a floating icon for easy access to the assistive menus from any screen.

When you tap the assistive shortcut icon, the icon expands slightly and the assistive menus appear on the icon. Tap the left or right arrow to move to other panels or swipe to the left or right to select other menus.

## Using the cursor

On the assistive menu, tap **Cursor**. You can control the screen using small finger movements on the touch area. Drag your finger on the touch area to move the cursor. Also, tap the screen to select items under the cursor.

Use the following options:

-  /  : Scroll left or right on the screen.
-  /  : Scroll up or down the screen.
-  : Magnify the area where the cursor is located.
-  : Move the touch area to another location.
-  : Close the touch area.

To change the touch area and cursor settings, launch the **Settings** app and tap **Accessibility** → **Dexterity and interaction** → **Assistant menu**. Then, customise settings in **CURSOR AND SCREEN CONTROL**.

## Using enhanced assistive menus

Set the device to display enhanced assistive menus for selected apps.

Launch the **Settings** app, tap **Accessibility** → **Dexterity and interaction** → **Assistant menu** → **Assistant plus**, tap the switch to activate it, and then select apps.

## Easy screen turn on

Turn on the screen by moving your hand above the sensor at the top of the device. You can turn on the screen without pressing a key. When you use this feature, place the device on a flat surface with the screen facing upwards or hold the device securely to prevent it from moving.

Launch the **Settings** app, tap **Accessibility** → **Dexterity and interaction**, and then tap the **Easy screen turn on** switch to activate it.

## Touch and hold delay

Set the recognition time for tapping and holding the screen.

Launch the **Settings** app, tap **Accessibility** → **Dexterity and interaction** → **Touch and hold delay**, and then select an option.

## Click after pointer stops

Set the device to select an item automatically when you place the mouse pointer over the item.

Launch the **Settings** app, tap **Accessibility** → **Dexterity and interaction**, and then tap the **Click after pointer stops** switch to activate it.

## Interaction control

Activate interaction control mode to restrict the device's reaction to inputs while using apps.

- 1 Launch the **Settings** app and tap **Accessibility** → **Dexterity and interaction** → **Interaction control**.
- 2 Tap the switch to activate it.
- 3 Press and hold the Power key and the Volume Up key simultaneously while using an app.
- 4 Adjust the size of the frame or draw a line around an area that you want to restrict.
- 5 Tap **DONE**.

The device displays the restricted area. The restricted area will not react when you touch it and the device's keys will be disabled. However, you can enable functions for the Power key, Volume key, and keyboard in interaction control mode.

To deactivate interaction control mode, press and hold the Power key and the Volume Up key simultaneously.

To set the device to lock the screen after deactivating interaction control mode, launch the **Settings** screen, tap **Accessibility** → **Dexterity and interaction** → **Interaction control**, and then tap the **Use screen lock when turned off** switch to activate it.



## Setting text-to-speech features

Change the settings for text-to-speech features used when Voice Assistant is activated, such as languages, speed, and more.

Launch the **Settings** app, tap **Accessibility** → **Text-to-speech**, and then use the following functions:

- **Preferred engine:** Select an engine for the text-to-speech feature.
- **Language:** Change the spoken language of the text-to-speech feature.
- **Speech rate:** Adjust the speed for the text-to-speech feature.
- **Pitch:** Adjust the pitch of the text-to-speech feature.
- **PLAY:** Play a short demonstration of your speech settings.
- **RESET:** Reset the speech speed and pitch.

## Direction lock

Create a directional combination to unlock the screen.

- 1 Launch the **Settings** app, tap **Accessibility** → **Direction lock**, and then tap the switch to activate it.
- 2 Drag your finger up, down, left, or right six to eight times, and then tap **CONTINUE**.
- 3 Draw the direction combination again to verify it and tap **CONFIRM**.

## Direct access

Set to open accessibility menus quickly.

Launch the **Settings** app, tap **Accessibility** → **Direct access**, and then tap the switch to activate it. Then, select an accessibility menu to open when you simultaneously press the Power key and the Volume Up key.

You can access the following accessibility menus:

- Accessibility
- Voice Assistant
- Universal switch
- Magnifier window
- Negative colors
- Color adjustment
- Interaction control

## Notification reminder

Set the device to alert you to notifications that you have not checked at the interval.

Launch the **Settings** app, tap **Accessibility** → **Notification reminder**, and then tap the switch to activate it.

To set the device to vibrate when you have unchecked notifications, tap the **Vibrate** switch to activate it.

To set an interval between alerts, tap **Reminder interval**.

