SAMSUNG

User Guide

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Model _____ Serial No. _____

To directly go to the page that provides instructions on how to use the manual for visually impaired users, select the Learn Menu Screen link below.
"Learn Menu Screen" Link

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252 How can I connect an audio device to the TV?

252 There is no sound or the sound is too low at maximum volume.

252 The picture is good but there is no sound.

253 HDMI (eARC/ARC) is connected, and there is no sound.

253 The speakers are making an odd sound.

253 The sound is interrupted.

254 Whenever a function is used on the TV or the channel is changed, the TV voices the activity. The TV explains in voice-over the video scenes displayed on the screen.

254 The TV audio is not being played through the Soundbar or A/V receiver.

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256 The TV is not receiving all channels.

256 The captions are not provided on a digital channel.

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257 The "Mode Not Supported" message appears.

257 The video is OK but there is no audio.

257 I want to connect to a PC and mobile device via screen mirroring.

258 No screen appears when connecting the TV to an external device.

258 I want to connect to a Bluetooth speaker.

258 The PC screen does not appear or it flickers.

Network Issues

259 Wireless network connection failed. Unable to connect to a wireless access point. Unable to connect to the network.

259 Wired network connection failed.

259 Connected to a local network, but not to the Internet.

Wireless One Connect Issues

260 Wireless One Connect cannot be found.

261 A message appears saying "Wireless One Connect is disconnected. when viewing content provided by an external input source (e.g., a terrestrial broadcast service, set-top box or game console).

262 A message appears saying "The signal strength is low. Adjust the location of your Wireless One Connect." when viewing content provided by an external input source (e.g., a terrestrial broadcast service, set-top box or game console).

262 The device does not automatically connect after position adjustment.

262 A message appears saying "Please use the enclosed Wireless One Connect power adapter to ensure proper functionality."

Anynet+ (HDMI-CEC) Issues

263 What is Anynet+?

263 Anynet+ does not work. The connected device is not displayed.

264 I want to start Anynet+. I also want the connected devices to turn on when the TV is turned on.

264 I want to exit Anynet+. It is inconvenient to turn on other devices because the TV also turns on. It is inconvenient because the connected devices (e.g. set-top box) turn off together.

264 The message "Connecting to Anynet+ device..." or "Disconnecting from Anynet+ device" appears on the screen.

264 The Anynet+ device won't play.

Remote Control Issues

265 The remote control does not work.

266 The mobile remote control does not work.

266 External devices cannot be operated with the TV remote control.

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267 The Timeshift or recording function cannot be used.

267 Cannot record videos received from an external device or Samsung TV Plus.

267 The "Format Device" message appears when the Timeshift or recording function is used.

268 The recorded files on the TV are not played back on a PC.

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269 I cannot find the app I want.

269 I launched an app, but it's in a different language. How can I change the language?

269 The app does not work properly. Its image quality is poor.

269 The Smart Hub Home Screen keeps appearing whenever you turn on the TV.

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270 Some files are interrupted during playback.

270 Some files can't be played.

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271 The microphone is off.

271 The voice commands do not work well.

271 Bixby/Alexa answers although I did not call it.

272 I spoke "Hi, Bixby/Alexa" but Bixby/Alexa does not answer.

272 Voice recognition does not work with the Samsung Smart Remote unlike other features. There is no response even if the Voice Assistant button is pressed.

272 During voice recognition, the heavy load message appears and the function does not work.

272 I want to see weather information of the desired area.

Other issues

273 The TV is hot.

273 The TV smells like plastic.

273 The settings are lost after 5 minutes or every time the TV is turned off.

273 The TV is tilted to the side.

273 The stand is wobbly or crooked.

273 I want to know how to attach and remove the TV stand.

274 A POP (TV's internal banner ad) appears on the screen.

274 The screen is off, but I hear noise.

274 The TV is making a popping noise.

274 The TV is making a humming noise.

274 The TV narrates the screen events in voice-over.

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Guide

Learn how to use various features.

Connections

You can watch live broadcasts by connecting a coaxial cable to your TV and can get access to the network by using a LAN cable or wireless access point. Using various connectors, you can also connect external devices.

Connection Guide

You can view detailed information about external devices that can be connected to the TV.

> left directional button > Connected Devices > Connection Guide Try Now

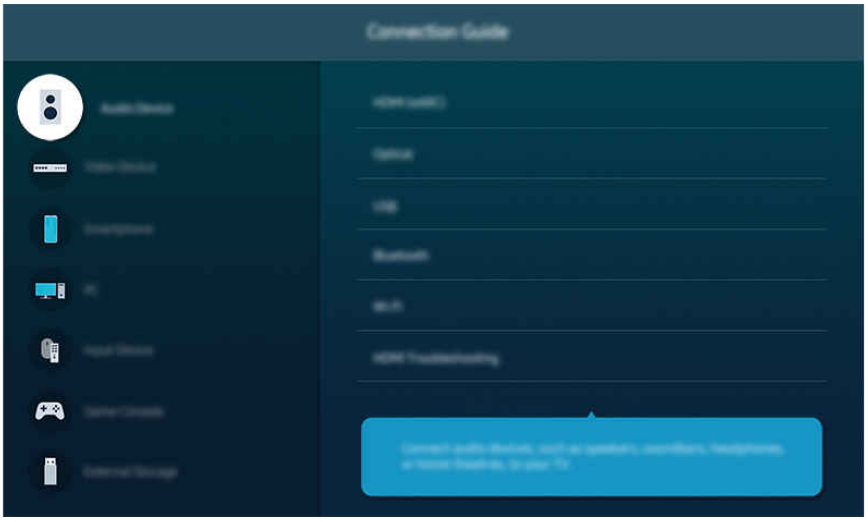
It shows you how to connect various external devices, such as video devices, game consoles, and PCs using pictures. If you select the connection method and an external device, the connection details appear.

- Wireless One Connect: Wireless One Connect
- Audio Device: HDMI (eARC/ARC), Optical/Audio Out, USB, Bluetooth, Wi-Fi
- Video Device: HDMI
- Smartphone: Screen Sharing (Smart View), Screen Sharing (Tap View), Samsung DeX, SmartThings, Camera Share, Apple AirPlay
- PC: HDMI, Screen Sharing (Wireless), Easy Connection to Screen, Apple AirPlay
- Input Device: Remote Control, USB Keyboard, USB Mouse, USB Gamepad, USB Camera, Bluetooth Device
- Game Console: HDMI
- External Storage: USB Flash Drive, Hard Disk Drive (HDD)

The connection method and available external devices may differ depending on the model.

Some functions may not be supported depending on the model or geographical area.

Using HDMI Troubleshooting, you can check the connection to HDMI cable and external devices (takes approximately 2 minutes).



The image on your TV may differ from the image above depending on the model and geographical area.

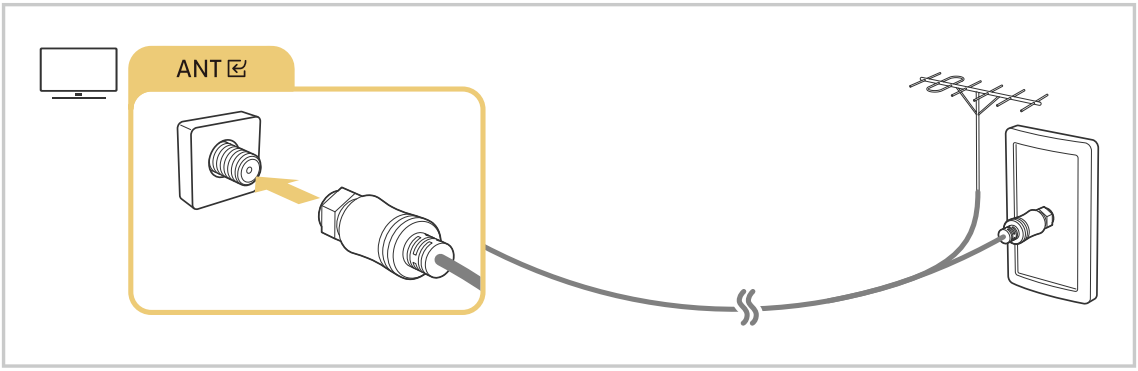
Connecting an Antenna

You can connect a coaxial cable to your TV.

An antenna connection is not necessary if you connect a cable box or satellite box.

- Do not use excessive force when connecting the antenna cable; excessive force may cause deformation of the port.
- To transport the product, first remove the antenna cable to prevent damage to the port.

The port on your TV may differ from the following figure depending on the product model and region.



Connecting to the network

You can get access to the network through your TV.

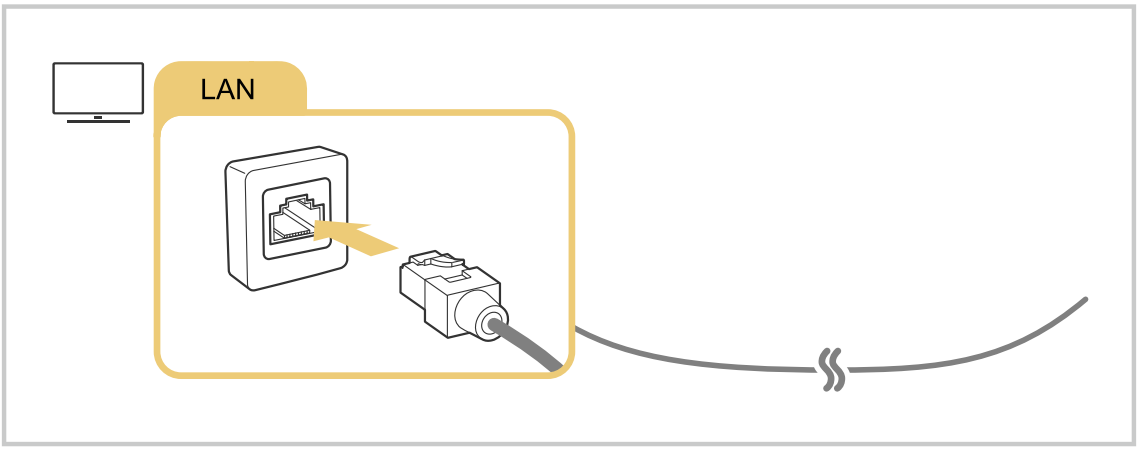
> left directional button > Settings > All Settings > Connections > Network > Network Settings Try Now

Configure network settings to connect to an available network.

Establishing a wired network connection

> left directional button > Settings > All Settings > Connections > Network > Network Settings > Wired

If you connect a LAN cable, the TV automatically accesses the network.



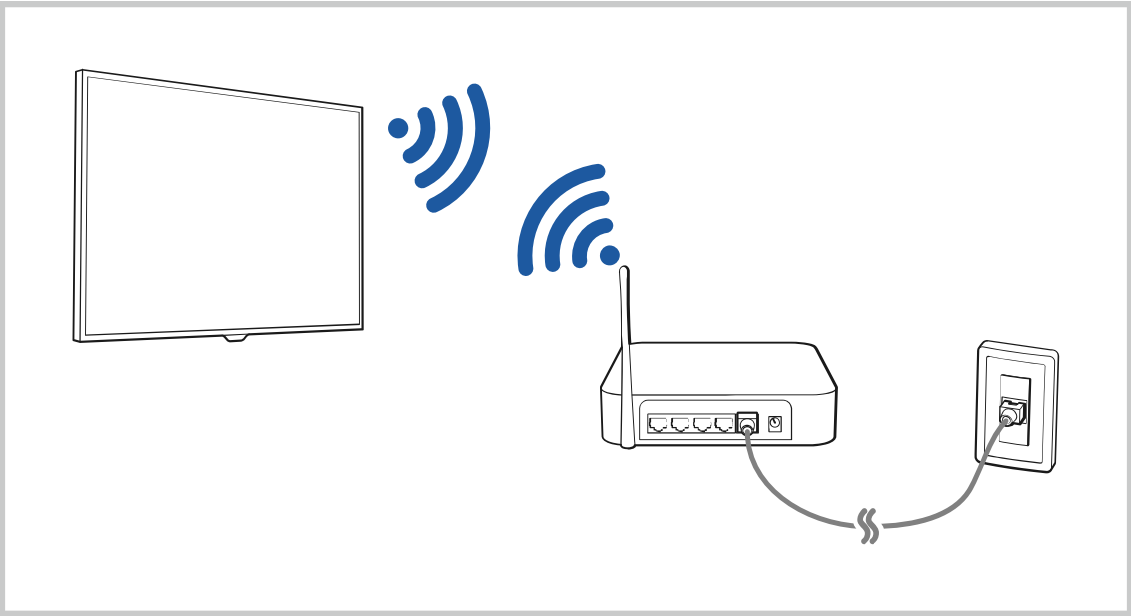
- If the TV does not automatically connect to the network, refer to "Wired network connection failed." in "Troubleshooting."
- To connect a LAN cable, use a CAT 7 (*STP type) cable for the connection. (100/10 Mbps)

  * Shielded Twisted Pair
- The TV will not be able to connect to the network if your network speed is below 10 Mbps.
- This function may not be supported depending on the model.
- Wired networks are not supported by some models.

Establishing a wireless network connection

Home > left directional button > Settings > All Settings > Connections > Network > Network Settings > Wireless

Make sure that you have the wireless access point's name (SSID) and password settings before attempting to connect. The network name (SSID) and security key are available on the wireless access point's configuration screen. See the wireless access point's user manual for more information.





- The image on your TV may differ from the image above depending on the model and geographical area.
- If no wireless access point is found, select **Add Network** at the bottom of the list and enter the network name (SSID).
- If your wireless access point has a WPS or PBC button, select **Use WPS** at the bottom of the list, and then push the WPS or PBC button on your access point within 2 minutes. The TV will connect automatically.
- To view or delete previously connected network names (SSIDs), move the focus to **Manage**, and then press the Select button.
- To disconnect Wi-Fi, select **Disconnect** in > left directional button > **Settings** > **All Settings** > **Connections** > **Network** > **Network Status**. Try Now
- 5 GHz or 6 GHz may not be supported depending on the model.

Checking the network connection status

> left directional button > **Settings** > **All Settings** > **Connections** > **Network** > **Network Status** Try Now

View the current network status.

Resetting Your Network

> left directional button > **Settings** > **All Settings** > **Connections** > **Network** > **Reset Network** Try Now

Restore the network settings to the factory default.

Turning on the TV with a mobile device

Home > left directional button > Settings > All Settings > Connections > Network > Expert Settings > Power On with Mobile Try Now

You can turn on the TV using a mobile device connected to the same network as the TV.

This function is available with a mobile device connected to the TV through the SmartThings app or the Apple AirPlay function.

Apple AirPlay may not be supported depending on the model or geographical area.

Connecting an IP control device to the TV

Home > left directional button > Settings > All Settings > Connections > Network > Expert Settings > IP Remote Try Now

You can connect an IP control device to the TV remotely to manage your IP device.

To use this function, **Power On with Mobile** must be turned on.

Turning this feature on may allow other IP control devices to control your TV. We recommend turning this feature on only if an authorized third-party custom controller is installed and configured specifically for a Samsung TV and if your Wi-Fi network is password protected.

This function may not be supported depending on the model.

Allowing to connect a wireless network

Home > left directional button > Settings > All Settings > Connections > Network > Expert Settings > Wi-Fi Try Now

You can enable the connection to Wi-Fi.

To connect a wireless network, the function must be active.

Changing the name of the TV

Home > left directional button > Settings > All Settings > Support > About TV > Edit Name

You can change the name of the TV on the network.

Pairing Wireless One Connect

Connect the Wireless One Connect to the TV.

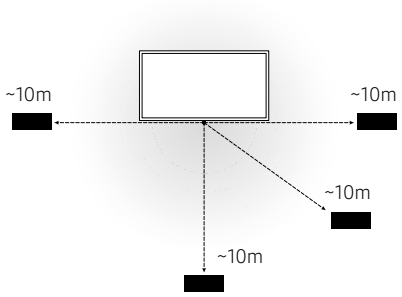
> left directional button > Settings > All Settings > Connections > Wireless One Connect > Set up Wireless One Connect

Available Wireless One Connect is searched for and connected.

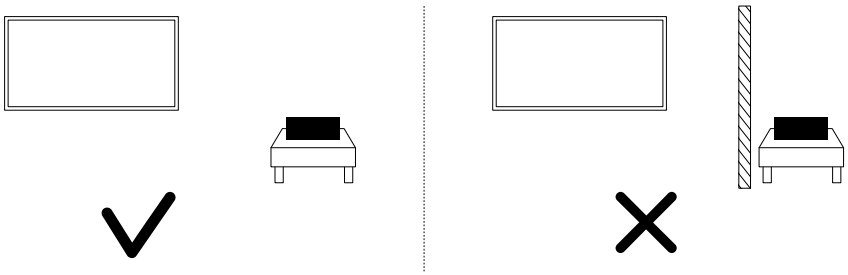
- If searching does not proceed, move close to the TV and select Search again. Searching for available Wireless One Connect is performed again.
- If you need to check the OC Name during the connection step, turn over the Wireless One Connect and view the label on the bottom.
- If you press and hold the PAIR button on the Wireless One Connect for 3 seconds, the device enters pairing mode and can connect to the TV.

Restrictions when using Wireless One Connect

- This function may not be supported depending on the model or geographical area.
- Use the type-C power adapter and cable supplied for exclusive use with Wireless One Connect.
  - The device may not work properly if used with components other than those that came with the device.



- Install Wireless One Connect within 10 m of the screen.
  - The effective range may differ, depending on the wireless environment conditions.



- Install Wireless One Connect in a location free of obstructions (e.g., concrete walls, metal furniture), which could affect the performance of the wireless signal.
- Malfunction (e.g., choppy video or audio) may occur, depending on the wireless transmission quality and installation distance.
- The supplied Wireless One Connect only works with screens of the model that came with it.
- Connect the USB camera to the USB-C port on the back of the screen device. Do not connect it to the Wireless One Connect.

Configuring Wireless One Connect

Home > left directional button > Settings > All Settings > Connections > Wireless One Connect

Configure Wireless One Connect settings.

- This function may not be supported depending on the model or geographical area.

- **Wireless One Connect Status**

  Manage wireless connections between Wireless One Connect and TV.

  Check the connection of the Wireless One Connect, or Unpair the connected Wireless One Connect. (Home > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status > Unpair)

  - If the connection disconnects, refer to the "Wireless One Connect cannot be found." section under Troubleshooting.

- **Set up Wireless One Connect**

  Connect Wireless One Connect to TV.

- **LED Indication**

  Check the LED on Wireless One Connect for connection and operation status. If you turn off this feature, the LED Indication turns off.

- **Low Signal Check**

  Get notified when the signal strength between TV and the Wireless One Connect is weak. If you turn off this feature, signal status notifications are not provided.

- **Power Adapter Check**

  Transmits an alert if the connected power adapter is not the dedicated adapter for Wireless One Connect. If you turn off this feature, alerts are not transmitted.

Displaying your mobile device screen on the TV

You can watch the screen of your mobile device on the TV screen through Smart View, Apple AirPlay or Tap View.

When you start screen sharing with a mobile device (Smart View / Apple AirPlay / Tap View), the TV screen switches to the Multi View or mobile device's screen. Watch multiple contents at the same time with the Multi View screen.

- This function may not be supported depending on the model.
- For more information, refer to "Using Multi View."

Using Screen Sharing (Smart View)

For information on how to share the screen with your mobile device, refer to > left directional button > Connected Devices > Connection Guide > Smartphone > Screen Sharing (Smart View). Try Now

- To turn off Screen Sharing (Smart View), disconnect the mobile device or press the button on the remote control.
- Using the Smart View menu on your mobile device, you can change the settings such as aspect ratio.

Using Apple AirPlay

Use AirPlay if you are an iPhone or iPad user. For more information, refer to > left directional button > Connected Devices > Connection Guide > Smartphone > Apple AirPlay. Try Now

- This function may not be supported depending on the model or geographical area.
- To use Apple AirPlay, make sure > left directional button > Settings > All Settings > Connections > Apple AirPlay Settings is enabled.

Using Screen Sharing (Tap View)

This function may not be supported depending on the model.

By tapping the mobile device on your TV, you can watch Multi View or mobile device's screen through the TV screen. When you tap a mobile device on your TV while running a music app on your mobile device, the TV screen switches to the Music Wall screen.

This function is only available in Samsung mobile devices with Android 8.1 or higher.

1. Enable Tap View, Tap Sound on your mobile device.

   For more information about configuration, refer to 'Enabling Tap View'.

2. Turn on the screen of your mobile device.
3. Tap your mobile device on the TV. The TV screen switches to Multi View, Music Wall, or mobile device's screen.

   Be sure to tap away from the TV screen and bezel corners. It may scratch or break the TV or mobile device screen.

   We recommend using your mobile device with the cover in place and lightly tap it on any external edge of the TV.

