

- **Navigation bar:** Change the navigation bar settings. Refer to [Navigation bar \(soft buttons\)](#) for more information.
- **Accidental touch protection:** Set the device to prevent the screen from detecting touch input when it is in a dark place, such as a pocket or bag.
- **Touch sensitivity:** Increase the touch sensitivity of the screen for use with screen protectors.
- **Screensaver:** Set the device to launch a screensaver when the device is charging. Refer to [Screensaver](#) 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 optimizes 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.

Optimizing the full screen colour balance

Optimize 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 **White balance**.
The colour balance of the screen will be optimized.



Adjusting the screen tone by colour value

Increase or lower certain colour tones by adjusting the values individually.

- 1 On the Settings screen, tap **Display** → **Screen mode** → **Adaptive display**.
- 2 Tap **Advanced settings**.
- 3 Adjust the colour bars to your preference.
The screen tone screen will be adjusted.

Screensaver

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** → **Screensaver** and tap the switch to activate it.
- 2 Select an option.
If you select **Photo Frame** or **Photos**, 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.

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.
- **AODs:** Select an image to display on the Always On Display.

Lock screen

Options

Change the settings for the locked screen.

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



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.
- **Always On Display:** Set the device to display information while the screen is turned off. Refer to [Always On Display](#) for more information.
- **Clock style:** Change the type and colour of the clock on the locked screen.
- **Roaming clock:** Change the clock to show both the local and home time zones on the locked screen when roaming.

- **FaceWidgets:** Change the settings of the items displayed on the locked screen.
- **Contact information:** Set the device to show contact information, such as your email address, on the locked screen.
- **Notifications:** Set how to show notifications on the locked screen.
- **App shortcuts:** Select apps to display shortcuts to them on the locked screen.
- **About Lock screen:** View the Locked screen version and legal information.

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** → **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.

Biometrics and security

Options

Change the settings for securing the device.

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

- **Face recognition:** Set the device to unlock the screen by recognizing your face. Refer to [Face recognition](#) for more information.
- **Fingerprints:** Register your fingerprints to unlock the screen. Refer to [Fingerprint recognition](#) for more information.
- **Biometrics preferences:** Change the settings for biometric data.
- **Google Play Protect:** Set the device to check for harmful apps and behaviour and warn about potential harm and remove them.
- **Find My Mobile:** Activate or deactivate the Find My Mobile feature. Access the Find My Mobile website (findmymobile.samsung.com) to track and control your lost or stolen device.

You can also allow the Google location service to provide more accurate information about the location of your device.

- **Security update:** View the version of your device's software and check for updates.
- **Samsung Pass:** Verify your identity easily and securely via your biometric data. Refer to [Samsung Pass](#) for more information.
- **Install unknown apps:** Set the device to allow the installation of apps from unknown sources.
- **Secure Folder:** Create a secure folder to protect your private content and apps from others. Refer to [Secure Folder](#) for more information.
- **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.
- **Location:** Change settings for location information permissions.
- **App permissions:** View the list of features and apps that have permission to use them. You can also edit the permission settings.
- **Send diagnostic data:** Set the device to automatically send the device's diagnostic and usage information to Samsung.
- **Receive marketing information:** Set whether to receive Samsung marketing information, such as special offers, membership benefits, and newsletters.

Face recognition

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



- If you use your face as a screen lock method, your face cannot be used to unlock the screen for the first time after turning on the device. To use the device, you must unlock the screen using the pattern, PIN, or password you set when registering the face. Be careful not to forget your pattern, PIN, or password.
- If you change the screen lock method to **Swipe** or **None**, which are not secure, all of your biometric data will be deleted. If you want to use your biometric data in apps or features, you must register your biometric data again.



Precautions for using face recognition

Before using the face recognition to unlock your device, keep the following precautions in mind.

- Your device could be unlocked by someone or something that looks like your image.
- Face recognition is less secure than Pattern, PIN, or Password.

For better face recognition

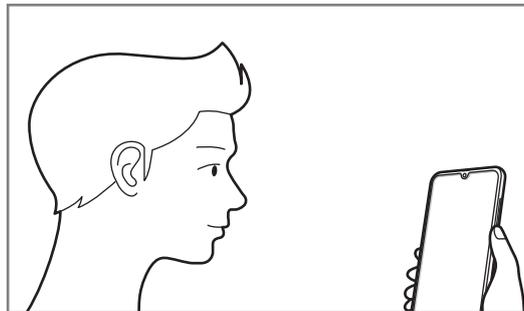
Consider the following when using face recognition:

- Consider the conditions when registering, such as wearing glasses; a hat, mask, or beard; 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

Registering your face

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

- 1 On the Settings screen, tap **Biometrics 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 Select whether you are wearing glasses or not and tap **Continue**.
- 5 Hold the device with the screen facing towards you and look at the screen.



- 6 Position your face inside the frame on the screen.

The camera will scan your face.

When the useful face recognition screen appears, turn on a switch to activate a feature and tap **OK**.



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.

Deleting the registered face data

You can delete face data that you have registered.

- 1 On the Settings screen, tap **Biometrics and security** → **Face recognition**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **Remove face data** → **Remove**.

Once the registered face is deleted, all the related features will also be deactivated.

Unlocking the screen with your face

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

- 1 On the Settings screen, tap **Biometrics 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 recognizing 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 recognized, you can unlock the screen without using any additional screen lock method. If your face is not recognized, use the preset screen lock method.

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:

- 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 recognize them as identical.
- If you use your fingerprint as a screen lock method, your fingerprint cannot be used to unlock the screen for the first time after turning on the device. To use the device, you must unlock the screen using the 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 recognized, unlock the device using the pattern, PIN, or password you set when registering the fingerprint, and then re-register your fingerprint. 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.
- If you change the screen lock method to **Swipe** or **None**, which are not secure, all of your biometric data will be deleted. If you want to use your biometric data in apps or features, you must register your biometric data again.

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:

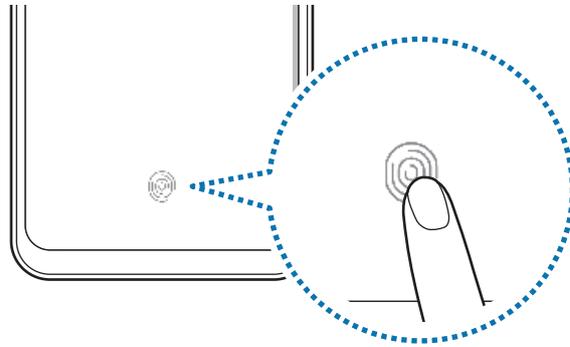
- The device may not recognize fingerprints that are affected by wrinkles or scars.
- The device may not recognize fingerprints from small or thin fingers.
- To improve recognition performance, register fingerprints of the hand used most often to perform tasks on the device.
- Your device has a built-in fingerprint recognition sensor at the bottom centre of the screen. Ensure that the screen protector or the touchscreen on the fingerprint recognition sensor area is not scratched or damaged by objects, such as coins, keys, pens, and necklaces.
- Ensure that the fingerprint recognition sensor area at the bottom centre of the screen and your fingers are clean and dry.
- If you bend your finger or use a fingertip, the device may not recognize your fingerprints. Press the screen so that your fingertip spreads over the wide surface of the fingerprint recognition area.