To set apps to alert you to notifications, select apps under **SHOW NOTIFICATIONS FROM**.

## Answering or ending calls

Change the method for answering or ending calls.

Launch the **Settings** app and tap **Accessibility** → **Answering and ending calls**.

Select the desired method.

## Using single tap mode

When an alarm sounds or a call comes in, tap the button to stop the alarm, or answer or reject the call instead of dragging the button.

Launch the **Settings** app and tap **Accessibility**, and then tap the **Single tap mode** switch to activate it.

## Managing accessibility settings

### Saving accessibility settings in a file

Export the current accessibility settings in a file.

Launch the **Settings** app and tap **Accessibility** → **Accessibility settings backup** → **Import/export** → **Export to My Files**.

### Importing an accessibility settings file

Import an accessibility settings file and update the current settings.

Launch the **Settings** app and tap **Accessibility** → **Accessibility settings backup** → **Import/export** → **Import from My Files**. Select a file to import and tap **DONE**. The accessibility settings will be updated according to the imported file.

### Sharing accessibility settings files

Share accessibility settings files with others via email, Wi-Fi Direct, Bluetooth, and more.

Launch the **Settings** app and tap **Accessibility** → **Accessibility settings backup** → **Share**. Then, select the accessibility files and tap **DONE**. Select a sharing method and follow the on-screen instructions to share the files.

## 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, USIM or UIM card. You can disable this feature by using the Lock SIM card menu.
- **PUK:** Your SIM, USIM or UIM 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, USIM or UIM 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 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 **General management** → **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.
- Visit a Samsung Service Centre and have the battery replaced.

## **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/cn](http://www.samsung.com/cn).
- 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.

## Another Bluetooth device is not located

- Ensure that the Bluetooth wireless feature is activated on your device.
- Ensure that the Bluetooth wireless feature is activated on the device you wish to connect to.
- Ensure that your device and the other Bluetooth device are within the maximum Bluetooth range (10 m).

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.


## The Home button does not appear

The navigation bar containing the Home button may disappear while using certain apps or features. To view the navigation bar, drag upwards from the bottom of the screen.

## Bixby Voice does not respond

- Restart your device to clear any temporary software bugs.
- Ensure that your device software is updated to the latest version.
- If you are still having trouble with Bixby Voice after trying these tips, contact a Samsung Service Centre.

## The screen brightness adjustment bar does not appear on the notification panel

Open the notification panel by dragging the status bar downwards, and then drag the notification panel downwards. Tap  next to the brightness adjustment bar and tap the **Show control on top** switch to activate it.

## Samsung Cloud does not work

- Ensure that you are connected to a network properly.
- During a Samsung Cloud's service check, you cannot use Samsung Cloud. Try again later.

## The device does not recognise my irises from the locked screen

- Ensure that nothing obstructing the iris recognition camera and LED and try again.
- If light conditions are very different from when you registered your irises, the device may not recognise your irises. Move to another location and try again.
- Ensure that the device is not moving or tilted too much.

## Notices

### The names and content of toxic and hazardous substances or elements

Part	Toxic and hazardous substances or elements					
	Pb	Hg	Cd	Cr <sup>6+</sup>	PBB	PBDE
PBA	X	O	O	O	O	O
Plastic	O	O	O	O	O	O
Metal	X	O	O	O	O	O
Battery	X	O	O	O	O	O
Accessory	X	O	O	O	O	O

O: Indicates that the toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit specified in GB/T 26572.

X: Indicates that the toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit specified in GB/T 26572.

The information provided in this table is based on figures presented by supply manufacturers and tests conducted by Samsung. All toxic and hazardous substances or elements are used at the minimum level allowed by current technology. Samsung continues to make every effort to reduce the need for these substances or elements through improved technology.



The “environmental protection use period” for this product is 20 years and the corresponding logo is as shown on the left. Exchangeable parts, such as batteries, may have different periods of warranty. The “environmental protection use period” is valid only when the product is used under normal conditions, as described in the manual.

# ***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, **A3LSMG8750**. 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](http://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.

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## **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 Battery march 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)

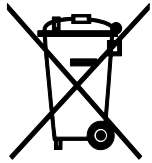
This marking shown on the product or its literature, indicates that it should not be



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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- 天津三星通信技术有限公司

地址：天津市西青区微电子工业区微五路 9 号 (邮编：300385)

- 惠州三星电子有限公司

地址：广东省惠州市仲恺高新技术产业开发区陈江街道仲恺六路 256 号  
(邮编：516029)

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