   When you perform Tap View in Ambient mode or Art mode, only the mobile device's screen appears on the TV.

4. Watch the Multi View, Music Wall, or mobile device's screen on the TV screen.

Music Wall screen is a function that allows you to enjoy music along with visual video effects that change according to the genre and beat of the music.

The displayed TV screen may differ depending on the model.

This function enables Screen/Sound Mirroring by detecting vibrations generated when you tap the mobile device on the TV.

Enabling Tap View

Enable Tap View in the SmartThings app.

Depending on the SmartThings app version, you may need to register the TV with your mobile device.

This function may not be supported depending on the model.

1. Launch the SmartThings app on your mobile device.
2. Select Settings (☰ > ⚙) in SmartThings app on your mobile device.
3. Set Tap View, Tap Sound to on.

   Upon connection for the first time, select Allow on a pop-up window of the TV.

Connection Cables for External Devices

You can view detailed information about the connection cables for external devices that can be connected to the TV.

Cable name	Image	Description
HDMI to HDMI		Each cable simultaneously transmits digital video and audio signals from an external device to the HDMI port on the TV. Cables are divided into various types according to the types of input or output ports on external devices.
HDMI to MINI HDMI		
HDMI to Micro HDMI		
HDMI to USB Type-C		
HDMI to DisplayPort		
Mini DisplayPort to HDMI		

Cable name	Image	Description
DVI to HDMI		DVI to HDMI cables can transmit only digital video signals and not audio signals. We recommend that you use HDMI to HDMI cables.
Optical		Optical cables are used to transmit audio signals to external speakers with low signal loss. Optical cables can't transmit video signals.
Component		Component cables transmit analogue signals. The video signal is separated and transmitted to the red, green, and blue terminals to provide HD (1080i) pictures. The audio signal is transmitted to the red and white terminals.
Composite		Composite cables transmit analogue signals. The video signal is transmitted to the yellow terminal, and the audio signal is transmitted to the red and white terminals.

Available connection cables may differ depending on the model or geographical area.

Switching between external devices connected to the TV

You can switch between TV programs and the content of external devices.

> left directional button > Connected Devices

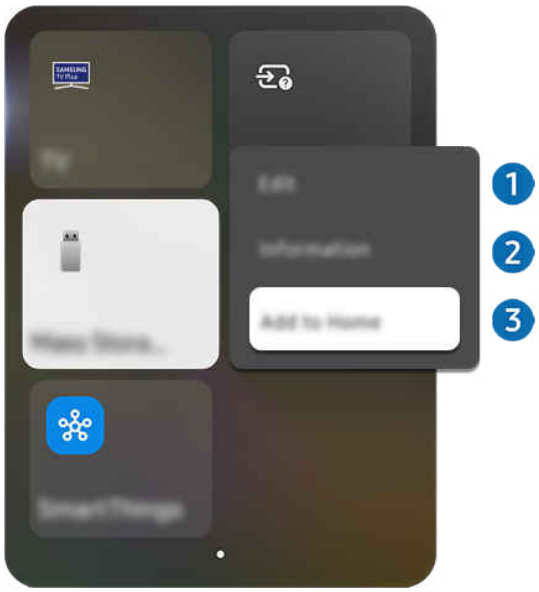
When you select a connected external device on the Sources screen, the output of the selected device is displayed on the TV's screen.

- To control a device (Blu-ray player, game console, etc.) that supports universal remote control with the TV's remote control, connect the device to an HDMI port on the TV, and then turn on the device. The output displayed on the TV is automatically switched to the output of the device or you can configure universal remote control for the device automatically. For more information, refer to "Controlling External Devices with a Samsung Remote Control - Using the Universal Remote Setup."
- When a USB device is connected to the USB port, a pop-up message appears that lets you switch easily to the media content listed on the device.
- This function may not be supported depending on the device and geographical area.

Editing the name and icon of an external device

> left directional button > Connected Devices

You can change the port name for a connected external device or add it to the Home Screen.



- The image on your TV may differ from the image above depending on the model and geographical area.

1. Move the focus to a connected external device.
2. Press and hold the Select button. The following functions become available:

   - Available functions may differ depending on the port type.

1 Add to Home

You can add the port of an external device to the Home Screen for quick switching.

2 Edit

You can rename the input ports and change the device icons.

3 Universal Remote

Set up your Samsung remote as a Universal Remote to easily control external devices.

This function may not be supported depending on the model or geographical area.

Using additional functions

On the connected device screen, use the following additional features:

- SmartThings

  Monitor and control connected home appliances and IoT devices from the screen.

  For more information about SmartThings, refer to "Using SmartThings."

  This function may not be supported depending on the model or geographical area.

- Screen Sharing (Smart View)

  You can watch the screen of your mobile device.

  For more information about Screen Sharing (Smart View), refer to "Displaying your mobile device screen on the TV."

  This function may not be supported depending on the model or geographical area.

- Quick Share

  Easily transfer and save photos from your Galaxy devices.

  For more information about Quick Share, refer to "Using Quick Share."

  This function may not be supported depending on the model or geographical area.

- Storage Share

  You can connect to a nearby Galaxy device to access its storage and check stored files.

  For more information about Storage Share, refer to "Using Storage Share."

  This function may not be supported depending on the model or geographical area.

- Camera Experience

  Connect a USB camera, or use the SmartThings app on your mobile phone to connect a camera.

  Connect a camera to use video call, home workout, and other new features.

  For details on how to connect, refer to Camera Share (> left directional button > Connected Devices > Connection Guide > Smartphone > Camera Share).

  This function may not be supported depending on the model.

- **Connection Guide**

  Displays device connection instructions.

  > For more information, refer to "Connection Guide."

- **Universal Remote Setup**

  Lets you register external devices to your Samsung remote control and control them using the Remote.

  > This function may not be supported depending on the model or geographical area.

  > For more information, refer to "Controlling External Devices with a Samsung Remote Control - Using the Universal Remote Setup."

Connection Notes

When connecting an external device, note the following:

- The number of connectors, and their names and locations may differ with the model.
- Refer to the external device's operating manual when connecting it to the TV. The number of external device connectors, and their names and locations may differ with the manufacturer.

Connection notes for HDMI

- The following types of HDMI cables are recommended:
  - High Speed HDMI Cable
  - High Speed HDMI Cable with Ethernet
  - Premium High Speed HDMI Cable
  - Premium High Speed HDMI Cable with Ethernet
  - Ultra High Speed HDMI Cable
- Use an HDMI cable with a thickness of 0.66 inches (17 mm) or less.
- Using a non-certified HDMI cable may result a blank screen or a connection error.
- Some HDMI cables and devices may not be compatible with the TV due to different HDMI specifications.
- This TV does not support HDMI Ethernet Channel. Ethernet is a Local Area Network (LAN) built with coaxial cables standardized by the IEEE.
- Use a cable shorter than 10 feet (3 m) to get the best UHD viewing quality.
- Many computer graphics adapters do not have HDMI ports, but have DVI or DisplayPort ports instead. If your PC does not support HDMI video out, connect your PC with a DVI to HDMI or HDMI to DisplayPort cable.
- When the TV is connected to an external device, such as a DVD/BD player or a set-top box via HDMI, power sync mode will be automatically activated. In the power sync mode, the TV continues to detect and connect external devices via HDMI cable. This function can be deactivated by removing the HDMI cable of the connected device.

  This function may not be supported depending on the model.

Connection notes for audio devices

- To obtain better TV audio quality, connect a soundbar or A/V receiver to the TV.
- If you connect an external audio device using an optical cable, the Sound Output setting automatically changes to the connected device. However, to make this happen, you must turn on the external audio device before connecting the optical cable. To manually change the Sound Output setting, do one of the following

  This function may not be supported depending on the model.

  – Use the Select button to select Receiver (Optical) on the Sound Output menu. (Home > left directional button > Settings > Sound Output > Select button to toggle between sound output modes) Try Now

  – Select Receiver (Optical) on the Sound Output menu. (Home > left directional button > Settings > All Settings > Sound > Sound Output) Try Now

    Refer to the soundbar's user manual when connecting it to the TV.

- An unusual noise coming from a connected audio device while you are using it, may indicate a problem with the audio device itself. If this occurs, ask for assistance from the audio device's manufacturer.
- Digital audio is only available with 5.1 channel broadcasts.

Connection notes for computers

- For the resolutions supported by the TV, refer to "Read Before Connecting a Computer (Supported Resolutions)."
- If you want to connect your PC and TV wirelessly, both of them must be connected to each other on the same network.
- When sharing content with other network-based devices, such as those in an IP (Internet Protocol) storage system, sharing may not be supported due to the network's configuration, quality, or functionality, for example, if the network has a NAS (Network-Attached Storage) device.

Connection notes for mobile devices

- To use the Smart View function, the mobile device must support a mirroring function, such as Screen Mirroring or Smart View. To check whether your mobile device supports the mirroring function, refer to the mobile device's user manual.
- The Screen Sharing (Smart View) feature may not operate smoothly in a 2.4 GHz environment. For a better experience, 5 GHz or 6 GHz is recommended.

  5 GHz or 6 GHz may not be supported depending on the model.
- To use Wi-Fi Direct, the mobile device must support the Wi-Fi Direct function. To check whether your mobile device supports Wi-Fi Direct, refer to the mobile device's user manual.

  This function may not be supported depending on the model or geographical area.
- The mobile device and your Smart TV must be connected to each other on the same network.
- Use AirPlay if you are an iPhone or iPad user. For more information, refer to > left directional button > Connected Devices > Connection Guide > Smartphone > Apple AirPlay. Try Now

  This function may not be supported depending on the model or geographical area.
- The video or audio may stop intermittently, depending on network conditions.
- When sharing content with other network-based devices, such as those in an IP (Internet Protocol) storage system, sharing may not be supported due to the network's configuration, quality, or functionality, for example, if the network has a NAS (Network-Attached Storage) device.

Connection notes for Portrait Mode

- If you connect the Auto Rotating Accessory (sold separately) to the TV, you can use the TV in Portrait Mode.
- To use the computer or console, connected via HDMI to the TV, in Portrait Mode, you need to change the device setting. Change the screen to Portrait Mode from the computer or console.

  Portrait Mode is supported when a computer that uses Windows 10 or later or a console that supports Portrait Mode is connected.

  This function may not be supported depending on the model.

Using Multi Control

Connect to nearby Galaxy devices to control them using the same keyboard and mouse.

Home > left directional button > Settings > All Settings > Connections > Multi Control

If you turn on Multi Control mode, you can connect all Galaxy devices in the vicinity and control them with a single keyboard and mouse.

- To connect to those devices, make sure that Multi Control mode, Wi-Fi and Bluetooth are enabled and the same Samsung account is logged in on all the devices.
- This function may not be supported depending on the model or geographical area.
- This feature may not be supported, depending on the Galaxy device model and the One UI version.

Using Quick Share

Easily transfer and save photos wirelessly from your Galaxy devices.

Home > left directional button > Settings > All Settings > Connections > Quick Share

Choose who can share content with you.

- This function may not be supported depending on the model or geographical area.

- Change Samsung Account
  - If you're signed in with the same Samsung account as your Galaxy devices, you can easily receive images.

    For more information, refer to "Using a Samsung account."
- Who can share with you
  - Choose who can share content with you.
- TV name
  - This name will appear on the other device when you connect.

Using Storage Share

Connect to a nearby Galaxy device to access its storage and check stored files.

> left directional button > Settings > All Settings > Connections > Storage Share Settings

Turn on the Storage Share feature. The Galaxy devices in the vicinity can be found in the list under Connected Devices.

Select the intended device from the list, and access the device storage to check stored files.

- To connect to those devices, make sure that Storage Share mode, Wi-Fi and Bluetooth are enabled and the same Samsung account is logged in on all the devices.
- This function may not be supported depending on the model or geographical area.
- This feature may not be supported, depending on the Galaxy device model and the One UI version.

Using Link to Galaxy Watch

Find out how to connect to your Galaxy Watch and check its connection status.

> left directional button > Settings > All Settings > Connections > Link to Galaxy Watch

Nearby Galaxy Watches are shown in a list. Select your desired device and connect to it.

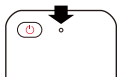
- To connect, make sure the Galaxy smartphone and Galaxy Watch are located in the vicinity of the TV, and Bluetooth is enabled and the same Samsung account is logged in on all the devices.
- This function may not be supported depending on the model.
- This feature may not be supported, depending on the Galaxy device model and the One UI version.
- This feature may not work in some apps or on some service screens.

Remote Control and Peripherals

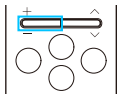
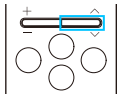
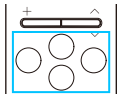
You can control TV operations with your Remote Control. Pair external devices, such as a keyboard, for ease of use.

About the Samsung Smart Remote (Remote Control)

Learn about the buttons on the Samsung Smart Remote (Remote Control).

Button	Description
(Power)	Press to turn the TV on or off. For The Frame model, When watching TV, press to switch to Art mode. In Art mode, press to switch to the Home screen. Press and hold to turn off the TV completely. For more information, refer to "Using Art Mode."
 (MIC / LED)	Used as MIC when using voice recognition with the remote control. When charging the remote control via the USB port, the LED is lit if charging is in progress. When charging is complete, the LED is turned off. • Do not impact the MIC hole or use a sharp object to poke into the hole. • The position of the MIC hole may differ depending on the model. This function may not be supported depending on the model or geographical area.
(AI/Click to Search)	Opens the AI or Click to Search function. The services opened when this button is pressed depend on the software version. This function may not be supported depending on the model or geographical area. [AI] Press the button to open the Vision AI Companion function. Vision AI Companion is an interactive AI service that answers your questions and provides the information you need. • Find out the key AI capabilities from the launched Vision AI Companion. [Click to Search] Press this button while watching a broadcast, to obtain recommended information related to the broadcast. • The type of recommended information may differ, depending on the content provider.
/ (Voice Assistant)	Runs Voice Assistant. Press and hold the button, say a command, and then release the button to run Voice Assistant. This function may not be supported depending on the model or geographical area.

Button	Description
(Settings - Number - Color button)	You can access Setting menu / virtual numeric pad / Color buttons / Option pad / SmartThings directly. • Accessing the SmartThings app using this button may not be supported, depending on the model. • Use this button to access additional options that are specific to the feature in use. • Press to bring up the virtual numeric pad on the screen. Use the numeric keypad to enter numeric values. Select numbers and then select Done or Enter Number to enter a numeric value. Use to change the channel, enter a PIN, ZIP code and etc. If the Color Button appears with a number strip on the screen, select the Color Button and then select a specific color by using the directional button (up, down, left, right).
(Settings - Number - Option button)	You can access Setting menu / virtual numeric pad / Option pad / SmartThings directly. • Accessing the SmartThings app using this button may not be supported, depending on the model. • Use this button to access additional options that are specific to the feature in use. • Press to bring up the virtual numeric pad on the screen. Use the numeric keypad to enter numeric values. Select numbers and then select Done or Enter Number to enter a numeric value. Use to change the channel, enter a PIN, ZIP code and etc.
(Color button)	When pressed, colored buttons appear on the screen. Use this button to access additional options that are specific to the feature in use. This function may not be supported depending on the model or geographical area.
(Directional button (up, down, left, right))	Use to navigate the menu or move the focus to highlight items on the Home Screen.
(Select)	Selects or runs a focused item. When pressed while you are watching a broadcast program, detailed program information appears.
(Return)	Press to return to the previous menu. When pressed for 1 second or more, the running function is terminated. When pressed while you are watching a program, the previous channel appears.
(Smart Hub)	Press to switch to the Home Screen. • If you press this button for more than 1 second, the same function found when pressing the button is provided. The feature may not be supported depending on the model or geographical area.

Button	Description
(Play/pause)	When pressed, the playback controls appear. Using these controls, you can control the media content that is playing. To use Game Bar, press and hold the button in Game Mode. Game Bar may not be supported depending on the model or geographical area.
 +/− (Volume)	Move the button up or down to adjust the volume. To mute the sound, press the button. When pressed for 2 seconds or more, the Accessibility Shortcuts appears. may not be present, depending on the model.
 ^/v (Channel)	Move the button up or down to change the channel. To see the Guide screen, press the button. When pressed for 1 second or more, the Channel List screen appears. Press and hold the button up or down to quickly change the channel.
 Launch app button	Launch the app indicated by the button. Available apps may differ depending on the geographical area or contents provider. This function may not be supported depending on the model.

- The Samsung Smart Remote may not be provided, depending on the model or geographical area. Use mobile remote control functions from the SmartThings app on your mobile device. For more information, refer to "Using a mobile remote control."
- Use the Bluetooth-connected Samsung Smart Remote less than 20 feet (6 m) from the TV. The usable distance may vary with the wireless environmental conditions.
- The images, buttons and functions on the remote control may differ, depending on the remote control type, TV model or geographical area.
- To use the Samsung Smart Remote to control a compatible external device that does not support HDMI-CEC (Anynet+), you must configure universal remote control for the device. For more information, refer to "Controlling External Devices with a Samsung Remote Control - Using the Universal Remote Setup."
- To use the Samsung Smart Remote to control a compatible external device that does support HDMI-CEC (Anynet+), connect the device to an HDMI port on the TV using an HDMI cable. For more information, refer to "Using Anynet+ (HDMI-CEC)."
- Depending on the model and region, a message may appear asking you to hold the remote control correctly if you control the TV while holding the remote control upside down. To turn off the alert, access Remote Grip Sensor. (> left directional button > Settings > All Settings > General & Privacy > Remote Control > Remote Grip Sensor) (TM236*, TM256*)
- For specific functions of each button on the Bluetooth-connected Samsung smart remote, access the Remote Control Guide. (> left directional button > Settings > Support > Tips and User Guides > Remote Control Guide)

About the Standard Remote Control

Learn about the buttons on the Standard Remote Control.

Button	Description
(Power)	Press to turn the TV on or off.
SOURCE	Displays and selects available video sources.
0-9 (Number button)	Enter numbers on each button.
—	Selects additional digital channels being broadcast by the same digital station. For example, to select channel '54-3', press '54', then press '-' and '3'.
TTX/MIX	Alternately selects Teletext mode, Full TTX / Double TTX / Mix / Live TV. This function may not be supported depending on the model.
PRE-CH	Returns to the previous channel.
+/— (VOL)	Adjusts the volume.
∧/∨ (CH)	Changes the current channel. Press and hold the button up or down to quickly change the channel.
MUTE	Turns the sound on/off.
GUIDE	Press to display the Guide screen, or press and hold to display the Channel List screen.
(Smart Hub)	Press to switch to the Home Screen. • While watching live broadcast content, press and hold this button for more than 1 second to activate the *Click to Search function. *: This function may not be supported depending on the software version, model or geographical area.
Launch app button	Launch the app indicated by the button. Available apps may differ depending on the geographical area or contents provider.
Directional button (up, down, left, right)	Use to navigate the menu or move the focus to highlight items on the Home Screen.

Button	Description
(Select)	Selects or runs a focused item. When pressed while you are watching a broadcast program, detailed program information appears.
RETURN	Returns to the previous menu or channel.
EXIT	Exits the menu.
Red, Green, Yellow, Blue (Color Button)	Press a button to run the additional option for the current function.
SETTINGS	Displays the main on-screen menu.
INFO	Displays information about the current program or content.
CC/AD (AD/SUBT.)	Displays the Accessibility Shortcuts.
Multimedia Button (Play/Pause/etc.)	Run the assigned functions for each button (e.g. Rewind, Play, Pause).