Registering fingerprints

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

3 Register your fingerprint.

Place your finger on the fingerprint recognition sensor at the bottom of the screen. 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.

4 When you are finished registering your fingerprints, tap **Done**.

Deleting registered fingerprints

You can delete registered fingerprints.

1 On the Settings screen, tap **Biometrics and security** → **Fingerprints**.

2 Unlock the screen using the preset screen lock method.

3 Select a fingerprint to delete and tap **Remove** → **Remove**.

Unlocking the screen with your fingerprints

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

- 1 On the Settings screen, tap **Biometrics and security** → **Fingerprints**.
- 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.

Samsung Pass

Samsung Pass allows you to sign in to your Samsung account, websites, or apps more easily and securely via your biometric data, such as fingerprints, rather than entering your login information. Also, Samsung Pass allows you to enter the personal information, such as your address or payment card information, more easily and quickly via your registered biometric data.

Register your biometric data to Samsung Pass and set to sign in to supported websites or apps using the data via Samsung Pass.



- To use this feature, your device must be connected to a Wi-Fi or mobile network.
- To use this feature, you must register and sign in to your Samsung account. For more information, refer to [Samsung account](#).
- The website sign-in feature is only available for websites that you access via the **Internet** app. Some websites may not support this feature.
- Registered biometric data and saved payment card information are only saved to your device and are not synced with other devices or servers.

Registering Samsung Pass

Before using Samsung Pass, register your biometric data to Samsung Pass.

- 1 On the Settings screen, tap **Biometrics and security** → **Samsung Pass**.
- 2 Tap **Sign-in**, enter your Samsung account ID and password, and then tap **Sign in**.
- 3 Agree to the terms and conditions of Samsung Pass.
- 4 Tap **Continue** and register your fingerprints.
Refer to [Fingerprint recognition](#) for more information.
- 5 Scan your fingerprint and tap **Next** to complete the Samsung Pass registration.
If the **Add Samsung Pass to Home screen** option is ticked, the Samsung Pass icon will be added on the Home screen.
If the **Use Samsung Pass instead of Samsung account password** option is ticked, you can use your registered biometric data to verify your identity instead of entering the Samsung account password.

Verifying the Samsung account password

You can use your registered biometric data to verify your identity instead of entering your Samsung account password when, for example, you purchase content from **Galaxy Apps** (**Galaxy Store**).

- 1 On the Settings screen, tap **Biometrics and security** → **Samsung Pass**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap  → **Settings** → **Samsung account**, and then tap the **Verify with Samsung Pass** switch to activate it.

Using Samsung Pass to sign in to websites

You can use Samsung Pass to easily sign in to websites that support ID and password autofill.

- 1 Open a website that you want to sign in to.
- 2 Enter your user name and password, and then tap the website's sign in button.
- 3 When a pop-up window asking whether you want to save the sign-in information appears, tick **Sign in with Samsung Pass** and tap **Remember**.

You can now use the biometric data you registered to Samsung Pass when signing in to the website.

Using Samsung Pass to sign in to apps

You can use Samsung Pass to easily sign in to apps that support ID and password autofill.

- 1 Open an app that you want to sign in to.
- 2 Enter your user name and password, and then tap the app's sign in button.
- 3 When a pop-up window asking whether you want to save the sign-in information appears, tap **Save**.

You can now use the biometric data you registered to Samsung Pass when signing in to the app.

Managing sign-in information

View the list of websites and apps you have set to use Samsung Pass and manage your sign-in information.

- 1 On the Settings screen, tap **Biometrics and security** → **Samsung Pass**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **Sign-in** and select a website or app from the list.
- 4 Tap **Edit** and modify your ID, password, and the website's or app's name.
To delete the website or app, tap **Delete**.

Using Samsung Pass with websites and apps

When using websites or apps that support Samsung Pass, you can easily sign in with Samsung Pass.

To see the list of websites and apps that support Samsung Pass, on the Settings screen, tap **Biometrics and security** → **Samsung Pass**, unlock the screen using your preset screen lock method, and then tap  → **Partners**. If there are no websites or apps that support Samsung Pass, **Partners** will not appear.



- Available websites and apps may vary depending on the region or service provider.
- Samsung is not responsible for any loss or inconvenience caused by signing in to websites or apps via Samsung Pass.

Entering your personal information automatically

You can use Samsung Pass to easily enter your address or payment card information on apps that support personal information autofill.

- 1 On the Settings screen, tap **Biometrics and security** → **Samsung Pass**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **Autofill forms** and select **Add address** or **Add card**.
- 4 Enter the information and tap **Save**.

You can now use the biometric data you registered to Samsung Pass when entering the personal information automatically on supported apps.

Deleting your Samsung Pass data

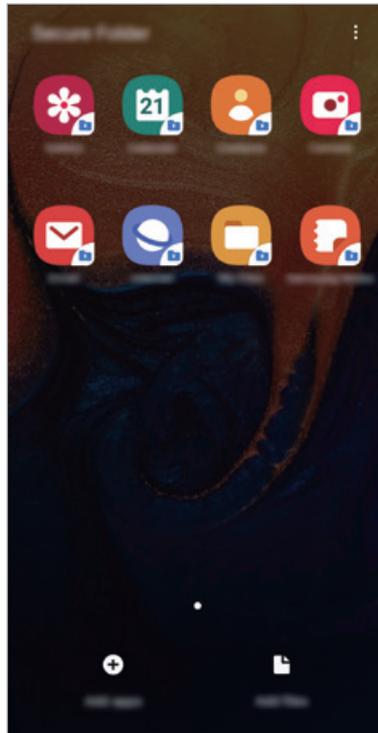
You can delete your biometric data, sign-in information, and app data registered to Samsung Pass. Your agreement to the terms and conditions and your Samsung account will remain active.

- 1 On the Settings screen, tap **Biometrics and security** → **Samsung Pass**.
- 2 Unlock the screen using the preset screen lock method.
- 3 Tap **⋮** → **Settings** → **Delete data** → **Delete**.
- 4 Enter your Samsung account password and tap **OK**.

Your Samsung Pass data will be deleted.

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 customize 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 **Settings** app and tap **Biometrics and security** → **Secure Folder**.
- 2 Tap **Continue**.
- 3 Enter your Samsung account ID and password and tap **Sign in**.
- 4 Read and agree to the terms and conditions and tap **Next**.
- 5 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 colour of Secure Folder, tap  → **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 **Play Store** or **Galaxy Apps (Galaxy Store)**, tap **Download from Play Store** or **Download from Galaxy Store**.

Removing apps from Secure Folder

Tap and hold an app to delete, and tap **Uninstall**.

Adding accounts

Add your Samsung and Google accounts, or 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 Apps 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 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**.
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 Tap **▼** to select a device to restore the data.
- 4 Select the data types you want to restore and tap **Restore**.
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, launch the **My Files** app, and then tap **Internal storage** → **Secure Folder**.



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

Accounts and backup

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 Google account, or transfer data to or from other devices via Smart Switch.

On the Settings screen, tap **Accounts and backup**.

- **Accounts:** Add your Samsung and Google accounts, or 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 Google or Samsung account to back up or restore data.
- **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.
- **Smart Switch:** Launch Smart Switch and transfer data from your previous device. Refer to [Transferring data from your previous device \(Smart Switch\)](#) for more information.



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

Back up data from your previous device to Samsung Cloud and restore the data to your new device. You can also sync data saved in your device with Samsung Cloud and view data saved on Samsung Cloud. You must register and sign in to your Samsung account to use Samsung Cloud. Refer to [Samsung account](#) for more information.

Backing up data from your previous device

1 On your previous device, sign in to your Samsung account.

2 Launch the **Settings** app, select the backup option, and back up your data.



- If your device supports Samsung Cloud, launch the **Settings** app, tap **Accounts and backup** → **Samsung Cloud** → **Back up this phone**, tick items you want to back up, and then tap **Back up** to back up your data.
- The data backup method may vary depending on your model.
- Some data will not be backed up. To check which data will be backed up, launch the **Settings** app, tap **Accounts and backup** → **Samsung Cloud** → **Back up this phone**.
- To view the backup data for each device in your Samsung Cloud, launch the **Settings** app, tap **Accounts and backup** → **Samsung Cloud** → **Restore data** → ▼, and then select a device you want.

Restoring data from your previous device

- 1 On your new device, launch the **Settings** app and tap **Accounts and backup** → **Samsung Cloud**.
- 2 Tap **Restore data** → ▼ and select a previous device.
- 3 Tick the data types you want to restore and tap **Restore**.

Syncing data from your device

You can sync data saved in your device, such as images, videos, and events, with Samsung Cloud and access it from other devices.

- 1 On your new device, launch the **Settings** app and tap **Accounts and backup** → **Samsung Cloud**.
- 2 Tap ⋮ → **Settings** → **Sync and auto backup settings** → **Sync**.
- 3 Tap the switches next to the items you want to sync with.



You can check the saved data or change the settings by tapping the **Gallery**, **Other synced data**, or **Samsung Cloud Drive**.

Google

Configure settings for some features provided by Google.

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

Advanced features

Options

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.

- **Accessories:** Change the accessory settings. (Galaxy A50)
- **Bixby Routines:** Add routines to automate settings that you use repeatedly. The device also suggests useful routines according to your frequent situations. Refer to [Bixby Routines](#) for more information.
- **Wake Bixby with Power key:** Set the device to launch Bixby when you press and hold the Power key.
- **Smart pop-up view:** Select apps to view their notifications via pop-up windows. When using this feature, you can quickly view the contents via pop-up windows by tapping the icon on the screen.



This feature is only available in apps that support the Multi window feature.

- **Smart capture:** Set the device to capture the current screen and scrollable area, and crop and share the screenshot immediately.
- **Direct share:** Set the device to display the people you contacted on the sharing options panel to allow you to share content directly.
- **Reduce animations:** Set the device to reduce certain screen effects if you are sensitive to animations or screen movement.
- **Motions and gestures:** Activate the motion feature and configure settings.
- **Game Launcher:** Activate the Game Launcher. Refer to [Game Launcher](#) for more information.
- **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 / Panic mode:** 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.

Bixby Routines

Bixby Routines are a service that automates settings you use repeatedly and suggests useful features according to your frequent situations by learning your usage patterns.

For example, you can create a 'good night' routine that reflects your sleep patterns that will turn on the blue light filter and adjust the screen brightness for your comfort when you go to bed.

Adding routines

Add routines to use your device more conveniently. When you add a routine, you can set its running condition to auto or manual.

Adding recommended routines

The device recommends your frequently used features or useful features to add as routines. When the recommendation notification appears, tap **View** and add it as your own routine.

Adding routines from the recommendation list

View the list of useful features and add them as your own routines.

- 1 On the Settings screen, tap **Advanced features** → **Bixby Routines**.
- 2 On the **Recommended** list, select a routine you want and tap **Save**.
 - To set the routine's conditions and actions, tap . If you want to set the routine's running condition to manual, tap **Start button tapped**.
 - For manual routines, you can add them to the Home screen as widgets and access them quickly. When a pop-up windows appears, tap **Add**.

Adding your own routines

Add your frequently used features as routines.

1 On the Settings screen, tap **Advanced features** → **Bixby Routines** → **+**.

2 Enter a routine name.

3 Tap , set conditions, and then tap **Next**.

If you want to set the routine's running condition to manual, tap **Start button tapped**.

4 Tap , set actions, and then tap **Done**.

For manual routines, you can add them to the Home screen as widgets and access them quickly. When a pop-up windows appears, tap **Add**.

Running routines

Auto routines will run automatically when their conditions are detected.

For manual routines which you set the running condition as **Start button tapped**, you can run them manually by tapping the button whenever you want. On the Settings screen, tap **Advanced features** → **Bixby Routines** → **My routines** and tap  next to the routine you want to run. Alternatively, tap the routine's widget on the Home screen.

Currently running routines will appear on the notification panel. To view a routine's details, tap the notification.

Stopping running routines

You can quickly stop running routines. On the notification panel, select a routine and tap **Stop**.

Managing routines

On the Settings screen, tap **Advanced features** → **Bixby Routines** → **My routines**. Your routines will appear.

To deactivate a routine, tap the routine's switch or .

To edit a routine, select a routine and tap .

To delete routines, tap  → **Delete**, tick routines to delete, and then tap **Delete**.

Dual Messenger

Install a second copy of a messaging app and use two separate accounts for the same messenger app.