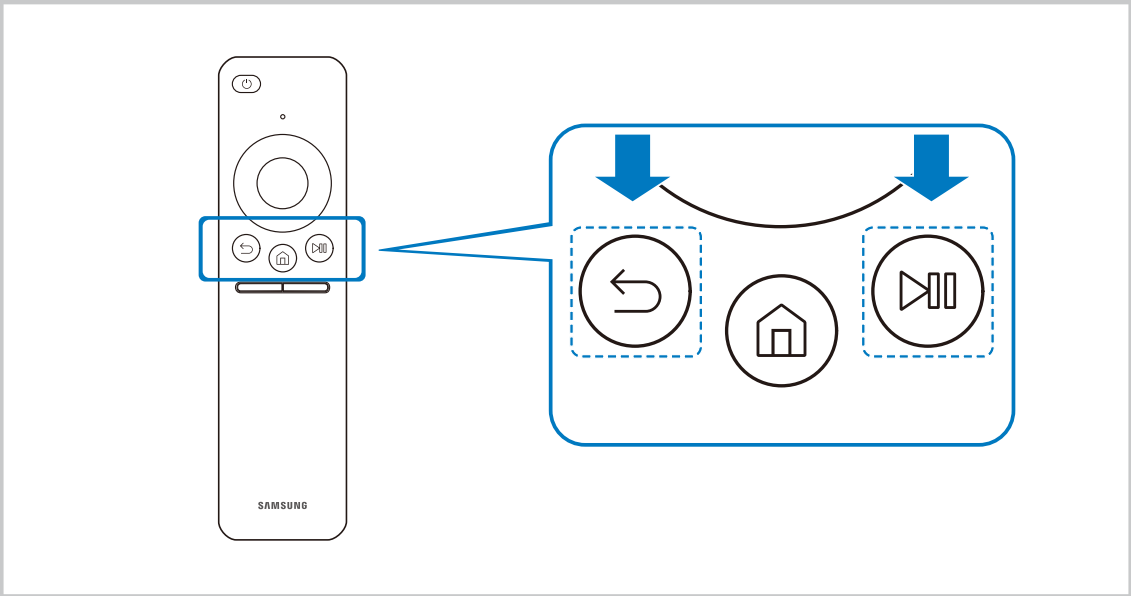
- The Standard Remote Control may not be provided, depending on the model or geographical area. Use mobile remote control functions from the SmartThings app on your mobile device. For more information, refer to "Using a mobile remote control."
- The images, buttons, and functions of the remote control may differ depending on the model or geographical area.
- This remote control has Braille points on the Power, Channel and Volume buttons and can be used by visually impaired persons.
- If you use the remote control that comes with your TV to control another TV, some functions may not operate normally.

Connecting the Samsung Smart Remote to the TV

Connect the Samsung Smart Remote to your TV to operate the TV.

When the TV turns on, it automatically pairs with the Samsung Smart Remote through Bluetooth. If the Samsung Smart Remote does not pair to the TV automatically, point it at the front of the TV, and then press and hold the and buttons simultaneously for 3 seconds or more.

- This function may not be supported depending on the model or geographical area.
- The Samsung Smart Remote may not be provided, depending on the model or geographical area. Use mobile remote control functions from the SmartThings app on your mobile device. For more information, refer to "Using a mobile remote control."



- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Using a mobile remote control

Control the TV using the remote control for a mobile device.

Use mobile remote control functions from the SmartThings app on your mobile device. If your TV is not registered in the mobile SmartThings app, open the mobile remote control using the following method.

- To use a mobile remote control, press the power button at the bottom of the TV to turn it on, and scan the QR code displayed on the screen.
  - This function may not be supported depending on the model.
- Before using the mobile remote control, please refer to the User Guide provided by the mobile remote control.

- Users may need to update the SmartThings app to the latest version.
- This function may not be supported depending on the model.
- The images, buttons, and functions of the mobile remote control may differ depending on the model or geographical area.

Controlling External Devices with a Samsung Remote Control - Using the Universal Remote Setup

Control the TV and connected external devices with a Samsung remote control.

> left directional button > Connected Devices > Universal Remote Setup

You can control all external devices connected to the TV using a single Samsung remote. Run the Universal Remote Setup menu to register external devices.

- This function may not be supported depending on the model or geographical area.
- This feature may not be supported on some models, if an external device is connected directly to the screen without using Wireless One Connect.
- You can also use the Anynet+ (HDMI-CEC) function to operate external Samsung devices with your TV's remote control without any additional setup. For more information, refer to "Using Anynet+ (HDMI-CEC)."
- Specific external devices connected to the TV may not support the universal remote feature.
- Do not place any obstacles in front of an external device and TV's logo. It may cause improper transmitted signals from the remote control.
- If you have difficulty controlling external devices with the Universal Remote, try adjusting the positions of the external devices.
- This function may not operate properly depending on the TV installation environment and the features of external devices.

Learn how to use Samsung Smart Remote

You can learn how to use Samsung Smart Remote.

> left directional button > Settings > Support > Tips and User Guides > Remote Control Guide

Find details on how to use the Samsung Smart Remote.

Press the menu to use a variety of functions of the Samsung Smart Remote.

- This function may not be supported depending on the model.

Learn how to use Game Controller

You can learn how to use Game Controller.

> left directional button > Settings > Support > Tips and User Guides > Game Controller Guide

Find details on how to use the Game Controller.

Press the menu to learn more about the functions of each Game Controller button.

- This function may not be supported depending on the model.
- Button layouts may vary between controllers.

Using Anynet+ (HDMI-CEC)

Control an external device connected via Anynet+ (HDMI-CEC) with the remote control.

You can use the TV's remote control to control external devices that are connected to the TV by an HDMI cable and that support Anynet+ (HDMI-CEC). Note that you can only set up and operate Anynet+ (HDMI-CEC) with the remote control.

Connecting an external device through Anynet+ and using their menus

Home > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Anynet+ (HDMI-CEC) Try Now

1. Set Anynet+ (HDMI-CEC) to On.
2. Connect an HDMI-CEC-compliant device to the TV.
3. Turn on the connected external device.

The device is automatically connected to the TV. After the connection process is finished, you can access the menu of the connected device using your TV remote and control the device.

- The connecting process can take up to 2 minutes to complete.

Read before connecting an Anynet+ (HDMI-CEC) device

- Anynet+ (HDMI-CEC)-enabled devices must be connected to the TV with an HDMI cable. Note that some HDMI cables may not support Anynet+ (HDMI-CEC).
- You can configure the TV's Universal Remote to control third-party cable boxes, Blu-ray players, and home theaters that do not support HDMI-CEC. For more information, refer to "Controlling External Devices with a Samsung Remote Control - Using the Universal Remote Setup."
- Anynet+ cannot be used to control external devices that do not support HDMI-CEC.
- The TV remote control may not work under certain circumstances. If this occurs, set up the device as an Anynet+ (HDMI-CEC)-enabled device again.
- Anynet+ (HDMI-CEC) works only with external devices that support HDMI-CEC, and when those devices are either in standby mode or turned on.
- Anynet+ (HDMI-CEC) can control up to 12 compliant external devices (up to 3 of the same type) except for home theaters. Anynet+ (HDMI-CEC) can control only one home theater system.
- To listen to 5.1 channel audio from an external device, connect the device to the TV via an HDMI cable and connect a 5.1 home theater system directly to the external device's digital audio output connector.
- If an external device has been set up for both Anynet+ and a universal remote control, the device can be controlled only with the universal remote control.

Controlling the TV with a Keyboard, Mouse, or Gamepad

Connecting a keyboard, mouse, or gamepad to make it easier to control the TV.

You can connect a keyboard, mouse, or gamepad to control the TV easily.

Connecting a USB keyboard, mouse, or gamepad

Home > left directional button > Connected Devices > Connection Guide > Input Device

Plug the keyboard, mouse or gamepad cable into the USB port.

- This function may not be supported by some apps or external devices.
- XInput USB gamepads are supported.

Connecting a Bluetooth keyboard, mouse, or gamepad

Home > left directional button > Settings > All Settings > Connections > Bluetooth Try Now

- If your device was not detected, position the keyboard close to the TV, and then select Scan. The TV scans for available devices again.
- This function may not be supported by some apps or external devices.
- A maximum of four gamepads can be connected, regardless of connection method (e.g., USB or Bluetooth).
  - When using two Bluetooth audio devices, it is best to use USB gamepads.
  - When using one Bluetooth audio device, up to two Bluetooth gamepads can be connected.
- For more information, refer to the Bluetooth device's user manual.
- This function may not be supported depending on the model or geographical area.

Using the keyboard and mouse

Button	Description
Directional keys	Use to navigate the menu, or move the focus to highlight items on the Home Screen.
Enter key	Selects or runs a focused item
ESC key	Press to return to the previous menu, or press and hold to close whatever is running on the screen.
Number keys	Enter numbers
F1 key	Turns on or off the TV
F2 key	Displays the Settings menu / numeric keypad / Option pad / SmartThings app Each time you press this button, Settings menu / virtual numeric pad / Option pad / SmartThings app are displayed alternately.
F3 key	Plays/pauses
F4 key	Displays the Settings screen
F5 key	Displays the Home Screen
F6 key	Displays the Sources screen
F7 key	Displays the Channel List
F8 key	Mutes the sound
F9 / F10 key	Adjusts the volume
F11 / F12 key	Changes the channel
Page Up / Page Down	Scrolls a webpage displayed by the Internet app.
Left-click	Selects and runs an item. This function is not available in some apps. You can click a menu or link to start a function as you do on a PC.
Right-click	Calling up shortcut buttons, such as ⮌/⌂/+/−/^/v Easily access a menu by right-clicking on the mouse and selecting the menu from among the displayed shortcut buttons. Displayed shortcut buttons may differ, depending on the screen.

The key operation may differ depending on some apps or the keyboard and mouse.

Using the Gamepad

Check the supported gamepads. Try Now

This function may not be supported depending on the model or geographical area.

Manufacturer	Controllers	Connection	Force feedback
Microsoft	Xbox Series X/S controller	Bluetooth	O
	Xbox One S controller	Bluetooth	O
		USB	O
	Xbox 360 controller	USB	O
	Xbox Elite Wireless Controller Series 2	Bluetooth	O
	Xbox Adaptive controller	Bluetooth	-
		USB	-
Sony	Dualsense Edge	Bluetooth	O
		USB	O
	Dualsense	Bluetooth	O
		USB	O
	DualShock 4	Bluetooth	O
		USB	O
Google	Stadia controller	USB	Not support
		Wi-Fi	Not support
Amazon	Luna controller	Bluetooth	O
		USB	O
		Wi-Fi	Not support
Joytron	CYVOX DX	USB	O
Logitech	F710	USB	O
	F510	USB	O
	F310	USB	-
PowerA	MOGA XP5-X Plus Bluetooth controller	Bluetooth	-
		USB	-
Nvidia	Shield controller	Bluetooth	O
		USB	Not support
Nintendo	Nintendo Switch Pro	Bluetooth	O
		USB	O
	Nintendo Joy-Con (L/R)	Bluetooth	O

- Some keys are not available on this product depending on controller.
- Force feedback :

  "Not support" (This product can't support force feedback.)

  "-" (Controllers don't have force feedback function.)

  * Tizen TVs will support only XInput mode for the supported gamepads.

  * Xbox controllers may require firmware updates.
- Controller audio output (3.5 mm port) is not available on this product.
- Other controllers may or may not work for cloud gaming.

Using the controller

Button	Description
Left joystick and dpad	4 way navigation
Right joystick	• Up / Down : Volume control (Up / Down) • Left / Right : Channel control (Up / Down) on TV screen • Select (press): Mute the sound
A button or X button (Sony Only)	Enter (OK)
B button or O button (Sony Only)	Return (Cancel)
Pressing and holding the B button or O button (Sony Only)	Exit
Home button	Gaming hub homepage (Gaming hub supported countries) Smart hub homepage
Pressing and holding the Home button	(During cloud game play) Quick panel
Option button on the left	Game Bar (when Game Mode is turned on and an external source is connected)
X button or □ button (Sony Only)	Numeric buttons (123)
Pressing and holding the left and right joysticks simultaneously	Power Off (Turning power on is not possible) On some models, the TV goes into Art mode.

- The button operation may differ depending on some apps or the controller.
- If you connect controller to this product by Wi-Fi solution, you cannot use UI navigation function.

  * Gaming Hub and Cloud game may not be supported depending on the country.

Setting up the input devices

Home > left directional button > Settings > All Settings > General & Privacy > Keyboard and Mouse

- Keyboard Settings Try Now

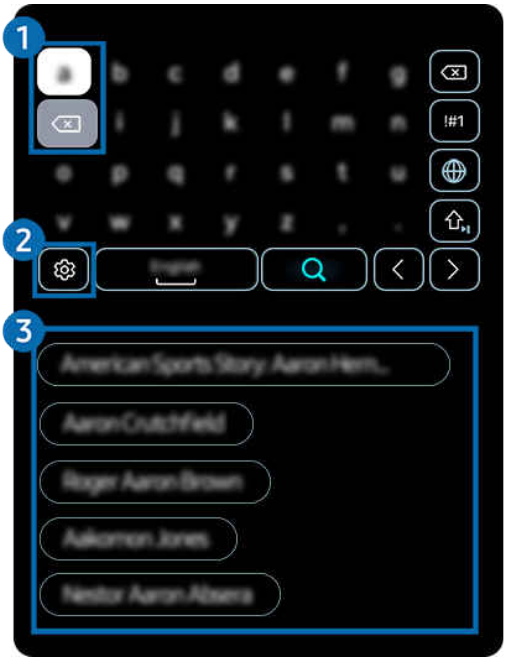
  You can set up the keyboard with the Keyboard Language and Keyboard Type functions.

- Mouse Settings Try Now

  You can set up the mouse with the Mouse Pointer Size, Primary Button and Pointer Speed functions.

Entering Text using the On-Screen Virtual Keyboard

Use the virtual keyboard to enter text on your TV.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Editing Buttons

By selecting any of pop-up Editing Buttons after entering characters on the virtual keyboard, you can quickly perform the editing function.

This function is only available when the Show Editing Buttons feature is turned on.

2 Settings

Select ⚙ on the virtual keyboard screen. The following options are available:

The options available may differ depending on the function running currently.

- Recommended text
  - Recommended text
  - Reset Recommended Text Memory
  - Show Editing Buttons
- Languages and Types

3 Recommended text

When you type a word you want to use as a search term, this function displays related suggestions from which you can choose one.

Entering Text using the remote control's microphone and the on-screen virtual keyboard

When the virtual keyboard is on the screen, press and hold the button 🎙 on the Samsung Smart Remote, speak into the microphone on the Samsung Smart Remote, and then release the button. What you say appears on the screen as text.

Entering text with your voice may not be supported for some functions.

This function may not be supported depending on the model or geographical area.

The Samsung Smart Remote may not be supported depending on the model or geographical area.

The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Smart Features

You can enjoy various apps with Smart Hub.

Using Smart Hub

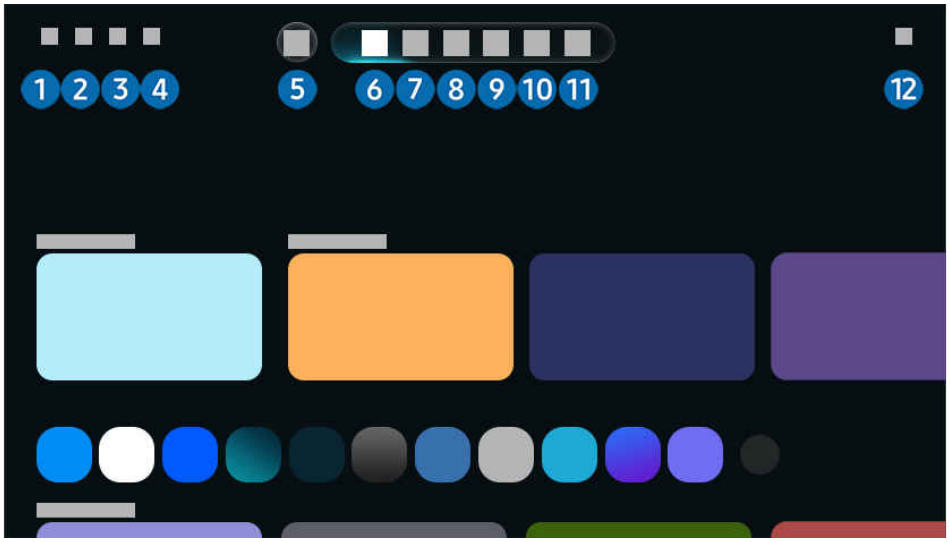
View descriptions of Smart Hub's basic functions.

From Smart Hub, you can use the Internet search function, install and use various apps, view photos and videos, or listen to music and perform more functions.

- Some Smart Hub services are paid services.
- To use smart functions, you should connect to a network, agree to the terms and conditions, and log in with your Samsung account.
- Some Smart Hub features may not be supported depending on the service provider, language, or geographical area.
- Smart Hub service outages can be caused by disruptions in your network service.

Displaying the Home Screen

Press the button.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Samsung Account

Go to the Samsung Account screen to create a new account or sign out of your account.

For more information, refer to "Using a Samsung account."

2 Search

Search for channels, programs, movies, and apps offered by Smart Hub.

To use the Search service, make sure the TV is connected to a network.

This function may not be supported depending on the model or geographical area.

3 Connected Devices

Select an external device that is connected to the TV.

For more information, refer to "Switching between external devices connected to the TV."

4 Settings

Manage external devices connected to the TV, and configure settings for various functions available on the TV.

For more information, refer to "About the Settings screen."

5 Vision AI Companion

Vision AI Companion is an interactive AI service that answers questions and recommends content and services tailored to the topic or situation.

- This function may not be supported depending on the model or geographical area.
- For more information, refer to "Using Vision AI Companion."

6 For You

View a variety of TV programs. Install various apps offered by Smart Hub, such as video, music and sports apps, and use the apps from the TV. The app makes personalized recommendations based on the user's viewing experience.

- For more information, refer to "About the For You screen."

7 Ambient / Art

- Supported features may vary depending on the model.
- On some models, the Ambient mode is integrated in the Art mode.

- **Ambient**

  When the TV is not being used, set your TV to display content that you desire such as the Time or Weather.

  To return to TV mode from Ambient mode, double-press the button. Press the button to turn off the TV.

  - This function may not be supported depending on the model or geographical area.
  - For more information, refer to "Using Ambient Mode."

- **Art**

  When you are not watching TV or when the TV is turned off, you can use the Art mode function to edit image contents such as artworks and photos, or to display the content.

  - This function may not be supported depending on the model or geographical area.
  - For more information, refer to "About the Art screen."

8 Live

Watch TV programs currently on the air. Access the Guide screen to check the broadcast schedules and set up scheduled viewing for the programs you want.

- For more information, refer to "About the Live screen."

9 Games

Play games from the TV screen by connecting a Controller to the TV. Configure settings to optimize the Controller and audio device for playing games.

- This function may not be supported depending on the model or geographical area.
- For more information, refer to "Using Samsung Gaming Hub."

⑩ Daily

Provides useful services, such as home training, remote work, karaoke, and early childhood education content, allowing users to conveniently experience different lifestyles.

- This function may not be supported depending on the model or geographical area.
- For more information, refer to "About the Samsung Daily+ screen."

⑪ Apps

Install a variety of apps offered by Smart Hub, such as video, music, sports and game apps, and use the apps from the TV.

- For more information, refer to "About the Apps screen."

⑫ Privacy Choices

From your TV, easily manage the privacy policy regarding services related to Smart Hub and verify how personal information is protected.

- To use Smart Hub, you must agree to the Smart Hub service agreement and the collection and use of personal information. Without giving consent, you cannot use the additional features and services. You can view the entire text of the Terms & Privacy by navigating to > left directional button > Settings > All Settings > General & Privacy > Terms & Privacy. Try Now
- If you want to stop using Smart Hub, you can cancel the agreement. To cancel the Smart Hub service agreement, select Reset Smart Hub (> left directional button > Settings > Support > Device Care > Reset Smart Hub). Try Now
- This function may not be supported depending on the model or geographical area.

Testing Smart Hub connections

> left directional button > Settings > Support > Device Care > Self Diagnosis > Smart Hub Connection Test Try Now

Resetting Smart Hub

> left directional button > Settings > Support > Device Care > Reset Smart Hub Try Now

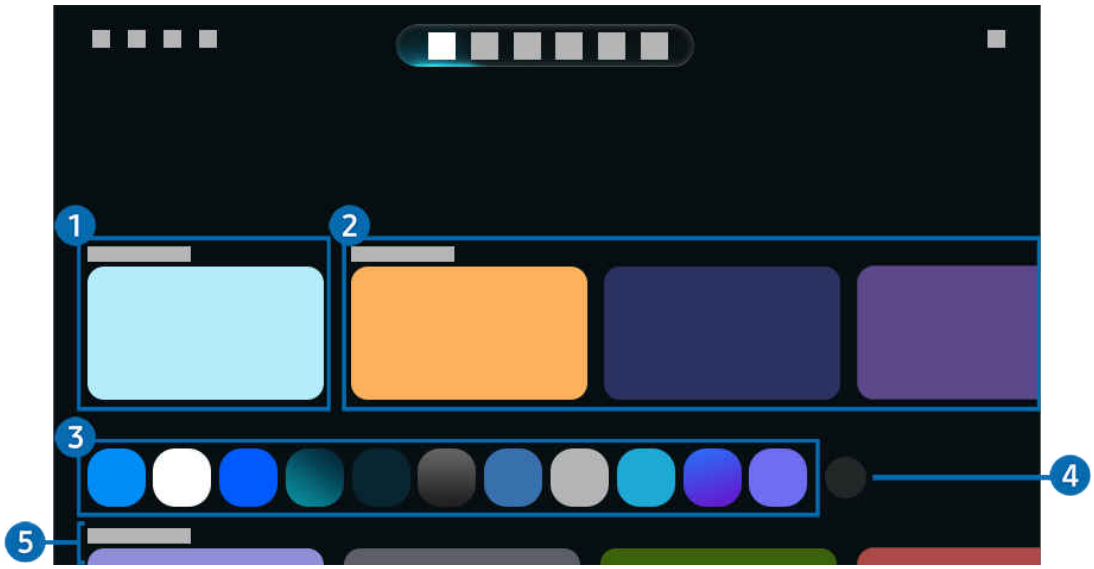
- You can reset the Smart Hub settings. To reset Smart Hub, enter the PIN. You can set the PIN in > left directional button > Settings > All Settings > General & Privacy > PIN Settings > Change PIN. Try Now

About the For You screen

This screen makes personalized recommendations based on the user's viewing experience.

> (top of Smart Hub Home screen) > For You

The name of this function may appear differently depending on the model or geographical area.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Now Playing

Access your last watched TV program, app or last used input source.

2 Search Trends / On Now

The name of this function may appear differently depending on the model or geographical area.

This function may not be supported depending on the model or geographical area.

This function may not be supported, depending on the input signal and settings.

- Search Trends

  Recommends content that are currently popular in many OTT services.

- On Now

  Display a list of TV programs or Samsung TV Plus content items currently being aired.

3 App List

Add frequently used apps or delete apps on the Home screen, to suit your preferences.

4 List Edit

- **Moving an item**

  From the end of the list, select List Edit. Move the focus to the app to relocate, and press the Select button on the remote control. Use the left or right button to reposition the app and then press Select. This repositions the app.

  – **Alternative, faster way**

    Alternatively, move the focus to the app to relocate, press and hold the Select button, and then press the left or right directional button.

- **Removing an item**

  From the end of the list, select List Edit. Position the focus on the app you wish to remove and then press the Select button on the remote control to display the 🗑 icon. To delete the app, use the down directional button to select the 🗑 icon. This removes the app from the list on the screen.

  Alternatively, move the focus to the app to be deleted, press and hold the Select button, and then use the down directional button to select the 🗑 icon.

- **Sort by Most Used**

  Automatically sort items by frequency of use. From the end of the list, select List Edit. Position the focus on Sort by Most Used and then press the Select button on the remote control. The items are automatically sorted. To save this change, select Done. To cancel, select Undo.

  This function may not be supported depending on the model or geographical area.

- **Adding Apps**

  From the end of the list, select List Edit. Apps that can be added to the app list appear at the bottom of the list. Move the focus to the app to be added and then press the Select button on the remote control. Use the left and right directional buttons to move to the desired position and then press the Select button. The selected app is added to the app list.

5 Universal Guide

Universal Guide is a function that allows you to search for and enjoy various content, such as TV shows, dramas, and movies, in one place. **Universal Guide** can recommend content tailored to your preferences.

You can use this feature on your mobile device with the Samsung SmartThings app.

- To access Universal Guide, press the down directional button on the remote control in Home Screen.
- To enjoy the content from these apps on your TV, the contents must be installed on the TV.
- When you watch some paid content, you may need to make a payment using their associated app.
- Some content may be restricted depending on your network conditions and your subscriptions to paid channels.
- Parental control is necessary when children use this service.
- Images may look blurry depending on the service provider's circumstances.
- This function may not be supported depending on the model or geographical area.
- All YouTube 8K content recommended and provided through the Home screen of 8K TV is attributed to YouTube.

  The picture quality of YouTube 8K Content can be affected by a variety of factors, including location, Internet bandwidth used at home, and Internet access speed.

  Depending on your environment, it may be temporarily played at a resolution rather than an 8K resolution.

  The recommended connection speed for receiving 8K image quality (8K resolution) is at least 80 Mbps.

  The loading time it takes to start watching YouTube 8K Content may vary depending on the Internet bandwidth or Internet access speed you are using at that time.

  In the future, depending on the operation policy of Samsung and YouTube services, whether YouTube 8K content is recommended through the Home screen may vary.

  This function may not be supported depending on the model or geographical area.

Media Options

- This menu can be found at the bottom of the **For You** home. To configure option settings, scroll down to the bottom.
- This function may not be supported depending on the model or geographical area.

- **Preferences**: Select a preferred service to receive content recommendations to suit your preference.
- **Continue Playing**: Choose content providers for **Continue Playing**. You can continue watching different shows in one place from all the **Continue Playing**-supported content providers listed below.
- **Watch Later**: Create a list of videos you want to watch or videos to watch later.
- **Parental Lock**: Redirect to the Parental Lock menu. Turn all parental control settings on or off.
- **Autoplay Sound**: When you browse and preview content, you can set the sound to come out or not automatically.

About the Live screen

View TV programs currently on the air. Access the Guide screen to check the broadcast schedules and set up scheduled viewing for the programs you want.

> (top of Smart Hub Home screen) > Live



The image on your TV may differ from the image above depending on the model and geographical area.

1 Live Banner

Recommended programs and live broadcast information are displayed.

This function may not be supported depending on the model or geographical area.

2 On Now

Display a list of TV programs or Samsung TV Plus content items currently being aired.

This function may not be supported, depending on the input signal and settings.

3 Guide

See the program schedules of different channels on a single screen. Use Guide to view the daily program schedule for each broadcaster. You can also find out detailed information about programs, watch a specific program, or schedule the recording of a program.

For more information about Guide, refer to "Using the Guide."

This function may not be supported depending on the model or geographical area.

4 Genre

Select a genre to sort and display specific channels to suit your preferences.

This function may not be supported depending on the model or geographical area.

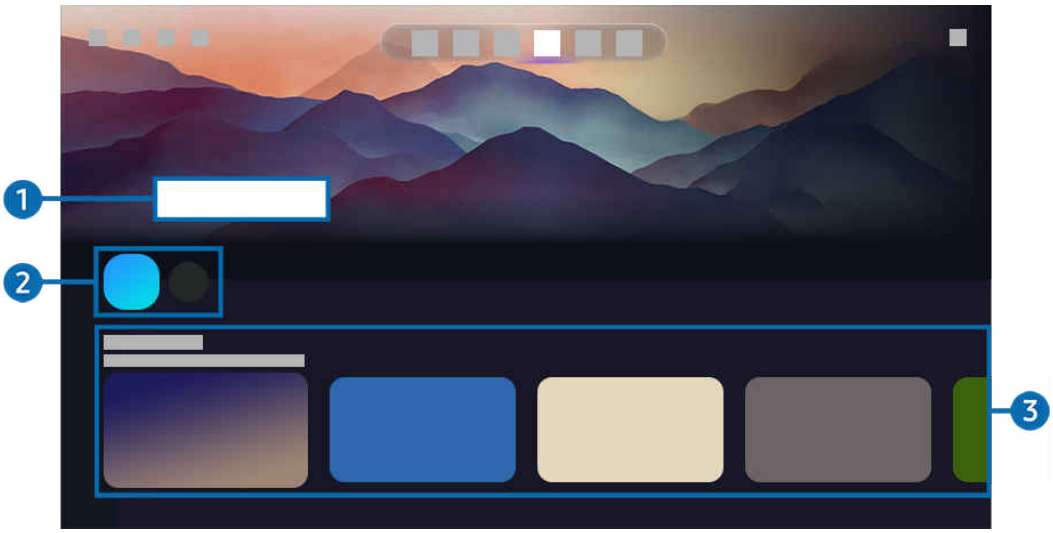
Using Ambient Mode

Learn about the functions available in Ambient mode.

> (top of Smart Hub Home screen) > Ambient

Set your TV to display a photo or content you desire when the TV is not used.

- This function may not be supported depending on the model.
- On some models, the Ambient mode is integrated in the Art mode.
- Press the button in Ambient mode screen to enter to Ambient Home.
- In Ambient mode, some functions may not be supported.



- The image on your TV may differ from the image above depending on the model and geographical area.

1 Getting to Know Ambient Mode

Press View Help to briefly view information about Ambient mode, including functions.

2 3rd Party App

You can download images from the 3rd Party apps and use them in Ambient mode. You can move the app to another location by selecting List Edit located at the end of the list.

- Supported 3rd Party apps may vary, depending on the region.
- Whenever a new 3rd Party apps is released, users can display a wider variety of artwork.

3 Function and content preview

Select a preferred content and a preferred background and set them as your Ambient mode. While in Ambient mode, press the Select button and then the Up directional button on the remote control to view the content details.

You can use the SmartThings app on a Mobile Device to select a desired content and change the settings. Indicates content perfectly suited for the time of the day.

Available content categories may differ depending on the model or geographical area.

- Changing art work

  Change the artwork to display in Ambient mode. Press the Select button on the remote control to move the focus to an artwork. Use the left or right directional button to move to the desired art work, and then press Select button on the remote control.

- View Details

  View detailed information about the selected image.

- Favorite

  Add or delete specific images in Favorite by pressing the Select button and then the Up directional button on the remote control. To view items that are set as Favorites, navigate to Ambient > Favorite.

  – ♡ Favorite: The item is not set as favorite

  – ♥ Favorite: The item is set as favorite

- Edit

  Customize the settings to suit your preferences.

  Available functions may not be supported depending on the model or content.

  – Weather Filter

    You can add a weather effect to content.

  – Time Filter

    You can select any background time format for content.

  – Color

    Changes the color of the content.

  – Vibes

    Selects a mood that matches the content.

  – Backgrounds

    Changes the background of the content.

  – Shadow Effects

    Applies a shadow effect that you select to the content.

- Filter

  You can select an image filter effect to content.

- BGM Mode

  You can add a background music to content.

- Screen Settings

  You can adjust the settings such as content brightness, saturation, and color tone.

  - Brightness

    Adjusts the brightness of the content.

  - Saturation

    Adjusts the saturation of the content.

  - Color Tone

    Adjusts the colors of the content.

  - Red Tone / Green Tone / Blue Tone

    Adjusts the red, green, blue contrast.

Selecting Content Category

Available content categories may differ depending on the model or geographical area.

- Favorite

  While in Ambient mode, press the Select button on the remote control and press ♥ Favorite to save the displayed content to Favorite.

- Special Edition

  Allows you to enjoy creative artwork and interior design content created by the world's finest artists and designers.

- Cinemagraph

  Adds a looping animation to a specific part of the photo to make it more attention-grabbing.

- My Album

  Allows you to set a photo stored in your mobile device or Samsung Cloud as the wallpaper of the Ambient mode screen.

  To import photos from your mobile device or Samsung Cloud, use the SmartThings app on your mobile device.

  For more information about how to configure the photo settings, select How to Select Photos.

- Q Collection

  Provides content that is dedicated to Samsung QLED.

- Mood

  Enjoy a range of options to create the right ambience to suit your mood.

- Relaxation

  Relax with a selection of calming content inspired by nature to soothe your mood.

- Décor

  Allows you to select content with a sensible and beautiful design.

- Info

  Allows you to select essential real-time information, such as weather, temperature, time, and news.

- Artwork

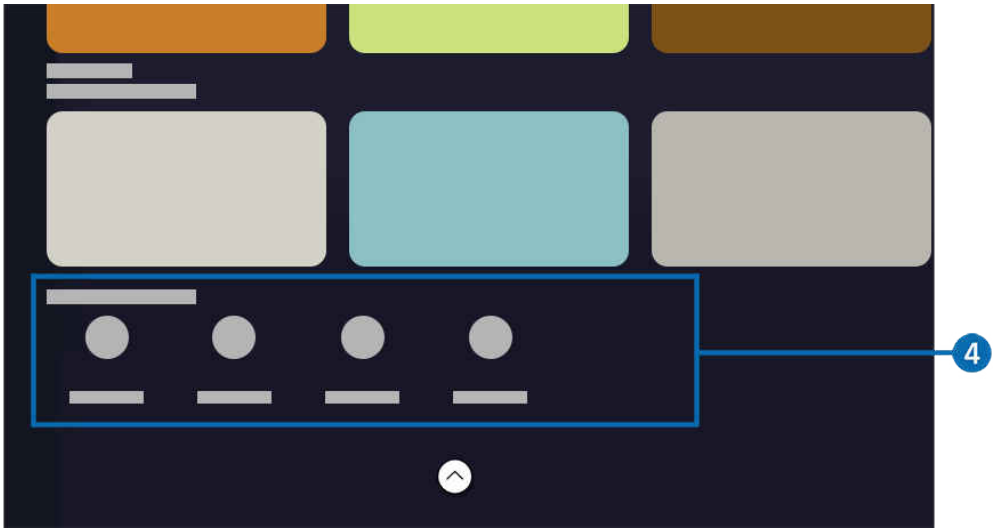
  Allows you to select content such as world famous photos and artwork.

- Background Theme

  Allows you to select a background theme provided by Samsung.

  Take a picture of a wall using the SmartThings app on your mobile device to create a custom background theme. When you use this function, there may be a delay in image transmission and optimization depending on network conditions.

  A created **Background Theme** can be set as the background for content. To set it as the background for content, press the Select button on the remote control while in **Ambient** mode, and select **Edit**



The image on your TV may differ from the image above depending on the model and geographical area.

4 Ambient Screen Options

Following Ambient mode options are configurable:

This menu can be found at the bottom of the Ambient home. To configure option settings, scroll down to the bottom.

Available options may vary depending on the model.

- Auto Brightness

  Changes the auto brightness setting for Ambient mode.

  When this function is set to Off, the brightness level of the TV screen is not automatically adjusted in response to the surrounding light level.

- Sleep After

  Sets the time when the Ambient mode screen turns off automatically.

  If there is no remote control input for the set time, the screen goes off.

- Reset My Album

  Reset photos saved in My Album.

- What is Ambient?

  Briefly view information about Ambient mode, including functions.

Entering the TV viewing screen from Ambient Mode

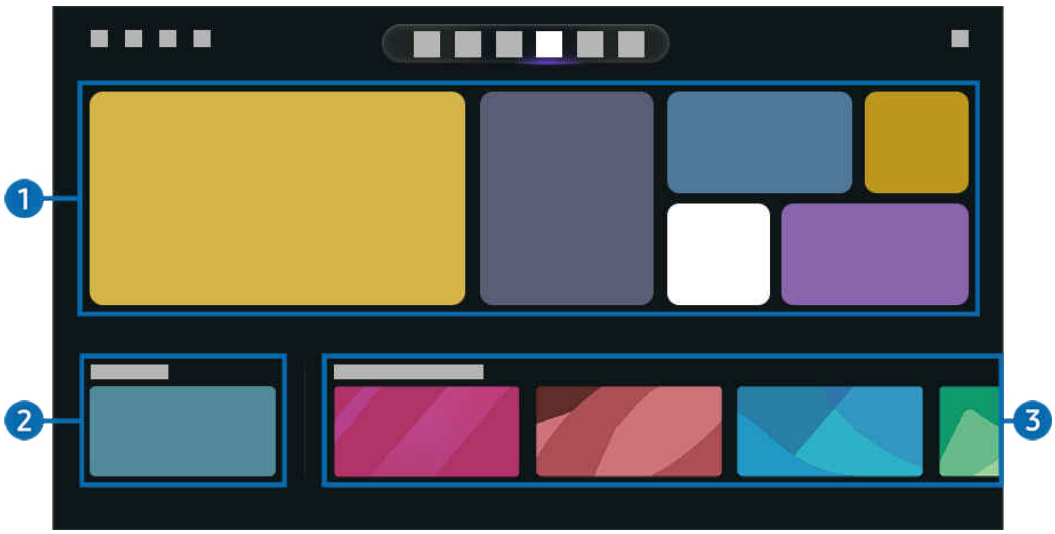
To access the TV screen from Ambient mode, press either the or button to redirect to the Ambient mode Home Screen and then press the directional buttons on the remote control to select For You or Live.

If the TV is off and the button is pressed, the For You screen appears.

About the Art screen

Learn about the functions available in Art Mode.

> (top of Smart Hub Home screen) > Art



The image on your TV may differ from the image above depending on the model and geographical area.

1 List of image categories

Choose from images of different categories shown on the screen and press the Select button to see the content related to the selected image or a full-screen view of the selected image. Select Preview for a full-screen view of the selected image for 30 seconds. If you like an image, you can sign up for Membership.

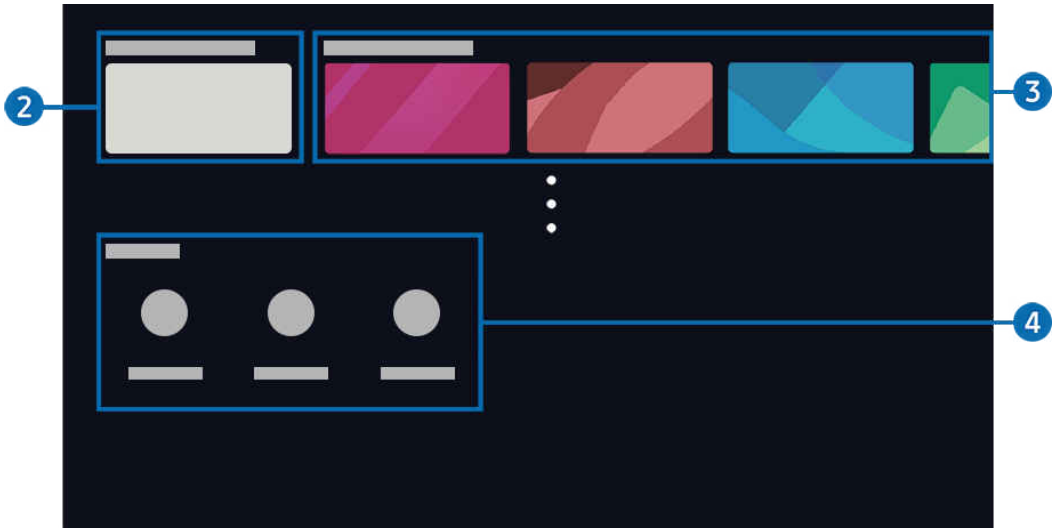
Add or delete specific images in Favorites by pressing Select on the remote control. To view items that are set as Favorites, navigate to My Art Store > Favorites.

- ♡: Favorites feature disabled / ♥: Favorites feature enabled

Available content categories may differ depending on the model or geographical area.

2 Recent

View the last-viewed image again.



The image on your TV may differ from the image above depending on the model and geographical area.

3 My Art Store

- My Photos

  Upload and display your photos.

- Favorites

  Manage images saved in Favorite.

  – Display All / Resume Play

    Play images in Favorite as a slideshow.

  – Delete

    Select and delete multiple images in Favorite simultaneously.

- Membership

  Sign up for Membership to gain full access to artwork so you can change the displayed artwork regularly for variety. Follow the on-screen instructions to proceed with the payment.

- Payment Info

  View artwork purchase details, and easily purchase artworks by entering required payment information.

  For details about payment information, visit Samsung Checkout (samsungcheckout.com).

- History

  View the content you recently viewed in Art mode, in order.

4 Art Options

Configure options related to the Art mode screen.

This menu can be found at the bottom of the Art home. To configure the option settings, scroll down to the far bottom.

- Sleep Options
  - Sleep After

    The TV automatically turns off if no motion is detected around the TV for a specified period of time. Press the Select button to specify a time period.
  - Motion Detector

    Set the Motion Detector for the motion sensor. Press the Select button to set the sensitivity level.

    Motion Detector may not be supported depending on the model or geographical area.
  - Night Mode

    The TV automatically turns off if no light is detected around the TV. This mode detects lights around the TV to automatically turn on or off the TV depending on the presence of light. Press the Select button to turn the mode on or off.

    This function may not be supported depending on the model.
- Art Effect

  The Art Effect is turned on by default. This displays content as close as possible to the original artwork.

  If you turn off the effect, content is displayed in the customized picture quality.

  This function may not be supported depending on the model.
- What is Art?

  Briefly view information about Art mode, including functions.

Setting the Art Mode

If you select a saved image, the TV goes into Art mode. In Art mode, press the Select button on the remote control to use the following menu options:

Settings may differ by image.

- Changing art work

  Change the artwork to display in Art mode. Use the directional button on the remote control to move to the desired art work, and then press Select button.
- View Details

  Press the Up button on the remote control to select View Details. View detailed information about the selected image.

- Mat

  Press the Up button on the remote control to select Mat. Customize the border style and color to suit your preferences. To save changes, select the desired mat style and color, and press either the Select or button.

  Supported border styles may differ if the image aspect ratio is not 16:9 or the image resolution is lower than the recommended resolution.

  Recommended resolution: 1920 x 1080 (for 32LS03F/32LS03H models) or 3840 x 2160

- Screen Settings

  Press the Up button on the remote control to select Screen Settings. Customize the Art mode screen settings to suit your preferences.

  – Brightness

    Adjust the screen brightness. Press the Select button to save the change.

  – Color Tone

    Adjust the image colors. Press the Select button to save the change.

  – Brightness Reset

    Reset the screen brightness to the default value.

Import images from USB memory

This function may not be supported depending on the model.

1. Connect the USB memory device storing images to the TV.
2. The USB memory is automatically recognized, and the screen displays a list of image, music, and video files that are stored in the USB memory.