1 On the Settings screen, tap **Advanced features** → **Dual Messenger**.
Supported apps will appear.

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

The second app copy 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 On the Settings screen, tap **Advanced features** → **Dual Messenger**.

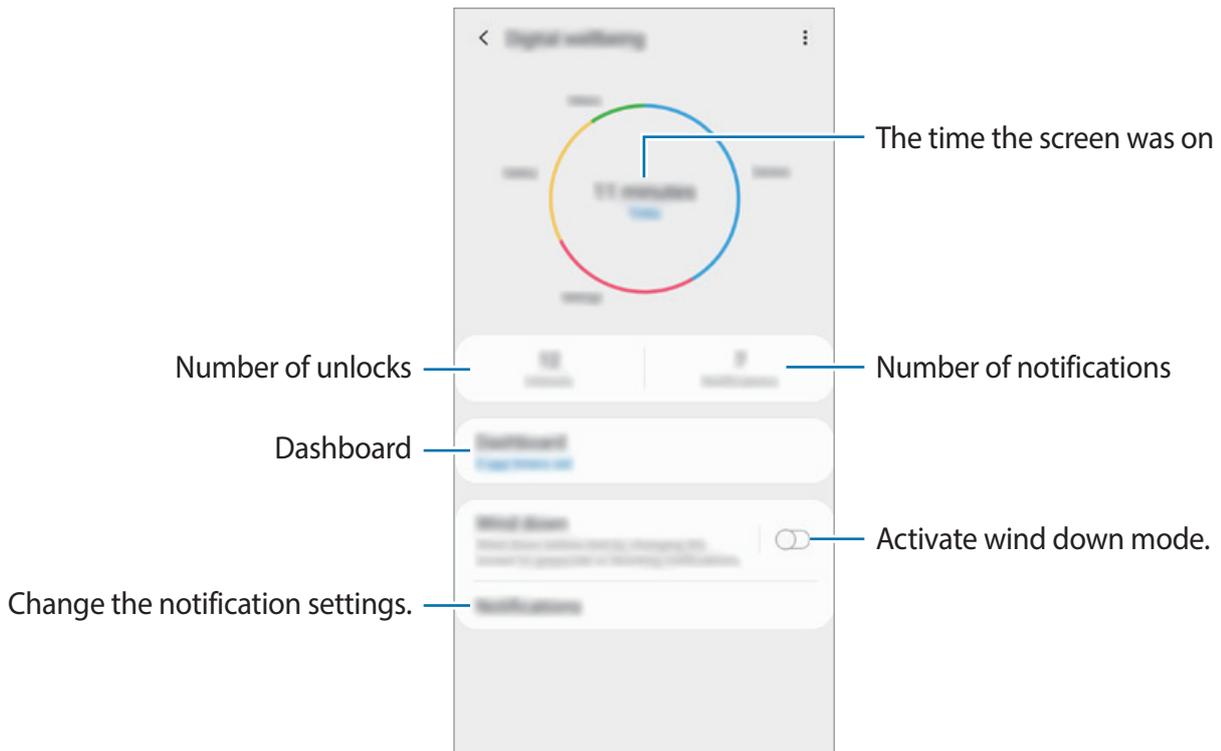
2 Tap the switch of the app you want to disable and tap **Disable** or **Uninstall**.
All data related to the second app will be deleted.

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

Digital wellbeing

View the daily usage history of your device. You can see information such as how long the screen was on and how many times you opened apps or used certain features. You can also limit usage time or change the notification settings for each app.

On the Settings screen, tap **Digital wellbeing**.



Setting timers for apps

You can limit the daily usage time for each app by setting a timer. When you reach the limit, the app will be deactivated and you cannot use it.

- 1 On the Settings screen, tap **Digital wellbeing** → **Dashboard**.
- 2 Tap **No timer** next the app you want and set the time.

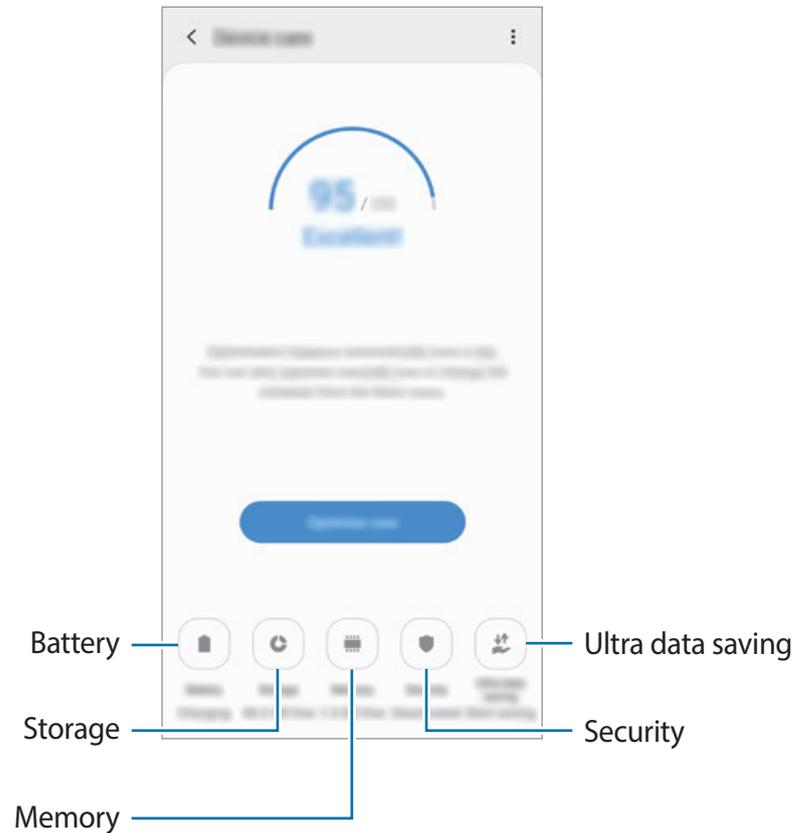
Activating wind down mode

You can activate wind down mode to reduce eye strain before sleeping and prevent your sleep from being disturbed.

- 1 On the Settings screen, tap **Digital wellbeing** → **Wind down** and tap the **Turn on now** switch to activate it.
- 2 Turn on the switch to activate the feature you want.
 - **Greyscale:** Displays colours on the screen as grey tones.
 - **Do not disturb:** Set the device to mute incoming calls and notification sounds, except for allowed exceptions.
- 3 To set the schedule to activate wind down mode, tap the **Turn on as scheduled** switch to activate it, tap **Set schedule**, and then set the time.