   An alternative way to run the USB memory is to navigate to > left directional button > Connected Devices and select the USB memory.

3. Navigate to the folder that contains the image file you want to save to the TV, and then select Options > Send to Art Mode.
4. After selecting an image, select Send to view sent images in My Photos or make Art Mode settings.

   Recommended resolutions (16:9): 1920 x 1080 (32-inch model), 3840 x 2160 (43-inch or larger models)

Using Art Mode

You can use Art mode function to display image content such as artworks or photos when you are not watching TV in full screen mode.

This function may not be supported depending on the model.

- Press the button while using the TV, the TV switches to Art mode.

  In Art mode, the Remote control sensor at the bottom of the TV remains off.

- Press the button in Art mode to enter to Home screen.
- Press the button in Art mode to enter to Art Home.
- To turn off the TV completely, press and hold the button on the remote control, or press the TV Controller button of the TV.

  Configure operation settings for the power button on the remote control in > left directional button > Settings > All Settings > General & Privacy > Remote Control > Power Button Option. This feature is set to Art/TV by default.

  If you briefly press the power button on the remote control, switches to Art mode or TV mode. If you set this feature to On/Off, the TV turns on or off.

  This function may not be supported depending on the model.

  If you use a remote control other than the Samsung Smart Remote, the TV may not be turned off completely.

- In Art mode, the brightness and color tone of your TV are automatically adjusted depending on the ambient, and the TV can be automatically turned off.

  The TV is set by default so that the screen turns off automatically when the ambient light dims in Art mode.

- Configure the motion sensor settings by using Art Options (> (top of Smart Hub Home screen) > Art > Art Options) at the bottom of the Art home displayed on the TV or using the mobile SmartThings app. The TV may automatically turn on or off by detecting user motions and other visual changes.

  This function may not be supported depending on the model or geographical area.

- While in Art mode, use the SmartThings app on your mobile device to save photos on the device to the TV.

  This function may not be supported depending on the TV model or mobile device.

  Supported features may differ depending on the version of the SmartThings app.

Using Art mode with the SmartThings app

You can download the SmartThings app from Google Play Store, Samsung Apps, or the App Store.

If the TV is not registered in your SmartThings app, press + (Add Device) and register the TV before using the mode.

The features or terminology may vary depending on the version of the SmartThings app.

On tablet devices, Art mode features may not be supported by the SmartThings app.

Once you have installed the SmartThings app on your mobile device, you can use the following functions:

- Selecting an image under Art mode.
- Saving photos from a mobile device to the TV: Use the Add picture function to save photos on a mobile device to the TV.
  - Add Picture > select 2 to 3 images > Create Mat: Combine the 2 to 3 images to create a single image.
  - My Album > select content, such as Dynamic Filter or Auto Gallery, and then press Select Photo to set the content as mobile photos.
- Subscribing to Membership.
- Applying border styles and colors to images.
- ⋮ (more) > Sleep Options
  - Setting the brightness for Art mode.
  - Setting Sleep After: When no motion is detected for the time specified in Art mode, the TV turns off automatically.
  - Setting Motion Detector: Set the sensor sensitivity so that the TV turns on or off automatically when motion is detected in Art mode.

    Motion Detector may not be supported depending on the model or geographical area.
  - Setting Night Mode: This mode detects lights around the TV to automatically turn on or off the TV depending on the presence of light.

Precautions when using Art mode

Motion Sensor may not be supported depending on the model or geographical area.

- The motion sensor is located at the bottom of the TV. Do not block the sensor at the front of the TV. The motion sensor as well as the brightness and color tone of the screen can be affected.
- Art mode uses algorithms to minimize image burn-in that can be caused by displaying still images on the screen for long periods of time.
- The performance of the sensor may vary depending on the TV installation and operating environment.
  - The screen brightness and color tone may be affected depending on the color of the floor on which the TV stands.
  - In an environment where special light sources other than standard light sources (halogen, fluorescent) are used, the sensor's motion recognition performance may vary depending on the positions, types, and number of the light sources.
  - If the area around the TV is too dark or bright, the screen brightness may be limited or the sensor may not work normally.
  - If the TV is installed too high or too low, the sensor may not work normally.
  - The motion sensor may sense motion from a flashing LED, a pet, a car moving outside the window, or other occurrence and start operating.
- Depending on the Auto Power Off function settings, the TV may turn off when there is no user input in Art mode, such as inputs from the remote control (> left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Auto Power Off). Try Now
- The following functions are disabled in Art mode.
  - > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Sleep Timer Try Now
  - > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Off Timer Try Now
  - > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Screen Saver Try Now

About the Generative Wallpaper

The Generative Wallpaper feature allows users to create and display images to suit their preferences.

(top of Smart Hub Home screen) > Ambient

(top of Smart Hub Home screen) > Art

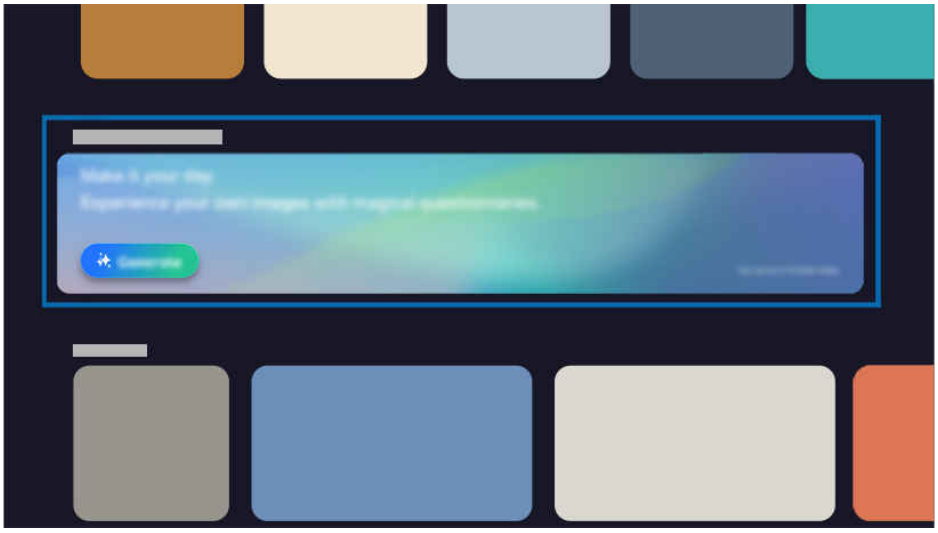
> Generative Wallpaper

It is possible to create custom pictures by displaying them on the TV screen.

This function may not be supported depending on the model.

The location of this feature may differ, depending on the model.

There is a limit to the number of Generative Wallpapers that can be created per day.



The image on your TV may differ from the image above depending on the model and geographical area.

Press the Generative Wallpaper banner or button to activate the feature.

- Selecting a keyword

  Select the desired keyword of interest for the asked question, then related images are displayed.

- Creating Images through Speech

  Press / and say the image you want. The intended image will be created.

  This function may not be supported depending on the geographical area.

- Saving an image

  Select and download images of your choice. Downloaded images are saved to Ambient, Art Mode, or Generative Wallpaper in Now brief, and saved images can be viewed from the corresponding menu items.

  It is possible to download only one of the displayed images.

  The maximum image size that can be saved may differ, depending on the available memory in the device.

- Displaying Images

  Display a specific image by selecting it from among the images saved under the Generative Wallpaper category.

  Images saved under Generative Wallpaper can be displayed from Ambient, Art Mode, or Now brief.

  Saved images can be set as the Wallpapers for Now brief (Now brief > Edit > Wallpapers).

- Deleting saved images

  Delete images to free up the memory or delete specific images that are no longer needed. From the Generative Wallpaper category in Art Mode or Ambient Mode, select View All and then select and delete the desired images.

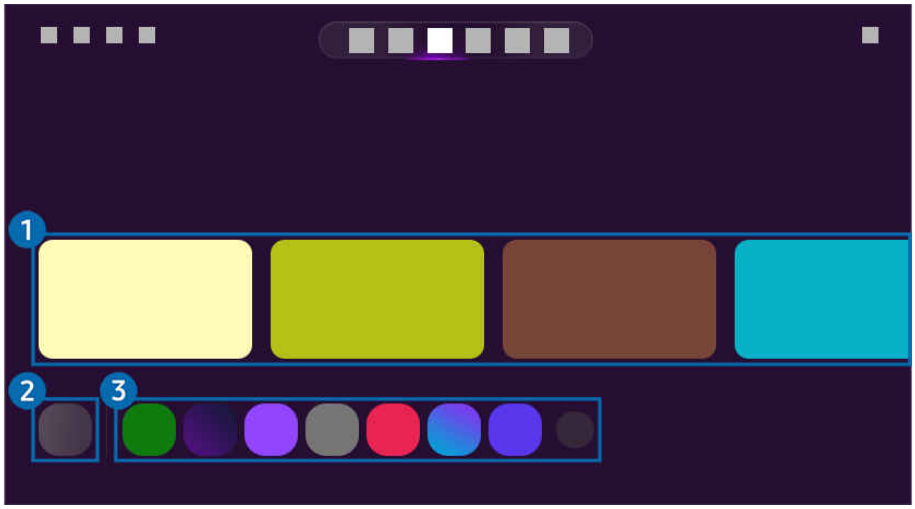
  Deleted images cannot be restored.

Using Samsung Gaming Hub

Gamestream a wide variety of games right on your TV through Samsung Gaming Hub. Connect your controller through Bluetooth or USB.

> (top of Smart Hub Home screen) > Games

This function may not be supported depending on the model or geographical area.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Recommended

Explore a wide range of games on Samsung Gaming Hub.

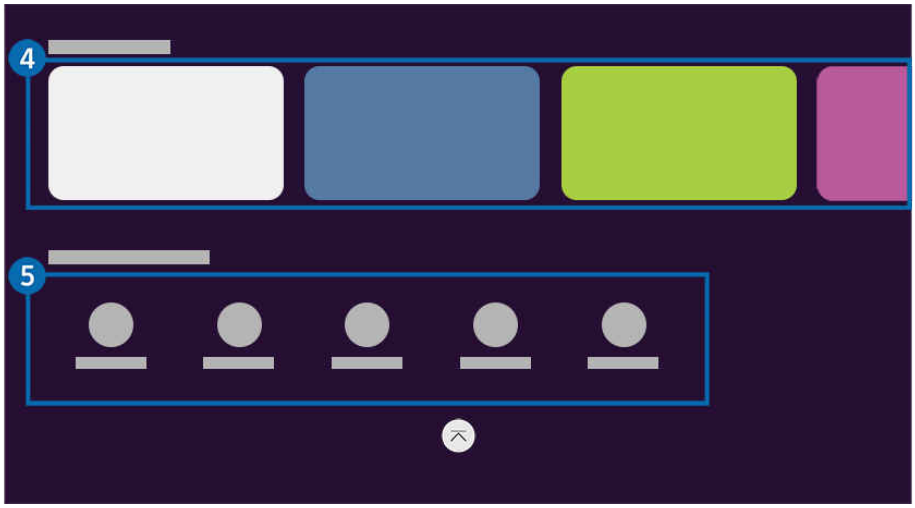
2 Controllers

Select a Controller to connect to the TV.

For more information about supported controllers, refer to "Using the Gamepad."

3 Apps and Devices

Install or remove apps or devices that are required to play games.



The image on your TV may differ from the image above depending on the model and geographical area.

4 Game list

Purchase games or subscribe to service offered by the Samsung Gaming Hub. Select a game to view the game details.

Installation of related apps is required to run some games.

5 Game Activity and Options

This menu is provided at the very bottom of the Samsung Gaming Hub screen. To configure Game Activity and Options, scroll down to the very bottom.

- Game Rating Lock

  Set the age limit for playing games.

  The age limit is only supported to cloud game browsing domain in Gaming Hub.

- Personalization

  Tailored content is recommended, according to the games recently played by the user and the content the user is interested in.

- Gaming Preference

  Customize the game content to be displayed depending on the selected gamer type.

- Audio

  Select an Audio Device (e.g. Gaming Headset) to connect to the TV.

- Music Player

  Manage the music to play while playing a game.

  This function may not be supported depending on the model or geographical area.

About the Samsung Daily+ screen

Easily use a wide variety services provided by Samsung Daily+.

> (top of Smart Hub Home screen) > Daily

This function may not be supported depending on the model or geographical area.



The image on your TV may differ from the image above depending on the model and geographical area.

Provides useful services, such as home training, remote work, karaoke, and early childhood education content, allowing users to conveniently experience different lifestyles.

1 Banner

Provides information related to apps provided by Samsung Daily+.

2 App List

Rearrange, add or delete apps, using the edit function.

3 Service Apps

This feature provides useful services for everyday life, such as video calls and remote working, as well as health-related services that help with healthcare, such as home training and remote medical treatment. This allows users to conveniently experience different lifestyles, including karaoke and children's content that the whole family can enjoy.

- This function may not be supported depending on the model or geographical area.
- Services supported by this feature may differ, depending on the model and region.
- Various other services are available, in addition to the services shown below.

- **Stingray Karaoke**

  With this karaoke service, sing the latest songs with your family and friends.

- **Baby Shark World for Kids**

  Provides early childhood education content featuring characters like Baby Shark and Bebefinn. This allows children to learn about a variety of topics, including numbers, the human body, dinosaurs, and space.

- **SmartThings**

  Monitor and control connected home appliances and IoT devices from the screen.

  - For more information, refer to "Using SmartThings."

- **Workspace**

  Use the remote function to connect to and use a Windows PC, Mac computer, or mobile device from the TV.

  - For more information, refer to "Using Workspace."
  - This function may not be supported depending on the model or geographical area.

- **Workout Tracker**

  Connect to a nearby Galaxy Watch to view saved exercise data from the TV screen.

  - For more information on **Workout Tracker**, refer to the User Guide provided by Samsung Daily+.
  - To connect, make sure the Galaxy smartphone and Galaxy Watch are located in the vicinity of the TV, and Bluetooth is enabled and the same Samsung account is logged in on all the devices.
  - This function may not be supported depending on the model.
  - This feature may not be supported, depending on the Galaxy device model and the One UI version.
  - This feature may not work in some apps or on some service screens.

4 App Preview

Provides quick access to frequently used features in the app.

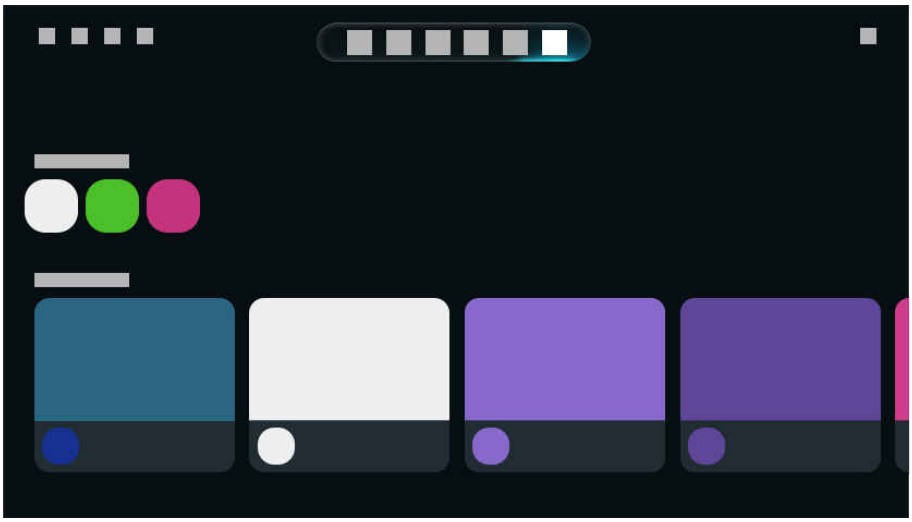
About the Apps screen

Download and run various apps from Smart Hub.

> (top of Smart Hub Home screen) > Apps

You can enjoy a wide range of content, including video, music, sports and game apps by installing the corresponding apps on your TV.

- To use this feature, the TV must be connected to the network.
- When Smart Hub is launched for the first time, the default apps are automatically installed. The default apps may differ depending on the model or geographical area.



- The image on your TV may differ from the image above depending on the model and geographical area.

Installing an app

1. Move to the app you want to install, and then press the Select button. The detailed information screen appears.
2. Select Install. When the installation is complete, the Open menu appears.
3. Select Open to run the app immediately.

- You can view installed apps on the App Settings screen.
- If the TV's internal memory is insufficient, you can install some specific apps on a USB device.
- You can run an app installed on a USB device only when the USB device is connected to the TV. If the USB device is disconnected while an app is running, the app is terminated.
- You cannot run an app installed on a USB device on a PC or another TV.

Launching an app

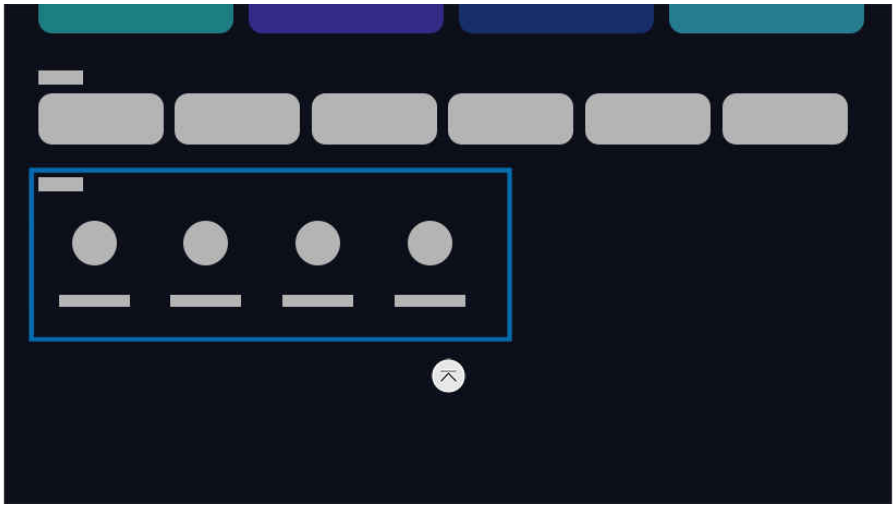
You can run the app desired from Downloaded App.

The icons below appear within the selected app's icon and indicate the following:

- : The app is installed on a USB device.
- : The app has a password.
- : The app needs to be updated.
- : The app supports the mirroring function.

About the Apps Settings

This menu can be found at the bottom of the Apps home. To configure the option settings, scroll down to the far bottom.



The image on your TV may differ from the image above depending on the model and geographical area.

- App Settings

  Manage installed apps.

  For details, refer to the 'Managing installed apps' section.

- Update All

  Simultaneously updates all apps that can be updated.

- Auto Update

  To automatically update the installed apps, set Auto Update to ON.

  Automatic update is enabled only when the TV is connected to the network.

- Copyright

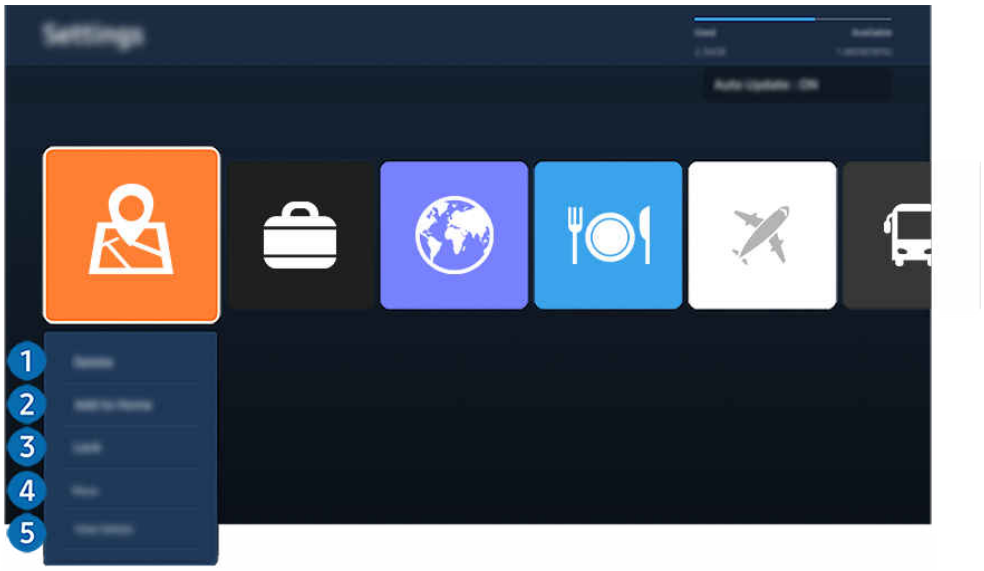
  View the copyright information.

  This function may not be supported depending on the model or geographical area.

Managing installed apps

To manage installed apps, access App Settings.

App Settings can be found at the bottom of the Apps screen. To access App Settings, scroll down to the bottom.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Adding apps to the Home Screen

1. Select an app to add.
2. Select Add to Home.
3. After the Home Screen appears, move the selected app to the desired location.
4. Press the Select button.

The selected app is added to the Home Screen.

If the selected app is already added to the Home Screen, this function is disabled.

2 Removing an app

1. Select an app to delete.
2. Select Delete.

The selected app is deleted.

Ensure that the related app data is also removed when you remove an app.

Standard apps cannot be uninstalled.

3 Locking and unlocking apps

1. Select an app to lock or unlock.
2. Select Lock/Unlock.

The selected app is locked or unlocked.

To lock or unlock an app, enter the PIN. You can set the PIN in > left directional button > Settings > All Settings > General & Privacy > PIN Settings > Change PIN. Try Now

4 Reinstalling an app

1. Select the app to install again.
2. Select Reinstall.

Reinstallation starts.

5 Checking the app information details

1. Select the app to check.
2. Select View Details.

The app information screen appears.

You can rate an app on the View Details screen.

Using Vision AI Companion

Vision AI Companion offered by intelligent chatbot service that comes with Samsung AI.

Whenever you have a question, press the button and ask the question. Ask any questions you might have verbally as if you were speaking to another person, and get content and service recommendations relevant to subject matter. Press the button to explore key AI features.

Vision AI Companion can be launched by selecting at the top of the Home screen or pressing and holding the button.

Vision AI Companion is capable of providing a wide range of answers depending on the user environment and questions asked. The services provided depend on execution conditions.

Before use

- To use this service, you must agree to the Terms of Use for Smart Hub and Viewing History Information Services. You cannot use this service if you do not agree to the Terms of Use.
- To use this feature, make sure your TV is connected to a network.
- You must be logged in to your Samsung account to use this function.

Caution

- Depending on the software version, the button may not open the Vision AI Companion function.
- This service can't be accessed if the age requirements are not met.
- If age restriction for content is enabled on your TV, you will need to enter a PIN to use this service.
- If you change the service language, access to some services or information may be limited.
- Types of content searched and recommended may vary by content provider.
- This function may not be supported depending on the model or geographical area.
- This service provides AI-generated content. There may be an error, so please check again.
- Provided answers may not include content from some apps.

Using Vision AI Companion While Viewing

When watching Live TV or Samsung TV Plus, press the button to receive recommendations for related information and content and to access various AI apps or services.

- This feature is supported when watching Live TV using an antenna, cable TV receiver / set-top box, or satellite receiver / set-top box, and is not supported by other external inputs or apps.
- Broadcast service provider setting or registration is required to use this function.
- Recommendations based on viewed content are provided. Recommendations may vary by service provider.
- Available features may differ depending on the model or geographical area.

Other Uses of Vision AI Companion

When using services other than broadcasts, press the button to explore various AI features. You can access a variety of AI apps or services.

Available features may differ depending on the model or geographical area.

Using the Service Through Bixby

When using the Bixby services through speech recognition, navigate to Enhanced AI Features (> Bixby Settings > Enhanced AI Features) and set it up so that Vision AI Companion provides answers. After making the setting, press the button or say the command "**Hi, Bixby**" to open Bixby and use the Vision AI Companion service.

If Vision AI Companion is unable to answer a question, Bixby can intervene and answer the question.

A registration or purchase may be required to access recommended content.

A wide range of answers is possible depending on the question asked. The types and number of recommended content and service options can vary. When a provided answer is not what you are looking for, you may get a more accurate answer if you ask a more specific question.

Using the Settings Features

On the right side of the Vision AI Companion main service screen, select the settings menu to view the service-setting-related features.

- Spoken Responses

  Sets Vision AI Companion to provide responses in speech.

- User Guide

  Provides a list of the main features of Vision AI Companion along with helpful information.

- Terms & Conditions

  Shows the history of user acknowledgment required for using the Vision AI Companion service.

Using Click to Search

Receive recommendations for content that may be related to the currently playing content.

View information on the playing content, and receive recommendations for related content. This feature is supported in Live TV and Samsung TV Plus only.

- To use this feature, make sure the TV is connected to a network.
- To use this feature when watching Live TV, make sure you set or register a Service Provider.
- View the cast information of the TV series or movie you're watching, and the available content may be updated or changed.
- This feature is supported when watching Live TV using an antenna, cable TV receiver / set-top box, or satellite receiver / set-top box, and is not supported by other external inputs or apps.
- This function may not be supported depending on the model or geographical area.
- The type of recommended information may differ, depending on the content provider.

The following options are available on the Click to Search screen:

- Some functions may not be supported depending on the model or geographical area.

- Watch Next

  Obtain information on the playing content and related content.

- Who's On

  Obtain information on the performers in the playing content, including other content in which they performed.

- Search and Recommendation

  Using various recommended commands provided, obtain detailed AI answers and related content recommendations.

- Conversational AI Chatbot

  Connect to Bixby, and obtain detailed AI answers and related content recommendations while interacting with the voice assistant.

Starting the feature with a button on the Samsung smart remote

To start Click to Search while viewing Live TV or Samsung TV Plus content, press the button on the Samsung smart remote or press and hold the button for more than 1 second.

- The function may not be supported depending on the model or geographical area.

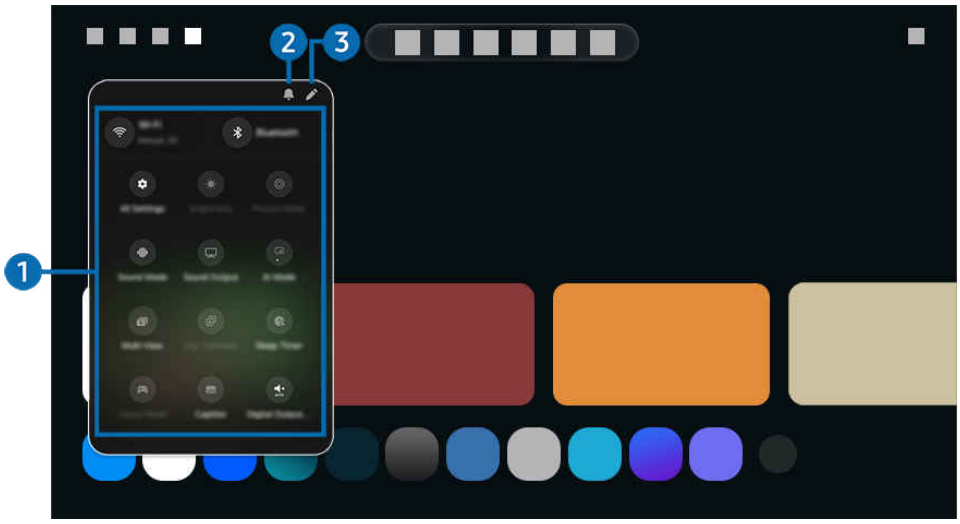
About the Settings screen

Manage external devices connected to the TV, and configure settings for various functions available on the TV.

Home > left directional button > Settings

Home / Home > Settings

Some screen setting features may not be available on the Smart Hub Home screen.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Settings

Move the focus to the Settings menu to display quick setting options below the menu. Quick Settings can be used to quickly configure frequently used features.

The Settings items may not be supported depending on the model or geographical area.

- All Settings

  Displays the Settings menu for configuring specific settings.

- Brightness

  Easily configure the screen settings: Brightness, Contrast, Sharpness, Color and Tint (G/R).

- Picture Mode

  Change the picture mode for the optimal viewing experience. Press the Select button to change the Picture Mode.

- Sound Mode

  You can select a sound mode to optimize your listening experience. To change the sound mode, press the Select button.

- Sound Output

  You can select which speakers the TV uses for audio output. To change the audio output, press the Select button.

- AI Mode

  Improves your viewing experience by recognizing your content, usage patterns and the environment around your TV.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Using AI Mode."

- Bluetooth

  Connect your TV to Bluetooth devices. This can be done by selecting Bluetooth to automatically search for Bluetooth devices.

  Connecting Bluetooth devices may not be supported depending on the model or geographical area.

- Wi-Fi / LAN

  Check your network connection. To check your network connection or change the connection settings, press the Select button.

  This function may not be supported depending on the model or geographical area.

- Multi View

  While watching the TV, you can simultaneously view multiple screens that are split.

  For more information, refer to "Using Multi View."

  This function may not be supported depending on the model or geographical area.

- Sleep Timer

  You can turn off the TV automatically at a specific time. To change the sleep time, press the Select button.

- Game Mode

  You can set the Game Mode to optimize the TV screen for better gaming performance. To turn Game Mode on or off, press the Select button.

  This function is only available when an external input source is being used.

  For more information, refer to "Using Game Mode."

  This function may not be supported depending on the model or geographical area.

- Live Translate

  Set your preferences for content with subtitles translated into your preferred language. To configure this setting, press the Select button on the remote control.

  This function may not be supported depending on the model or geographical area.

- AI Soccer Mode Pro / AI Soccer Mode / Soccer Mode

  Automatically optimizes picture and sound quality when watching soccer matches.

  The name of this function may appear differently depending on the model or geographical area.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Using Soccer Mode."

- Caption

  You can watch TV broadcasts with captions. To activate or deactivate the Caption function, press the Select button.

  This function may not be supported depending on the model or geographical area.

- Digital Output Audio Format

  You can select an output format for digital audio. Note that the Dolby Digital+ option is only available via HDMI (eARC) for external devices that support the Dolby Digital+ format.

- Picture Clarity

  You can optimize pictures that contain a lot of motions. To turn this function on or off, press the Select button.

- Color Tone

  You can select a color tone suitable for your viewing preferences. To change to a color tone that you want, press the Select button.

- Energy Saving Solution

  Reduce power consumption by adjusting brightness settings.

  This function may not be supported depending on the model or geographical area.

- Power and Energy Saving

  Display the Power and Energy Saving menu. Reduce energy consumption by changing your power preferences and other energy-saving options.

  This function may not be supported depending on the model or geographical area.

- Auracast

  You can listen to the TV's audio by connecting to a Bluetooth audio device that supports Auracast.

  This function may not be supported depending on the model or geographical area.

  Some models support the Auracast feature. For more information about Auracast, refer to "Using Auracast."

- Quick Share

  Easily transfer and save photos wirelessly from your Galaxy devices.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Using Quick Share."

- On Timer

  You can set On Timer to turn on the TV automatically at a specific time. On Timer is only available if the Clock has been set.

  This function may not be supported depending on the model or geographical area.

- Off Timer

  You can set Off Timer to shut off the TV automatically at a specific time. Off Timer is only available if the Clock has been set.

  This function may not be supported depending on the model or geographical area.

- Support

  Displays the Support settings menu.

These functions may not be supported depending on the model or geographical area.

2 Notifications

You can view a list of notifications for all events that occur on your TV. A notification appears on the screen when it is time to schedule viewing, schedule recording, etc.

If you move the focus to Notifications, and then press the Select button, a notification window appears on the right and the following functions are available:

- Delete All

  You can delete all your notifications.

- Settings

  You can select services you want to be notified about.

  When you select Allow sound, notifications are displayed with a notification sound.

3 Edit

Select the menu to move and arrange in your preferred order.

Using a Samsung account

Create and manage your own Samsung account.

> left directional button > Settings > All Settings > Samsung Account Try Now Try Now

- You can view the entire text of the Terms & Policy in > left directional button > Settings > All Settings > Samsung Account > My Account > About Samsung account > Terms and Conditions after logging in to your Samsung account.
- Follow the instructions on your TV screen to create or log in to a Samsung account.
- Samsung account can be used on TV, mobile device, and website with one ID.
- In the U.S.A., only users over 13 can sign in.
- This function may not be supported depending on the model.

Signing in to a Samsung account

> left directional button > Settings > All Settings > Samsung Account

Launch the camera on your mobile phone, and scan the QR code to log in to your Samsung account or create a new account.

An alternative way to log in is to select an email address and manually enter your account, or to select a website and access the website from your computer or mobile phone.

Managing your Samsung account

> left directional button > Settings > All Settings > Samsung Account > My Account

When you sign in to your Samsung account, you can use the following functions:

- Edit Profile

  You can edit your account information.

  - To protect personal information, enter Edit Profile and then Sign-in Method is set to Select your ID and input password (high security).
  - If you want the TV to log you into your account automatically whenever you turn on the TV, click Stay Signed In.
  - When the TV is used by multiple people, turn off Stay Signed In to protect personal information.

- Payment Info

  You can view or manage your payment information.

- Subscriptions

  View subscription-related information.

  - This function may not be supported depending on the model.

- PIN Setting

  Set or change your PIN.

- Security and Privacy

  You can read the Privacy Policy for Samsung accounts or change custom service settings.

  This function may not be supported depending on the model.

- Product Registration

  You can register the current TV or see the registered information. You can easily receive services after product registration.

  You can see the registered information or delete it at the Samsung account website (https://account.samsung.com).

- Back up

  You can back up the TV settings to your Cloud storage. When resetting or replacing the TV, you can also restore its settings with the backed-up settings.

- About Samsung account

  You can view the user agreement and privacy policy.

  For more information about the terms and conditions, special terms, select View Details.

  This function may not be supported depending on the model.

- Remove Account

  You can delete an account from the TV. Although you have deleted your Samsung account from the TV, you are not unsubscribed.

  To unsubscribe from your Samsung account, visit the Samsung accounts website (https://account.samsung.com).

  This function may not be supported depending on the model.

- Sign Out

  When multiple people share the TV, you can sign out of your account to prevent others from using it.

  This function may not be supported depending on the model.

Using Workspace

Use the remote function to connect to and use a Windows PC, Mac, or mobile device from the TV.

> (top of Smart Hub Home screen) > Daily > Workspace Try Now

Connect a Windows PC, Mac, or mobile device to the TV to easily use the device.

- For easy computer use, connect a keyboard and a mouse to your TV in advance.
- This function may not be supported depending on the model.

Using Screen Sharing (Windows PC) / AirPlay (Mac)

> (top of Smart Hub Home screen) > Daily > Workspace > Windows PC > Screen Sharing

> (top of Smart Hub Home screen) > Daily > Workspace > Mac > Screen Mirroring

Follow the instructions on the screen to adjust the PC settings and wirelessly connect the TV to the PC.

- This function is only available for PCs that support wireless screen sharing.
- This function may not be supported depending on the model or geographical area.
- Connection via Windows OS is available in Windows 10 and later versions only.
- Connection via Mac OS is available in AirPlay.

Using Easy Connection to Screen

> (top of Smart Hub Home screen) > Daily > Workspace > Windows PC > Easy Connection

You can easily use remote access function after installing **Easy Connection to Screen** on your PC.

Follow the instructions on the screen to download and install the **Easy Connection to Screen** PC app. Then you can easily connect a remote PC.

1. Download the **Easy Connection to Screen** PC app from http://smsng.co/easy and then install it on your PC.
2. Log in to the same Samsung account for both TV and PC.
3. When the PC is turned on and connected via the network, Workspace's Home Screen displays the PC.

- The **Easy Connection to Screen** PC app is available in Windows 10 and later versions only.
- Depending on the network environment including the firewall configuration, router type, and wireless signal strength, connection problems may occur, such as low speed, disconnection, or limited connection.
- This function may not be supported depending on the model or geographical area.

Connecting a Remote PC

(top of Smart Hub Home screen) > Daily > Workspace > Windows PC > Manual Connection Try Now

(top of Smart Hub Home screen) > Daily > Workspace > Mac > Remote Login Try Now

Provides **Remote Desktop Connection (RDP)** for remotely connecting to a PC running on Windows and **Virtual Network Computing (VNC)** for a PC running on Mac. To remotely connect to a PC, you must enter the IP address of the remote PC or select a saved profile. Enter a correct username and password. If there is any computer that can be accessed via the same network, the found IP is displayed.

- This function may not be supported depending on the model or geographical area.
- To register a frequently used PC, move the focus to Manage User Profiles, and then press the Select button. When a pop-up window appears, select Add, and then enter the PC information.
- When your PC enters in power saving mode, connection is not available. It is recommended to cancel the power saving mode.
- It is recommended to connect the wired network because the screen or sound may be interrupted depending on the network condition.

1. Configure your computer's settings to use the Workspace function.

   - Connection to Windows via the RDP protocol is available in Windows 10 Professional or higher.
   - Remote connection to a PC running on Mac via the VNC protocol is only supported for Mac OS X 10.5 or later.

   - Windows OS:

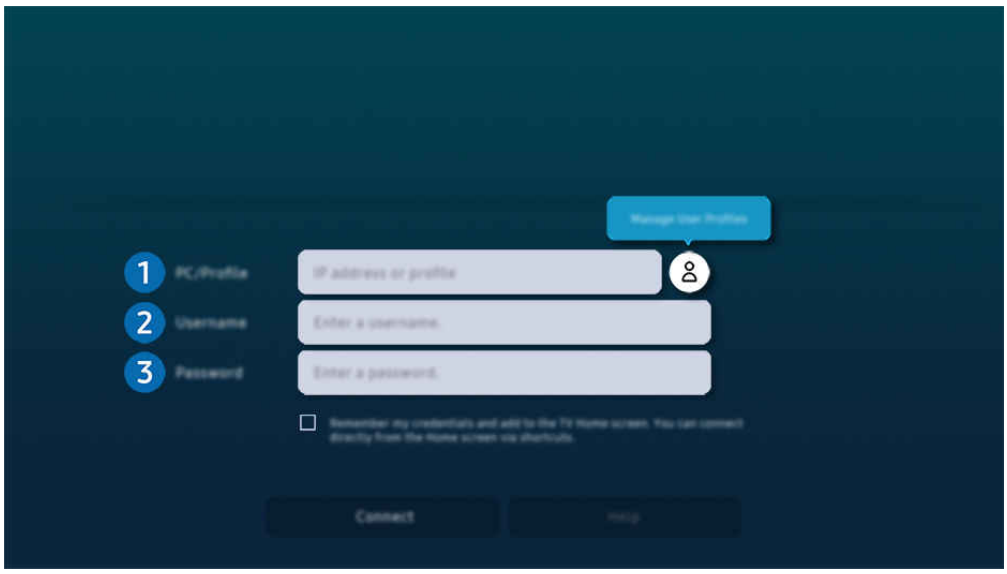
     1) Right-click the **My PC** icon on Desktop or Windows Explorer and then click **Properties**.
     2) Click **Remote Desktop** and select **Activate Remote Desktop**.

   - Mac OS:

     1) Select **Menu** > **System** > **Preferences** and then click **Sharing**.
     2) Select the **Screen Sharing** and **Remote Login** check box.
     3) Run the resolution changing app downloaded from App Store and then change the resolution to 1440 x 900 or lower.

        - If you do not change the resolution in Mac OS, the previous image may appear while connecting a remote computer.

2. Enter the required settings to connect the computer remotely.

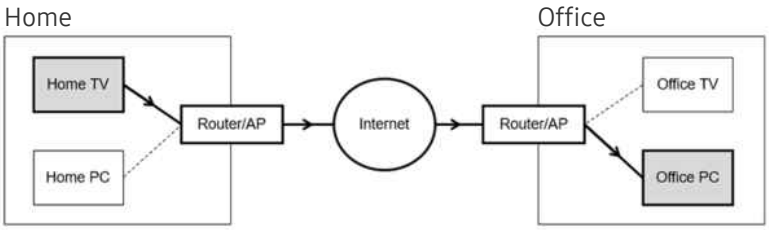


The image on your TV may differ from the image above depending on the model and geographical area.

1 PC/Profile

Enter the IP address or profile of the PC you want to connect to.

- In case of Windows, when the computer to connect is within the same network (router/AP), run “cmd" command in **Settings** > **Network and Internet** > View Network **Properties** or in **Start** > **Run**, and then run “ipconfig” to check the IPv4 address of the computer.
- In case of Mac, you can check the **IP** address in **Settings** > **Remote Access**.
- When the TV and computer are not within the same network, it is required to know the public IP and configure the router and AP. Check whether the router connected to the computer supports port forwarding. When the company provides additional security features such as firewall, seek help from a security officer.



2 Username

Enter the Username of the computer. How to check the **Username**:

- Windows OS: **Control Panel** > **User Account Control**
- Mac OS: **System Preferences** > **Users & Groups**

❸ Password

Enter the password for the login account.

For use of PIN, do not enter PIN but the specified password of the computer.

Playing Multimedia Content on a Remote PC

When you move the mouse cursor to the top of the screen after accessing a remote computer, the top bar appears. When the sharing folder icon is clicked in the top bar, the folders shared on Windows or Mac OS appear. You can play back any media content in a folder.

For more information, refer to "Playing pictures/video/music."