Device care

The device care feature provides an overview of the status of your device's battery, storage, memory, and system security. You can also automatically optimize the device with a tap of your finger, and ultra data saving mode helps you manage your mobile data usage.



Using the quick optimization feature

On the Settings screen, tap **Device care** → **Fix now** or **Optimize now**.

The quick optimization 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.

On the Settings screen, tap **Device care** → **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.

Managing battery usage

Select a power mode that suits your device usage purposes.

Tap **Power mode** and select an option.

- **Optimized:** Optimized for a balance between the device's performance and battery usage.
- **Medium power saving:** Activate power saving mode to extend the battery's usage time.
- **Maximum power saving:** In maximum power saving mode, the device decreases battery consumption by activating night mode and limiting the apps and features available. Network connections, except for the mobile network, will be deactivated.

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

Managing battery usage for each app

You can save battery power by preventing apps that are running in the background from using battery power when they are not being used. Select apps from the apps list and tap the **Put app to sleep** switch to activate the feature. Also, tap  → **Settings** and set up the options under **App power management**.

Storage

Check the status of the used and available storage space.

On the Settings screen, tap **Device care** → **Storage**.



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

Managing the storage

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**.

Memory

On the Settings screen, tap **Device care** → **Memory**.

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

Security

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

On the Settings screen, tap **Device care** → **Security** → **Scan phone**.

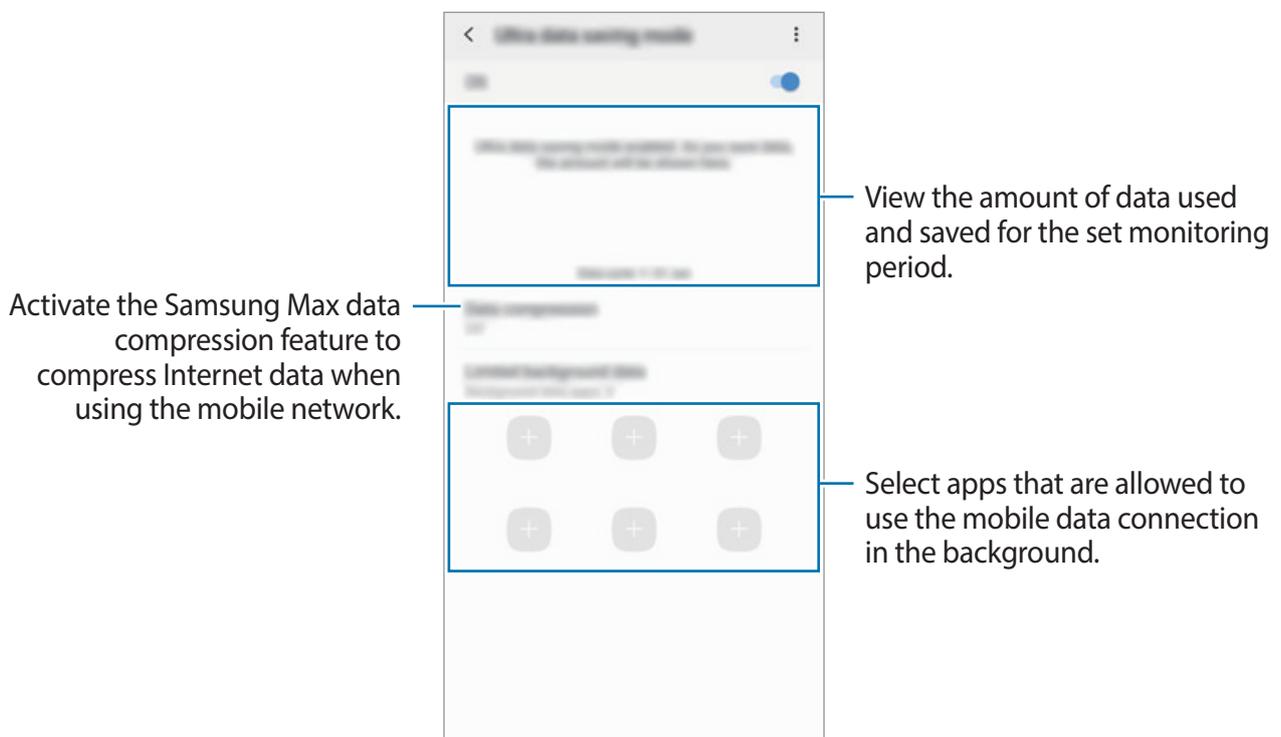
Ultra data saving

Monitor and reduce your mobile data usage by preventing background apps from using the mobile data connection. You can also use the data compression feature to compress Internet data, such as images, videos, and webpages, accessed via the mobile network.



- This feature may not be available depending on the region or service provider.
- Some webpages or content may not be available when this feature is activated, depending on the service provider or the mobile network conditions.

On the Settings screen, tap **Device care** → **Ultra data saving**, and then tap the switch to activate it.



You can change the data usage monitoring period. On the Settings screen, tap **Connections** → **Data usage** → **Billing cycle and data warning**.

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**.

General management

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

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

- **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.
- **Reset:** Reset your device's settings or perform a factory data reset. You can reset all your settings, or only network settings or accessibility settings. You can also set the device to restart at a preset time for device optimization.

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.

Accessibility

Configure various settings to improve accessibility to the device.

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

- **Screen reader:** Activate Voice Assistant, which provides voice feedback. To view help information to learn how to use this feature, tap **Tutorial**.
- **Visibility enhancements:** Customize the settings to improve accessibility for visually impaired users.
- **Hearing enhancements:** Customize the settings to improve accessibility for users with hearing impairment.
- **Interaction and dexterity:** Customize the settings to improve accessibility for users who have reduced dexterity.
- **Advanced settings:** Configure settings for Direct access and notification features.
- **Installed services:** View accessibility services installed on the device.

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**.



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 and install:** Check for and install updates manually.
- **Auto download over Wi-Fi:** Set the device to download updates automatically when connected to a Wi-Fi network.
- **Last update:** 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.



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.
- **Regulatory information:** Check the regulatory information.
- **Software information:** View the device's software information, such as its operating system version and firmware version.
- **Battery information:** View the device's battery status and information.

Appendix

Troubleshooting

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

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

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

Your device displays network or service error messages

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

Your device does not turn on

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

The 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 dialing.
- 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.
- 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 authorized by your network service provider or providers of additional services. Some content circulated on the Internet, such as ringtones, videos, or wallpapers, may not work properly.