To use this function, the folder sharing option on the computer to access must have been enabled as shown below:

- Windows OS:
  1. Run Windows Explorer and then move to the folder to share.
  2. Right-click the folder and then click **Properties**.
  3. After the **Properties** window appears, click the **Sharing** tab and then click **Advanced Sharing**.
  4. After the **Advanced Sharing** window appears, select the **Share this folder** check box.
- Mac OS:
  1. Select **Menu** > **System Preferences** and then click **Sharing**.
  2. Select the **File Sharing** check box.
  3. To add a folder to share, click the Add+ button at the bottom.
  4. Select a folder and then click Add+.

It is recommended to connect the wired network because the screen or sound may be interrupted depending on the network condition.

When playing a video file via a remote computer, the screen or sound breaking may be encountered.

Using Samsung DeX

Run Samsung DeX on your mobile device to connect the software to the TV.

Follow the on-screen instructions to connect Samsung DeX. Some models may not be searched when connecting the TV from a mobile device through Samsung DeX. If that is the case, follow the instructions shown on the mobile device screen to connect the software.

- This function is available only on mobile devices that support the wireless Samsung DeX.
- This function may not be supported depending on the model or geographical area.

Using Microsoft 365

You can read or create a document after accessing the Microsoft 365 website.

- Run the site in full-screen mode.
- URL modification is impossible in the Microsoft 365 page.
- This function may not be supported depending on the model or geographical area.

Adding the Web Service

Select the Add Web Service icon. Use the bookmarking function of the Workspace browser, you can add or delete the web service link to or from Workspace.

- To add the web service, you must be signed in to your Samsung account.
- The number of web services that can be added to Workspace is limited.
- Workspace browser not share data with Internet. (Web browser outside from Workspace)

Using Web Service

You can access the web service by selecting the web service icon added to Workspace.

- The screen on the webpage may differ from that of a computer.
- You can copy or paste any text. Some image formats are supported.
- For easy and secured login in Web Service, Workspace Pass is additionally supported as well as Samsung Pass.

  Setting Samsung Pass or Workspace Pass.

  Set Samsung Pass or Workspace Pass to Use in > (top of Smart Hub Home screen) > Daily > Workspace > Run the Workspace browser (Additionally select Microsoft 365 or Add Web Service) > Internet Menu > Settings > General.

  Workspace Pass allows you to easily manage the web service ID and password without biometric authentication on mobile devices. For this purpose, you must be signed in to your Samsung account. The password is encrypted to be safely stored on your TV.

  However, the log in to Workspace Pass may not work depending on the site policy.

  Workspace Pass only working on Workspace.
- To securely access the web service, you can use the Workspace browser's automatic shutdown or clear the history logs.
- Before accessing the web service, refer to "Read Before Using the Internet Function."
- Workspace browser not share data with Internet. (Web browser outside from Workspace)

The web service supports the following keyboard shortcuts:

- F1: Returns to Workspace's Home Screen.
- F5: Refresh.
- F8: Mutes the sound.
- F9/F10: Adjusts the volume.
- F11: Switches between full screen or default screen.

Using the User Guide

Read the manual embedded in your TV.

Launching the User Guide

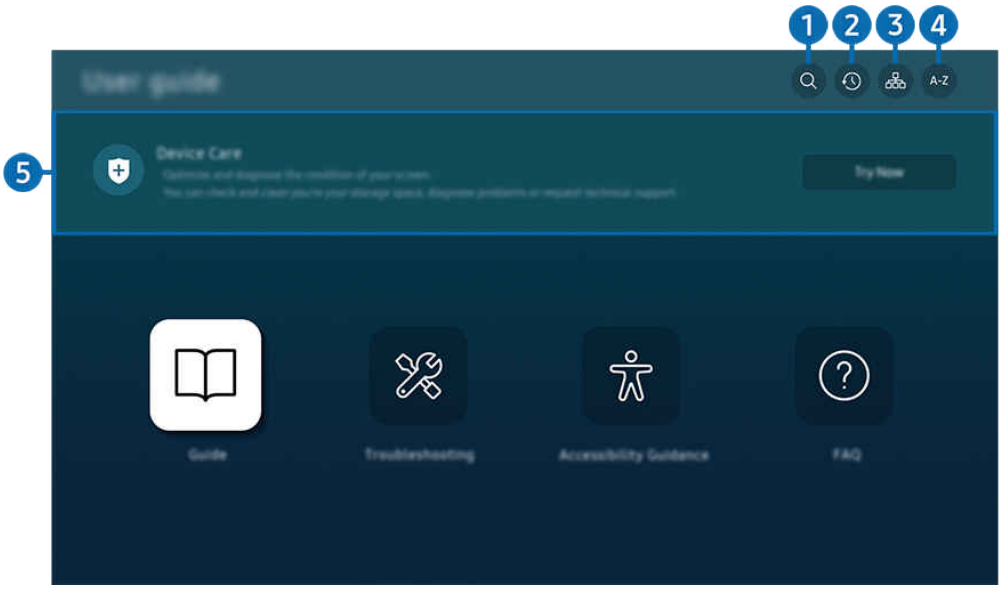
Home > left directional button > Settings > Support > Tips and User Guides > Open User Guide

You can view the embedded User Guide that contains information about your TV's key features.

You can download a copy of the User Guide from Samsung's website to view or print on your PC or mobile device (https://www.samsung.com).

Some menu screens cannot be accessed from the User Guide.

Using the buttons in the User Guide



The image on your TV may differ from the image above depending on the model and geographical area.

1 (Search)

Select an item from the search results to load the corresponding page.

2 (Recently Viewed Topics)

Select a topic from the list of recently viewed topics.

3 (Sitemap)

It displays the lists for each item in User Guide.

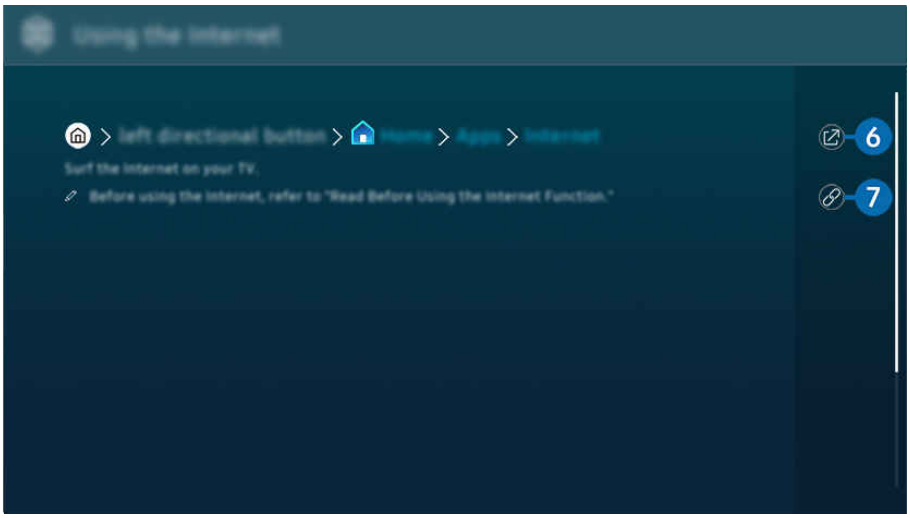
4 A-Z (Index)

Select a keyword to navigate to the relevant page.

This function may not be supported depending on the model or geographical area.

5 Device Care

Optimize and diagnose the condition of your TV. You can check and clean your storage space, diagnose problems or request technical support.



Words in blue (e.g., Internet) indicate a menu item.

The image on your TV may differ from the image above depending on the model and geographical area.

6 (Try Now)

Allows you to access the corresponding menu item and try out the feature right away.

7 (Link)

Access an underlined topic referred to on an User Guide page immediately.

Using the Internet

Surf the Internet on your TV.

> (top of Smart Hub Home screen) > Apps > Internet

When you run Internet, you can see recently viewed websites or featured recommendations. When you select a desired website, you can get immediate access to it.

- This function may not be supported depending on the model or geographical area.
- You can use the Internet function more easily after connecting a keyboard and mouse.
- You can scroll webpages with the directional button on the Samsung Smart Remote or Remote Control.
- The webpages may differ from those on a PC.
- Before using the Internet, refer to "Read Before Using the Internet Function."
- The Internet app has an embedded Samsung Pass Settings (> (top of Smart Hub Home screen) > Apps > Internet > Internet Menu > Settings > Samsung Pass).

  With Samsung Pass, you can log into the website easily and securely. When you visit the website again, you can log in with Samsung Pass Biometrics Authentication on your mobile device without entering your ID and password.

  However, this Samsung Pass login may not work depending on the website policy. For this purpose, you must have been logged in the mobile device with a Samsung account registered in Samsung Pass.

Using SmartThings

Monitor and control home appliances and IoT devices, connected to SmartThings, from the screen.

> left directional button > Connected Devices > SmartThings Try Now Try Now

> (top of Smart Hub Home screen) > Daily > SmartThings Try Now Try Now

You can control the devices registered to the SmartThings cloud with remote control.

This function may not be supported depending on the product or model.

Power consumption may increase as SmartThings will operate when the TV is a low power or standby mode.



The image on your TV may differ from the image above depending on the model and geographical area.

1 Place

Displays all places connected via the SmartThings app.

2 Map View

you can check the status of registered devices.

If you log in with the same account used for the mobile SmartThings app, you can view devices, registered through SmartThings, more intuitively from Map View.

This function may not be supported depending on the model.

3 Favorites

View devices or features that have been set as favorites from the Devices/Routines tab.

4 Devices

View devices connected to SmartThings, and use the remote control to select and control any of the connected devices.

For details on SmartThings devices, access https://partners.smartthings.com/supported-devices.

SmartThings devices can also be controlled from the mobile app.

5 Routines

View or run scenes created from the Routines tab in the mobile SmartThings app.

6 Add Device

Displays the list of devices that can be registered on your TV. You can register any by selecting a device.

This function may not be supported depending on the model.

7 Samsung Account

Go to the Samsung account screen to create a new account or sign out of your account.

If you are signed out of your Samsung account, select Sign In to sign in.

8 Settings

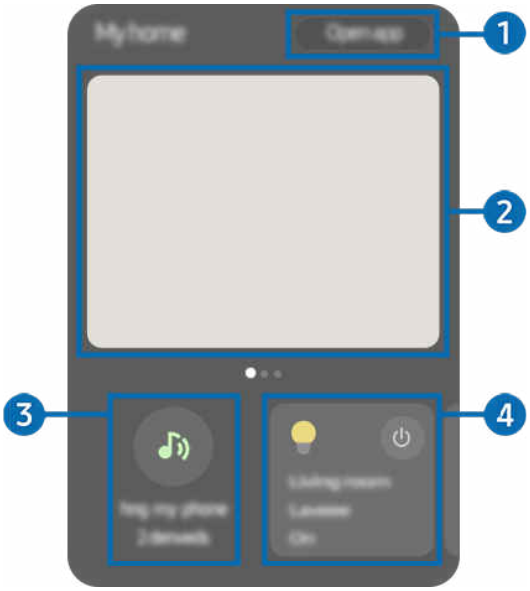
Edit devices connected to SmartThings, or configure notification settings for the devices. You can also turn on the Sensors or the SmartThings hub feature.

SmartThings Quick access

Control most used devices by accessing the Quick Panel, without having to access SmartThings.

Quick Panel in SmartThings can be run using the or button on the remote control. Select at the bottom left of the screen.

This function may not be supported depending on the model or geographical area.



1 Open App

Opens the SmartThings app.

2 Camera

View camera streaming. When multiple cameras are connected, switch to a different camera screen using the left and right directional buttons on the remote control.

This feature is only available when cameras are connected to SmartThings.

3 Ring my phone

Make your mobile device ring to help locate it more easily.

This feature is only available on Galaxy smart phones and tablets.

4 Most used

Monitor and easily control frequently used devices.

Use the SmartThings Hub features Try Now

Use the SmartThings Hub features on various Samsung products to connect IoT devices (e.g., light bulbs, plugs, or sensors) that are supported by SmartThings.

Home > left directional button > Connected Devices > SmartThings > Settings > SmartThings Hub

- This function may require a SmartThings dongle when connecting to Zigbee or Thread, depending on the model.
- Make sure to log in to the same Samsung account on your TV as your mobile SmartThings app.
- This function may not be supported depending on the connected device type.

Register and manage devices via SmartThings Try Now

Registering a TV / Smart Appliance / IoT device from the mobile app

Use the mobile SmartThings app to register your TV, smart appliances or various IoT devices. In the mobile app, tap the + (Add Device) to register a device.

*Connect a doorbell to your TV, to receive a notification of the doorbell video and speak with the visitor while watching TV.

- Only WWST (Works with SmartThings) certified doorbells are supported. Supported options may vary, depending on the device.
- *: This function may not be supported depending on the model.

Use the screen's sensors via SmartThings Try Now

When you activate the sensor, you can see the sensor device on the SmartThings Device tab. You can create various IoT scenarios with TV without purchasing a separate IoT sensor.

Home > left directional button > Connected Devices > SmartThings > Settings > Sensors

- Each sensor can be activated with user consent.
- Each sensor may not be supported depending on the model.
- The sound sensor is supported when the microphone switch at the bottom of the TV is turned on. The TV microphone may not be supported, depending on the model or geographical area.
- This function may not be supported depending on the model.

Control SmartThings with Bixby Try Now

With Bixby on the product, you can control devices connected to SmartThings, as well as the TV, using voice commands.

- This function may not be supported depending on the connected device type.

Control the display device from the mobile SmartThings app Try Now

From the mobile SmartThings App, use the TV remote control functionality, such as On/Off, Channel, Volume, and four directional buttons. You can also use Search, Apps, Ambient mode, Art mode, Mobile Cam, and other functions from the mobile app.

Routines in the mobile SmartThings app allows you to automatically run apps installed on the TV.

With Routines, you can turn on the TV at your desired time and automatically run frequently used apps.

Controlling a display device from the SmartThings app in Galaxy Watch

From the SmartThings app in Galaxy Watch, use the remote-control functions to turn on/off the TV, change channels, adjust the volume or use the directional buttons. If you switch to Pointer mode while using a remote-control function, it is possible to control the TV with simple hand gestures.

- Pointer mode may not be supported in some apps or external devices.
- Pointer mode may not be supported, depending on the Galaxy Watch model and the Wear OS version.
- This function may not be supported depending on the model or geographical area.

Playing pictures/video/music

Play media content stored on your TV, USB devices, mobile devices, cameras, PCs, etc.

Home > left directional button > Connected Devices > Connected Device Try Now

You can play media content saved on storage devices, such as USB devices, mobile devices, and cameras on the TV.

- You cannot play media content if the content or the storage device is not supported by the TV. For more information, refer to "Read Before Playing Photo, Video, or Music Files."
- Backup important files before connecting a USB device. Samsung is not responsible for damaged or lost files.

You can use the following functions on the media content list screen of a storage device.

- Filter By

  Filters the media content by type of media.

- Sort By

  Sorts the content list.

  - This function may not be supported depending on the type of external device.

- Options

  Deletes or plays the selected media content in the media content list. When you select Refresh, the content list is reloaded.

  - You can delete only the recorded content. To delete content, change the Filter By option to Recorded.
  - Recorded may not be supported depending on the geographical area.

Playing multimedia content on a PC or mobile device

1. Select a device with media content in Home > left directional button > Connected Devices > Sources. The media content list in the device appears.
2. Select a media content item from the list.

The selected content is played.

- The content may not be played depending on the encoding method or file format. Furthermore, several functions may be restricted.
- Content on devices connected to the TV via your network may not play smoothly due to network communication problems. If this occurs, use a USB device.

Playing multimedia content on a USB device

1. Connect a USB device to the USB port.
2. There is a content list browser shown directly.

   If a USB device that contains the content you want to play is already connected to the TV, select the USB device in the > left directional button > Connected Devices > Sources screen.

3. Select a content item to play from the list.

The selected content is played.

Listening to your mobile device sound through the TV speaker using Sound Mirroring

Enjoy listening to music in your living space. Visualizations are generated on your TV that alter and respond to the frequency of your music.

1. Search for and connect to your TV from the (Bluetooth) device list on your mobile device.
2. Select media content to play on your mobile device.

The selected media is played through the TV speaker.

- This function may not be supported depending on the model.
- In some models, the image of the played content may differ depending on the mode.
- If the TV and the soundbar are connected wirelessly, the operation may be restricted.
- Sound Mirroring entry path may be different in some models. (> (top of Smart Hub Home screen) > Apps > Mobile Connection > Sound Mirroring)

Buttons and functions available while playing multimedia content

Press the Select button while playing any video, photo, or recorded content. The following buttons appear.

- The provided buttons and functions may not be supported depending on the model or geographical area.
- The available buttons and functions may differ with the content you are viewing or playing.

- Pause, Play

  Pauses or plays the multimedia content.

- Jump Backward, Jump Forward

  Press the up directional button to move the focus to the playback control bar, and then select the left or right directional button in the playback control bar to move backward or forward by 10 seconds in the video.

- Move to a specific playback section, move up the focus on the playback bar, and then select one of the five thumbnails.

  This function may not be supported depending on the file format.

- Stop

  Stop the contents being played.

- Previous / Next

  Displays the previous or the next multimedia content file.

  If video playback time is 3 seconds or shorter and you press the button, the video starts from the beginning.

- Rewind / Fast Forward

  Rewinds or fast forwards the multimedia content. To increase the rewind or fast forward speed up to 3 times faster than normal, select the button repeatedly. To return to normal speed, select the option or press the button.

  You can use the following functions when the video is paused. Note that with the video paused, the TV does not play audio.

  – Slow Rewind or Slow Forward: Allows you to play a video slowly backward or forward by selecting the or option. There are 3 playback speeds. To change the playback speed, press the option repeatedly. To return to normal speed, select the option or press the button.

- 360 Mode

  Provides a 360-degree view for videos and photos.

  This function may not be supported depending on the file format.

  Video files using the mjpeg codec do not support a 360-degree view.

  When a video or photo does not support a 360-degree view, applying 360 rotation to it may cause the screen to look distorted.

  Videos may be interrupted if 360 rotation is applied during double speed playback.

  Videos that support a 360-degree view may be interrupted if 360 rotation is simultaneously applied with other functions during playback.

  This function may not be supported for some resolutions.

  This function may not be supported depending on the model.

- 360 Auto Rotation

  Automatically adjusts the video's viewing angle by analyzing the amount of image changes during playback of a video file that provides a 360-degree view. When this function is started, the rotation starts in a short time.

  When 360 Auto Rotation is focused, press the Select button to change to the following modes:

  – General

  – Dynamic

  – Natural

  - This function is only available when 360 Mode is selected.
  - When 360 Auto Rotation is activated, automatic adjustment is followed. The adjustment position may differ depending on the image.
  - The video's viewing angle is manually adjusted in General mode.
  - This function may not be supported depending on the file format.
  - Video files that use the mjpeg codec do not support a 360-degree view.
  - When a video does not support a 360-degree view, applying 360 rotation to it may cause the screen to look distorted.
  - Videos may be interrupted if 360 rotation is applied during double speed playback.
  - Videos that support a 360-degree view may be interrupted if 360 rotation is simultaneously applied with other functions during playback.
  - This function may not be supported for some resolutions.
  - This function may not be supported depending on the model.

- Repeat

  Plays the current multimedia content repeatedly or all multimedia content files in the same folder repeatedly.

- Shuffle

  Plays music files in random order.

- Picture Off

  Plays music files with the screen off.

- Screen Fit

  Fits a photo to the screen.

- Rotate left / Rotate right

  Rotates a photo left or right.

- Zoom

  Zooms in a photo.

- Background Music

  Pauses or resumes the background music while the TV displays photos.

  This function is available after enabling the Background Music option.

- Options

  The available options may differ with the model and content.

Function	Description
Slideshow Speed	Sets the slideshow speed. If there is only one image file in the USB device, the slide show is not played.
Slideshow Effect	Applies transition effects to the slide show. If there is only one image file in the USB device, the slide show is not played.
Background Music	Plays background music as you set in the pop-up window while the TV displays photos. The music files must be saved in the same USB device as the photo files. To pause the background music, select Background Music on the playback screen bottom.
Subtitles	You can set the detailed subtitle options, such as the language, sync, size, and color. If subtitles are not displayed correctly, check the encoding setting.
Rotate	Rotates the video.
Audio Language	Changes the audio language. This function is only available if the video supports multi-track sound.
Information	Displays detailed information about the current multimedia content.