Bluetooth is not working well

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

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

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

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

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

Your device cannot find your current location

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

Data stored in the device has been lost

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

A small gap appears around the outside of the device case

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

There is not enough space in the device's storage

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

The Apps button does not appear on the Home screen

Without using the Apps button, you can open the Apps screen by swiping upwards or downwards on the Home screen. To display the Apps button at the bottom of the Home screen, launch the **Settings** app, tap **Display** → **Home screen**, and then tap the **Apps button** switch to activate it.

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 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 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.

Removing the battery

- **To remove the battery, contact an authorized service centre.**
- For your safety, you **must not attempt to remove** the battery. If the battery is not properly removed, it may lead to damage to the battery and device, cause personal injury, and/or result in the device being unsafe.
- Samsung does not accept liability for any damage or loss (whether in contract or tort, including negligence) which may arise from failure to precisely follow these warnings and instructions, other than death or personal injury caused by Samsung's negligence.

Health and Safety

Please read this important safety information before you use the device. It contains general safety information for devices and may include content that does not apply to your device. Follow the warning and caution information to prevent injury to yourself or others and to prevent damage to your device.



The term 'device' refers to the product and its battery, charger, the items supplied with the product, and any Samsung-approved accessories used with the product.



Warning: Failure to comply with safety warnings and regulations can cause serious injury or death.

Do not use damaged power cords or plugs, or loose electrical sockets

Unsecured connections can cause electric shock or fire.

Do not touch the device, power cords, plugs, or the electric socket with wet hands or other wet body parts

Doing so may cause electric shock.

Do not pull the power cord excessively when disconnecting it

Doing so may cause electric shock or fire.

Do not bend or damage the power cord

Doing so may cause electric shock or fire.

Do not use the device with wet hands while the device is charging

Doing so may cause electric shock.

Do not directly connect together the charger's positive and negative terminals

Doing so may cause fire or serious injury.

Do not use your device outdoor during a thunderstorm

Doing so may result in electric shock or device malfunction.

Use manufacturer-approved batteries, chargers, accessories, and supplies

- Using generic batteries or chargers may shorten the life of your device or cause the device to malfunction. They may also cause a fire or cause the battery to explode.
- Use only a Samsung-approved battery and charger specifically designed for your device. An incompatible battery or charger can cause serious injuries or damage to your device.
- Samsung cannot be responsible for the user's safety when using accessories or supplies that are not approved by Samsung.

Do not carry your device in your back pockets or on your waist

- The device may be damaged, explode, or result in a fire if too much pressure is applied to it.
- You may be injured if you are bumped or fall.

Do not drop or cause an impact to the charger or the device

Handle and dispose of the device and charger with care

- Never dispose of the battery or device in a fire. Never place the battery or device on or in heating devices, such as microwave ovens, stoves, or radiators. The device may explode when overheated. Follow all local regulations when disposing of used battery or device.
- Never crush or puncture the device.
- Avoid exposing the device to high external pressure, which can lead to an internal short circuit and overheating.

Protect the device, battery and charger from damage

- Avoid exposing your device and battery to very cold or very hot temperatures.
- Extreme temperatures can damage the device and reduce the charging capacity and life of your device and battery.
- Do not directly connect together the battery's positive and negative terminals and prevent them from coming into contact with metal objects. Doing so may cause the battery to malfunction.
- Never use a damaged charger or battery.

Do not store your device near or in heaters, microwaves, hot cooking equipment, or high pressure containers

- The battery may leak.
- Your device may overheat and cause a fire.

Do not use or store your device in areas with high concentrations of dust or airborne materials

Dust or foreign materials can cause your device to malfunction and may result in fire or electric shock.

Prevent the multipurpose jack and the small end of the charger from contact with conductive materials, such as liquids, dust, metal powders, and pencil leads. Do not touch the multipurpose jack with sharp tools or cause an impact to the multipurpose jack

Conductive materials may cause a short circuit or corrosion of the terminals, which may result in an explosion or fire.

When using the wireless charger, do not place foreign materials, such as metal objects, magnets, and magnetic stripe cards, between the device and the wireless charger

The device may not charge properly or may overheat.

Do not bite or suck the device or the battery

- Doing so may damage the device or result in an explosion or fire.
- Children or animals can choke on small parts.
- If children use the device, make sure that they use the device properly.

Do not insert the device or supplied accessories into the eyes, ears, or mouth

Doing so may cause suffocation or serious injuries.

Do not handle a damaged or leaking Lithium Ion (Li-Ion) battery

For safe disposal of your Li-Ion battery, contact your nearest authorized service centre.



Caution: Failure to comply with safety cautions and regulations can cause injury or property damage

Do not use your device near other electronic devices

- Most electronic devices use radio frequency signals. Your device may interfere with other electronic devices.
- Using an LTE data connection may cause interference with other devices, such as audio equipment and telephones.

Do not use your device in a hospital, on an aircraft, or in automotive equipment that can be interfered with by radio frequency

- Avoid using your device within a 15 cm range of a pacemaker, if possible, as your device can interfere with the pacemaker.
- To minimize possible interference with a pacemaker, use your device only on the side of your body that is opposite the pacemaker.
- If you use medical equipment, contact the equipment manufacturer before using your device to determine whether or not the equipment will be affected by radio frequencies emitted by the device.
- On an aircraft, using electronic devices can interfere with the aircraft's electronic navigational instruments. Make sure the device is turned off during takeoff and landing. After takeoff, you can use the device in flight mode if allowed by aircraft personnel.
- Electronic devices in your car may malfunction due to radio interference from your device. Contact the manufacturer for more information.

Do not expose the device to heavy smoke or fumes

- Doing so may damage the outside of the device or cause it to malfunction.

If you use a hearing aid, contact the manufacturer for information about radio interference

The radio frequency emitted by your device may interfere with some hearing aids. Before using your device, contact the manufacturer to determine whether or not your hearing aid will be affected by radio frequencies emitted by the device.

Do not use your device near devices or apparatuses that emit radio frequencies, such as sound systems or radio towers

Radio frequencies may cause your device to malfunction.

Turn off the device in potentially explosive environments

- Turn off your device in potentially explosive environments instead of removing the battery.
- Always comply with regulations, instructions and signs in potentially explosive environments.
- Do not use your device at refuelling points (gas stations), near fuels or chemicals, or in blasting areas.
- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the device, its parts, or accessories.

If you notice strange smells or sounds coming from your device or the battery, or if you see smoke or liquids leaking from the device or battery, stop using the device immediately and take it to a Samsung Service Centre

Failure to do so may result in fire or explosion.

Comply with all safety warnings and regulations regarding mobile device usage while operating a vehicle

While driving, safely operating the vehicle is your first responsibility. Never use your mobile device while driving, if it is prohibited by law. For your safety and the safety of others, use your common sense and remember the following tips:

- Get to know your device and its convenience features, such as speed dial and redial. These features help you reduce the time needed to place or receive calls on your mobile device.
- Position your device within easy reach. Make sure you can access your wireless device without taking your eyes off the road. If you receive an incoming call at an inconvenient time, let your voicemail answer it for you.
- Suspend use in heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice, and heavy traffic can be hazardous.

- Do not take notes or look up phone numbers. Jotting down a “to do” list or flipping through your address book takes attention away from your primary responsibility of driving safely.
- Dial sensibly and assess the traffic. Place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary.
- Do not engage in stressful or emotional conversations that may be distracting. Make the person you are talking to aware that you are driving and suspend conversations that could potentially divert your attention from the road.

Care for and use your mobile device properly

Keep your device dry

- Humidity and liquids may damage the parts or electronic circuits in your device.
- Do not turn on your device if it is wet. If your device is already on, turn it off and remove the battery immediately (if the device will not turn off or you cannot remove the battery, leave it as-is). Then, dry the device with a towel and take it to a service centre.
- This device has internal liquid indicators fitted. Water damage to your device may void the manufacturer’s warranty.

Store your device only on flat surfaces

- If your device falls, it may be damaged.

The device can be used in locations with an ambient temperature of 0°C to 35°C. You can store the device at an ambient temperature of -20°C to 50°C. Using or storing the device outside of the recommended temperature ranges may damage the device or reduce the battery’s lifespan

- Do not store your device in very hot areas such as inside a car in the summertime. Doing so may cause the screen to malfunction, result in damage to the device, or cause the battery to explode.
- Do not expose your device to direct sunlight for extended periods of time (on the dashboard of a car, for example).
- For a device with a removable battery, the battery can be stored separately in locations with an ambient temperature of 0 °C to 45 °C.

Do not store your device with metal objects, such as coins, keys, and necklaces

- Your device may be scratched or may malfunction.
- If the battery terminals come into contact with metal objects, this may cause a fire.

Do not store your device near magnetic fields

- Your device may malfunction or the battery may discharge from exposure to magnetic fields.
- Magnetic stripe cards, including credit cards, phone cards, passbooks, and boarding passes, may be damaged by magnetic fields.

Prolonged exposure of your skin to an overheated device may cause low temperature burn symptoms, such as red spots and pigmentation

Do not use your device with the back cover removed

The battery may fall out of the device, which may result in damage or malfunction.

If your device has a camera flash or light, do not use it close to the eyes of people or pets

Using a flash close to the eyes may cause temporary loss of vision or damage to the eyes.

Use caution when exposed to flashing lights

- While using your device, leave some lights on in the room and do not hold the screen too close to your eyes.
- Seizures or blackouts can occur when you are exposed to flashing lights while watching videos or playing Flash-based games for extended periods. If you feel any discomfort, stop using the device immediately.
- If anyone related to you has experienced seizures or blackouts while using a similar device, consult a physician before using the device.
- If you feel discomfort, such as a muscle spasm, or disoriented, stop using the device immediately and consult a physician.
- To prevent eye strain, take frequent breaks while using the device.

Reduce the risk of repetitive motion injuries

When you repetitively perform actions, such as pressing keys, drawing characters on a touch screen with your fingers, or playing games, you may experience occasional discomfort in your hands, neck, shoulders, or other parts of your body. When using your device for extended periods, hold the device with a relaxed grip, press the keys lightly, and take frequent breaks. If you continue to have discomfort during or after such use, stop using the device and consult a physician.

Protect your hearing and ears when using a headset



- Excessive exposure to loud sounds can cause hearing damage.
- Exposure to loud sounds while walking may distract your attention and cause an accident.

- Always turn the volume down before plugging the earphones into an audio source and use only the minimum volume setting necessary to hear your conversation or music.
- In dry environments, static electricity can build up in the headset. Avoid using headsets in dry environments or touch a metal object to discharge static electricity before connecting a headset to the device.
- Do not use a headset while driving or riding. Doing so may distract your attention and cause an accident, or may be illegal, depending on your region.

Use caution when using the device while walking or moving

- Always be aware of your surroundings to avoid injury to yourself or others.
- Make sure the headset cable does not become entangled in your arms or on nearby objects.

Do not paint or put stickers on your device

- Paint and stickers can clog moving parts and prevent proper operation.
- If you are allergic to paint or metal parts of the device, you may experience itching, eczema, or swelling of the skin. When this happens, stop using the device and consult your physician.

Do not use the device if the screen is cracked or broken

- Broken glass or acrylic could cause injury to your hands and face. Take the device to a Samsung Service Centre to have it repaired.

Install mobile devices and equipment with caution

- Ensure that any mobile devices or related equipment installed in your vehicle are securely mounted.
- Avoid placing your device and accessories near or in an airbag deployment area. Improperly installed wireless equipment can cause serious injury when airbags inflate rapidly.

Do not drop your device or cause impacts to your device

- Your device may be damaged or may malfunction.
- If bent or deformed, your device may be damaged or parts may malfunction.

Ensure maximum battery and charger life

- Batteries may malfunction if they are not used for extended periods.
- Over time, unused device will discharge and must be recharged before use.
- Disconnect the charger from power sources when not in use.
- Use the battery only for its intended purpose.
- Follow all instructions in this manual to ensure the longest lifespan of your device and battery. Damage or poor performance caused by failure to follow warnings and instructions can void your manufacturer's warranty.
- Your device may wear out over time. Some parts and repairs are covered by the warranty within the validity period, but damages or deterioration caused by using unapproved accessories are not.

When using the device, mind the following

- Hold the device upright, as you would with a traditional phone.
- Speak directly into the microphone.

Do not disassemble, modify, or repair your device

- Any changes or modifications to your device can void your manufacturer's warranty. If your device needs servicing, take your device to a Samsung Service Centre.
- Do not disassemble or puncture the battery, as this can cause explosion or fire.
- Turn off the device before removing the battery. If you remove the battery with the device turned on, it may cause the device to malfunction.

When cleaning your device, mind the following

- Wipe your device or charger with a towel or an eraser.
- Clean the battery terminals with a cotton ball or a towel.
- Do not use chemicals or detergents. Doing so may discolour or corrode the outside the device or may result in electric shock or fire.

Do not use the device for anything other than its intended use

- Your device may malfunction.

Avoid disturbing others when using the device in public

Allow only qualified personnel to service your device

- Allowing unqualified personnel to service your device may result in damage to your device and will void your manufacturer's warranty.

Handle SIM cards, memory cards and cables with care

- When inserting a card or connecting a cable to your device, make sure that the card is inserted or the cable is connected to the proper side.
- Do not remove a card while the device is transferring or accessing information, as this could result in loss of data and/or damage to the card or device.
- Protect cards from strong shocks, static electricity, and electrical noise from other devices.
- Do not touch gold-coloured contacts or terminals with your fingers or metal objects. If dirty, wipe the card with a soft cloth.
- Inserting a card or connecting a cable by force or improperly may result in damage to the multipurpose jack or other parts of the device.

Ensure access to emergency services

Emergency calls from your device may not be possible in some areas or circumstances. Before travelling in remote or undeveloped areas, plan an alternative method of contacting emergency services personnel.

Protect your personal data and prevent leakage or misuse of sensitive information

- While using your device, be sure to back up important data. Samsung is not responsible for the loss of any data.
- When disposing of your device, back up all data and then reset your device to prevent misuse of your personal information.
- Carefully read the permissions screen when downloading applications. Be particularly cautious with applications that have access to many functions or to a significant amount of your personal information.
- Check your accounts regularly for unapproved or suspicious use. If you find any sign of misuse of your personal information, contact your service provider to delete or change your account information.
- In the event your device is lost or stolen, change the passwords on your accounts to protect your personal information.
- Avoid using applications from unknown sources and lock your device with a pattern, password, or PIN.

Do not distribute copyright-protected material

Do not distribute copyright-protected material without the permission of the content owners. Doing this may violate copyright laws. The manufacturer is not liable for any legal issues caused by the user's illegal use of copyrighted material.

Malware and viruses

To protect your device from malware and viruses, follow these usage tips. Failure to do so may result in damages or loss of data that may not be covered by the warranty service

- Do not download unknown applications.
- Do not visit untrusted websites.
- Delete suspicious messages or email from unknown senders.
- Set a password and change it regularly.
- Deactivate wireless features, such as Bluetooth, when not in use.
- If the device behaves abnormally, run an antivirus program to check for infection.
- Run an antivirus program on your device before you launch newly-downloaded applications and files.
- Install antivirus programs on your computer and run them regularly to check for infection.
- Do not edit registry settings or modify the device's operating system.

Acknowledging Special Precautions and ISED (Innovation, Science and Economic Development Canada) Notice

Cautions

Any changes or modifications to your device not expressly approved in this document could void your warranty for this equipment, and void your authority to operate this equipment. Only use approved batteries, antennas, and chargers. The use of any unauthorized accessories may be dangerous and void the phone warranty if they cause damage or a defect to the device.

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

Information to User

This equipment has been tested and found to comply with the limits of a Class B digital device. 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/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.



Warning: At very high volumes, prolonged listening to a headset can damage your hearing.

Specific Absorption Rates (SAR) for Wireless Devices

The SAR is a value that corresponds to the relative amount of RF energy absorbed by the user of a wireless device.

The SAR value of a device is the result of an extensive testing, measuring and calculation process. It does not represent how much RF the device emits. All devices are tested at their highest value in strict laboratory settings. But when in operation, the SAR of a device can be substantially less than the level reported to ISED. This is because of a variety of factors including its proximity to a base station antenna, design and other factors. What is important

to remember is that each device meets strict federal guidelines. Variations in SARs do not represent a variation in safety.

All devices must meet the federal standard, which incorporates a substantial margin of safety. As stated above, variations in SAR values between different model devices do not mean variations in safety. SAR values at or below the federal standard of 1.6 W/kg are considered safe for use by the public.

This device has been tested and meets RF exposure guidelines when used with an accessory that contains no metal and that positions the mobile device 15mm from the body.

Correct disposal of this product

(Waste Electrical & Electronic Equipment)



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

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

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

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

This product is RoHS compliant.

Correct disposal of batteries in this product



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.

Disclaimer

Some content and services accessible through this device belong to third parties and are protected by copyright, patent, trademark and/or other intellectual property laws. Such content and services are provided solely for your personal non-commercial use. You may not use any content or services in a manner that has not been authorized by the content owner or service provider. Without limiting the foregoing, unless expressly authorized by the applicable content owner or service provider, you may not modify, copy, republish, upload, post, transmit, translate, sell, create derivative works, exploit, or distribute in any manner or medium any content or services displayed through this device.

“THIRD PARTY CONTENT AND SERVICES ARE PROVIDED “AS IS.” SAMSUNG DOES NOT WARRANT CONTENT OR SERVICES SO PROVIDED, EITHER EXPRESSLY OR IMPLIED, FOR ANY PURPOSE. SAMSUNG EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SAMSUNG DOES NOT GUARANTEE THE ACCURACY, VALIDITY, TIMELINESS, LEGALITY, OR COMPLETENESS OF ANY CONTENT OR SERVICE MADE AVAILABLE THROUGH THIS DEVICE AND UNDER NO CIRCUMSTANCES, INCLUDING NEGLIGENCE, SHALL SAMSUNG BE LIABLE, WHETHER IN CONTRACT OR TORT, FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, ATTORNEY FEES, EXPENSES, OR ANY OTHER DAMAGES ARISING OUT OF, OR IN CONNECTION WITH, ANY INFORMATION CONTAINED IN, OR AS A RESULT OF THE USE OF ANY CONTENT OR SERVICE BY YOU OR ANY THIRD PARTY, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.”

Third party services may be terminated or interrupted at any time, and Samsung makes no representation or warranty that any content or service will remain available for any period of time. Content and services are transmitted by third parties by means of networks and transmission facilities over which Samsung has no control. Without limiting the generality of this disclaimer, Samsung expressly disclaims any responsibility or liability for any interruption or suspension of any content or service made available through this device.

Samsung is neither responsible nor liable for customer service related to the content and services. Any question or request for service relating to the content or services should be made directly to the respective content and service providers.

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, A3LSMA705W. 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>

FCC Notice and Cautions

FCC Notice



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

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

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

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

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

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

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

Cautions

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

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

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

Copyright

Copyright © 2019 Samsung Electronics

This manual is protected under international copyright laws.

No part of this manual may be reproduced, distributed, translated, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or storing in any information storage and retrieval system, without the prior written permission of Samsung Electronics.

Trademarks

- SAMSUNG and the SAMSUNG logo are registered trademarks of Samsung Electronics.
- Bluetooth® is a registered trademark of Bluetooth SIG, Inc. worldwide.
- Wi-Fi®, Wi-Fi Protected Setup™, Wi-Fi Direct™, Wi-Fi CERTIFIED™, and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance.
- Manufactured under license from Dolby Laboratories. Dolby, Dolby Atmos, and the double-D symbol are trademarks of Dolby Laboratories.
- All other trademarks and copyrights are the property of their respective owners.

ISED Notice

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

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

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.