Using Multi View

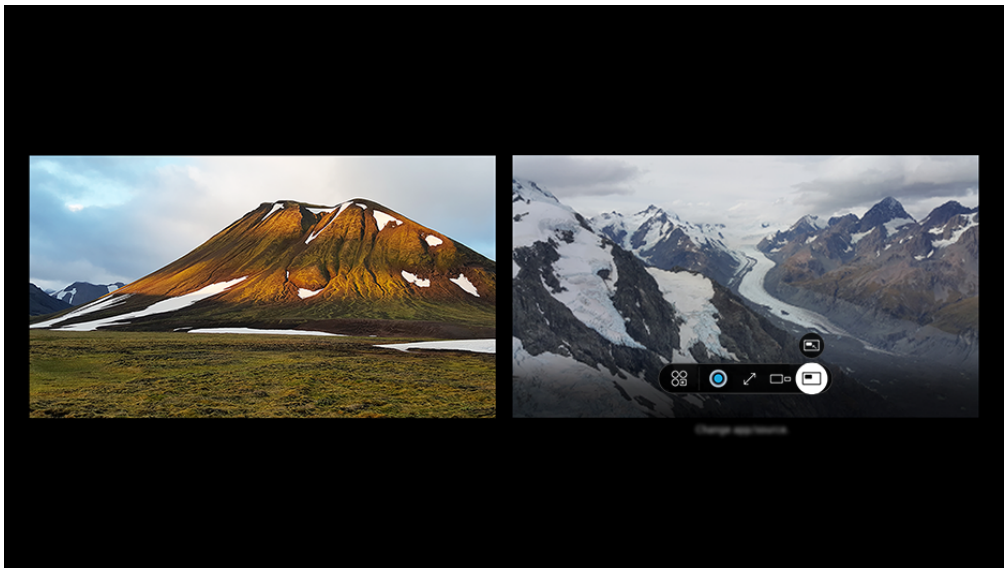
You can view multiple content items through Multi View.

> left directional button > Settings > Multi View Try Now

This function may not be supported depending on the model.

To start Multi View, navigate to > left directional button > Settings > Multi View. Next, Select the item you want from the Add View list. Or select Make My Own to configure a custom layout and screen. You can add or delete a screen in the current Multi View screen by pressing the down directional key on the Samsung Smart Remote.

The number of screens that can be configured may differ, depending on the model.



The image on your TV may differ from the image above depending on the model and geographical area.

When Multi View is running, press the Select button to configure the following menus.

This function and the provided options for each menu icon may not be available depending on the model and region.

- App/Source

  You can select from the content list displayed above.

- Content

  You can view the currently displayed app or source.

  After selecting a content item, you can control the screen or change the app and source.

- Maximize

  View the selected screen in full screen mode.

- Return to Multi View

  Reduce the maximized screen to the original size, and return to the Multi View.

- Screen Size

  Selects the desired size of Multi View.

- Picture-in-Picture

  Selects the position of a small screen on the full screen. The focusing left or right screen appears as small window.

- Screen Position

  Selects a position of the Multi View screen.

- Swap Screen

  Switches between small screen and full screen positions. This displays the full screen as a small screen.

- PIP Off

  Turns off the function for viewing a small screen over the full screen. This returns the screen to Multi View.

- Double Audio

  You will hear the sound of both screens at the same time by adjusting the ratio of each screens sound.

- Bluetooth Speaker

  You can hear the sound by connecting the Bluetooth speaker.

- Full Screen

  Multi View is ended and then the full screen appears.

- Delete

  You can delete the selected screen.

To close Multi View, press and hold the ↩ button or press the ⌂ button on the Samsung Smart Remote.

This function operates only by TV broadcasts, external devices, or apps that support Multi View.

While running Multi View, app casting from your mobile device is run on Multi View. This function is not available in some apps.

In some models, you can view the image on the camera connected to the SmartThings app of your mobile device.

Q-Symphony is not supported by Multi View.

When an external device that connects to a receiver or Soundbar is used in Multi View, sound outputs from the TV speaker, not from the receiver or Soundbar.

Using Auracast

You can listen to the TV's audio by connecting to a Bluetooth audio device that supports Auracast.

- This function may not be supported depending on the model.
- This feature may not be supported depending on the models of the mobile device and Bluetooth audio device.

Using Auracast

Home > left directional button > Settings > All Settings > Sound > Expert Settings > Auracast

You can connect a Bluetooth device that supports Auracast to the TV.

Connect a Bluetooth audio device to the TV via the mobile device that is connected to the Bluetooth audio device. This can be done by using the Broadcast menu in the Bluetooth settings in the mobile device.

- The location of the Broadcast menu may differ depending on the mobile device model.
- This function may not be supported depending on the model.
- This feature can connect the TV to two or more Bluetooth devices that support Auracast, simultaneously.
- This feature cannot connect the TV to a Bluetooth audio device that supports Auracast and a Bluetooth audio device that does not support Auracast simultaneously.
- The Auracast feature may not be supported depending on the mobile device model.
- Audio volume can be adjusted from the mobile device that is connected to the audio device.
- When this feature is turned on, audio cannot be played from the Bluetooth audio device that is already connected to the TV and does not support Auracast.
- If Auracast is turned on and you change the audio output device to the previously connected Bluetooth audio device, Auracast automatically turns off.
- To turn on Auracast, change the audio output device to the TV speakers.
- While Auracast is in use, other devices that support wireless connection cannot be used together.

  (e.g., Bluetooth Speaker, Wi-Fi Speaker, Headset, Soundbar, Gamepad, Keyboard, Mouse, Sound Mirroring, etc.)

Setting sound quality

Home > left directional button > Settings > All Settings > Sound > Expert Settings > Auracast > Audio Quality

Set the sound quality of Auracast.

Using a password

> left directional button > Settings > All Settings > Sound > Expert Settings > Auracast > Use Password

If you set a password, you should enter the password when you connect an audio device to the TV via a mobile device, before using Auracast.

Changing your password

> left directional button > Settings > All Settings > Sound > Expert Settings > Auracast > Reset Password

Change the password you use when connecting to Auracast.

Advanced Features

Use useful features available on your Samsung TV.

Using Soccer Mode

Create a more immersive viewer experience when watching soccer matches by automatically optimizing picture and sound quality.

Home > left directional button > Settings > All Settings > Advanced Features > AI Soccer Mode Pro Settings / AI Soccer Mode Settings / Soccer Mode Settings

Home / Home > Settings > All Settings > Advanced Features > AI Soccer Mode Pro Settings / AI Soccer Mode Settings / Soccer Mode Settings

- Some screen setting features may not be available on the Smart Hub Home screen.

This feature automatically provides optimum picture and sound quality for watching soccer matches.

Before use

- To use this feature, make sure the latest software version is installed.
- If a soundbar is connected, only picture optimization works, and the sound setting automatically switches to the soundbar's sound field mode.
- To use this feature through Bixby, you must register and log in to a Samsung Account and agree to the collection and use of personal information.

Caution

- This function may not be supported depending on the model.
- This feature's button and functionality may differ, depending on the model.
- Service performance and operation may differ, depending on the network environment.
- Soccer Mode is automatically deactivated when AI Mode or EyeComfort Mode is activated.

- *AI Soccer Mode Pro / AI Soccer Mode

  Automatically optimizes picture and sound quality through real-time AI analysis. This feature automatically adjusts colors and brightness, and remasters sound to enhance the immersive viewer experience when watching soccer matches. **AI Soccer Sound Controller allows users to adjust the volumes of the individual commentator voices and background sound.

  - *: It is possible to set it up so that the AI Soccer Mode Pro feature automatically runs by recognizing soccer matches. If you select Auto, the content you are watching is analyzed in real time and the picture and sound quality is automatically adjusted.

    **: The performance or operation of the service may differ, depending on the original content. Individually set sound volume may be reset if the content changes.

  - This function may not be supported depending on the model.
  - Supported functionality of this feature may differ, depending on the model.

- Soccer Mode

  Provides optimum picture and sound quality when watching soccer matches.

  This function may not be supported depending on the model.

Using Live Translate

Use the Live Translate feature to view live content with subtitles translated into your preferred language.

> left directional button > Settings > Live Translate

> left directional button > Settings > All Settings > Advanced Features > Live Translate Settings

This feature automatically translates subtitles broadcast by broadcasters. It does not work if the broadcaster does not provide a subtitling service.

Before use

- Translation speed may differ, depending on subtitle reception speed and the language pair.
- This function may not be supported depending on the model or geographical area.
- The availability of supported languages may differ.
- To use this function, the input signal must be TV or Samsung TV Plus. This function is not compatible with all other external inputs or apps.
- Broadcaster settings may be required in some regions.
- This feature is supported only when the input source is TV. It does not work when external input or an app is in use.
- To use this feature, make sure that you are logged in to your Samsung account, and set a service provider.
- Service performance and operation may differ, depending on the network environment.

Caution

- Translation accuracy and reliability is not guaranteed.
- The feature may be changed, suspended, or terminated at any time.

Changing the Live Translate Settings

Configure specific items for viewing content using the real-time translation service.

- Broadcast Language

  Automatically detect the language of the playing content to set it as the translation source language. It is possible to manually set the source language when necessary.

- Translation Language

  Set the translation language for the subtitles. Certain languages may need to be downloaded. To download a language, the TV must be connected to a network.

- Font Size

  Set the font size for the translated subtitles in a range of three sizes.

- Position

  Move the position of the translated subtitles between the top, bottom, left and right of the screen.

- Subtitle Background

  Set the background color of the translated subtitles.

Using AI Mode

Let the TV analyze the surrounding and the content you are watching so that it can provide an upgraded viewing experience.

Home > left directional button > Settings > All Settings > Advanced Features > AI Mode Settings > AI Mode

Home / Home > Settings > All Settings > Advanced Features > AI Mode Settings > AI Mode Try Now

Some screen setting features may not be available on the Smart Hub Home screen.

In AI Mode, the TV recognizes and analyzes the surroundings, noise, the content, and your usage patterns to provide the best viewing experience. You can turn the options below on or off. Create your preferred viewing environment.

This function may not be supported depending on the model.

This function may not be supported by some modes or apps (e.g., Game Mode).

- AI Picture Mode Settings Try Now
  - AI Optimized

    Optimizes brightness and provides the best picture quality in real time, based on the lighting condition and the content you're viewing.
  - AI Customization

    AI recognizes the type of content currently being viewed (e.g., Sports Games, Movies, General) and automatically switches to the customized picture quality settings.

    Using AI Customization Mode Settings, users can customize the picture quality for each content type.

    Some models, modes or apps may not support this feature.

    Settings that can be adjusted by AI Customization may differ, depending on the region.

- AI Customization Mode Settings

  This feature is available when AI Picture Mode Settings is set to AI Customization.

  – Detail Settings

    Customize specific settings, such as Brightness, Contrast, Color and Color Tone, for each content type (e.g., Sports Games, Movies, General).

    Available setting items under Detail Settings may differ, depending on the region.

- AI Sound Mode Settings

  – Active Voice Amplifier / Active Voice Amplifier Pro

    Analyzes ambient noise and provides optimal sound depending on the noise.

    This function is available only when the microphone switch at the bottom of the TV is active and the sound output is set to TV Speaker. The location of the microphone switch may vary depending on the model or geographical area. The microphone on TV is not supported depending on the model or geographical area.

    While using this function, the TV does not save the data.

    This function may not be supported by some modes or apps (e.g., Game Mode).

  – Adaptive Sound+ / Adaptive Sound Pro

    Provides optimized sound quality by analyzing the viewing space and the acoustic components of the content.

    This function can be used only when the microphone switch at the bottom of the TV is active and the sound output is set to TV Speaker. The microphone on TV is not supported depending on the model or geographical area.

    This function may not be supported by some modes or apps (e.g., Ambient Mode, Game Mode, Art Mode, and apps that control the TV sound).

    While using this function, the TV does not save the data.

    This function may not be supported depending on the model.

    The name of this function may appear differently depending on the model.

– Adaptive Sound

Provides optimized sound quality by analyzing the viewing space and the acoustic components of the content.

- This function is only available when the sound output of the TV is set to TV Speaker.
- This function may not be supported by some modes or apps (e.g., Ambient mode, Game Mode, and apps that control the TV sound).
- This function may not be supported depending on the model.

– Adaptive Volume Try Now

Automatically adjusts to a specific volume level while you are watching TV. The TV analyzes your volume usage history by time period to automatically adjust the volume when you use an app or switch to an external input source.

- This function is only available when the sound output of the TV is set to TV Speaker.
- This function may not be supported by some apps or external devices.
- This function's operation affects Auto Volume function, but it does not work the other way around.
- This function operates based on your volume usage history, and may not operate if the volume usage history by time period is insufficient.
- The amount of difference made by this function does not exceed +/- 5 levels from the current volume, and this function does not change the current volume if it exceeds 40.

- AI Sound Controller / AI Sound Controller Settings / AI Sound Controller Pro Settings

Analyzes the audio of the currently playing content to adjust the volume of each individual audio object, including Voice, Music, and Effect (or Voice and Background).

- While using this function, the TV does not save the data.
- This function may not be supported by some apps or external devices.
- This function may not be supported depending on the model.
- The name of this function may appear differently depending on the model.
- Items adjustable with this feature may differ, depending on the model.
- To use this feature with Bixby, make sure your TV is connected to a network.
- To use this feature with Bixby, you need to register and log in to a Samsung Account. Some functions may not be available if you are not logged in to a Samsung Account.
- The voice assistant is available in a limited number of languages only, and supported functions may differ between regions.
- The performance or operation of the service may differ, depending on the original content. Individually set sound volume may be reset if the content changes.

Using Voice Assistants

You can change the settings of a Voice Assistant after selecting it.

Select the Voice Assistant

Home > left directional button > Settings > All Settings > Advanced Features > Voice > Voice Assistant Try Now

Select which Voice Assistant you would like to help control your TV.

- On models that support speech recognition, users can use Bixby with the SmartThings mobile app. Press and hold the button on the remote control in the SmartThings mobile app and say your desired command.

To use this function, the TV must be connected to the network.

This function and Voice Recognition Solution Partner may not be supported depending on the model or geographical area.

Voice Assistant only supports some languages, and the supported functions may differ depending on the geographical area.

The Voice Wake-up function may not be supported depending on the model, Voice Assistant or geographical area.

- Bixby / Amazon Alexa

  To use the Voice Assistant, follow the instructions on the TV screen to enable the selected Voice Assistant.

  To change the settings for Voice Assistant, run the Settings menu under each Voice Assistant (Home > left directional button > Settings > All Settings > Advanced Features > Voice > Voice Assistant). Try Now

  To enable the Settings menus for each Voice Assistant, log in each Voice Assistant.

  For an example of Voice command, see the Settings menus for each Voice Assistant.

Using Bixby

Set Voice Assistant to Bixby. Speak into the microphone on your Samsung Smart Remote or TV to control your TV.

- This function is available only if Voice Assistant is set to Bixby. (> left directional button > Settings > All Settings > Advanced Features > Voice > Voice Assistant) Try Now
- Bixby is available only when the TV is connected to the network.
- To use Bixby, you must register and sign in to your Samsung account. Some functions may not be supported if you are not signed in to your Samsung account.
- Bixby only supports some languages, and the supported functions may differ depending on the geographical area.
- Bixby may not be supported depending on the model or geographical area.
- The microphone on TV is not supported depending on the model or geographical area.

Starting Bixby with voice

You can immediately start a conversation with Bixby by saying "**Hi, Bixby**." Say "**Hi, Bixby**", and the Bixby icon at the bottom of the TV screen is activated in Listen mode. Continue speaking.

- For best results, you need to be within 10 feet (3-4 m) of your TV. If Bixby does not answer, refer to "I spoke "Hi, Bixby/Alexa" but Bixby/Alexa does not answer." in "Troubleshooting."
- These functions may not be supported depending on the model or geographical area.

Starting Bixby using buttons on the Samsung Smart Remote

You can have conversation with Bixby using the Samsung Smart Remote buttons. Press and hold the button on your Samsung Smart Remote, say a command, and then release the button.

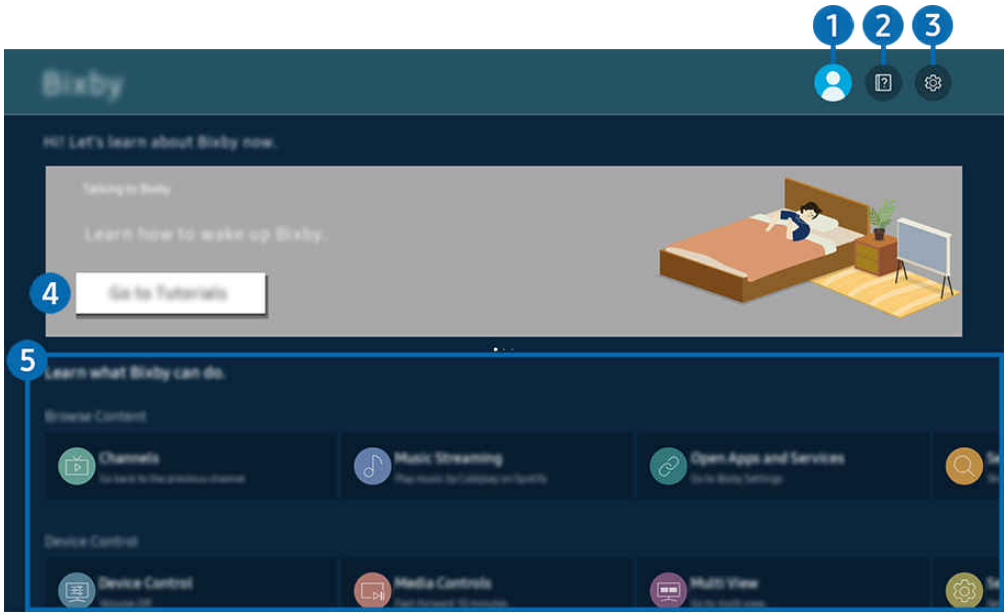
For details on how to use Bixby, press the button once:

- When you press the button, the icon appears at the bottom right of the screen. Press the Select button to go to the Discover Bixby screen.



The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Learning about the Discover Bixby Screen



The image on your TV may differ from the image above depending on the model and geographical area.

1 Account

Log out after going to the Samsung Account screen.

If you are signed out of your Samsung account, select Account to sign in.

2 Tutorials

View tutorials related to the Bixby.

3 Settings

You can change the settings for using Bixby.

These functions may not be supported depending on the model or geographical area.

These functions can be set in Bixby Settings (> left directional button > Settings > All Settings > Advanced Features > Voice > Bixby Settings). Try Now

- Voice Wake-up

  Configure settings on how to wake up Bixby with your voice. You can configure the following settings: Hands-free wake-up, Voice registration, Using your voice with a Soundbar's microphone, Wake-up phrase, Talk to Bixby without wake-up, and Wake-Up Sensitivity. (> Bixby Settings > Voice Wake-up).

  From Voice Wake-Up, set Hands-free wake-up to operate at all times, and say "**Hi, Bixby**" when the TV is off. You can use Now brief which provides a variety of daily information, even when you are not watching TV.

  For more information about Now brief, refer to "Using Now brief."

  The Voice Wake-up function may not be supported depending on the model or geographical area.

  This function can be used only when the microphone switch at the bottom of the TV is active. The microphone on TV is not supported depending on the model or geographical area.

- For best results, you need to be within 10 feet (3-4 m) of your TV. If Bixby does not answer, refer to "I spoke "Hi, Bixby/Alexa" but Bixby/Alexa does not answer." in "Troubleshooting."
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

- **Voice registration**

  Bixby can recognize your voice and provide personalized results. To use this feature, your voice needs to be registered in your account.

  - This function may not be supported depending on the model or geographical area

- **Language and voice style**

  You can change Bixby's language and voice style.

  - The languages of the TV and other apps will not change.
  - Bixby only supports some languages.
  - This function may not be supported in Bixby depending on the language selected.

- **Bixby Feedback**

  Play a sound when Bixby starts and stops listening.

  - This function may not be supported depending on the model.

- **Enhanced AI Features**

  Connect to Vision AI Companion, and obtain more advanced AI answers and related content recommendations.

  - This function may not be supported depending on the model or geographical area.

- **Privacy**

  You can permit or prohibit Bixby from utilizing your personal information when you are using Bixby services.

- **About Bixby**

  Displays the detailed terms and conditions.

4 Recommended commands

Displays recommended commands you can use to control the TV with Bixby given the current context.

5 All Services

You can learn the voice commands that let you use Bixby in various situations. Use the directional buttons to move to the desired command, and then press the Select button. You can operate the TV with various voice commands.

Read Before Using Bixby

- The supported voice interaction languages and features may differ depending on the geographical area.
- If the language set differs from the language of your country, some features are not available.
- Bixby is available only when the TV is connected to the network.
- Even if the TV is connected to the network, there may be no response due to a Bixby server error.
- The existing functional specifications may be changed if Bixby is updated.
- Bixby is available only on TVs that support it and come with remote controls that have a microphone.
- Symbols including "-" and special characters are not supported. Consequently, if a word or sentence contains numeric values or symbols, the function may not operate properly.
- Searched results may not provide complete results.
- You may be required to pay for some apps. Consequently, you may encounter a service application or contract.
- To change the current channel by saying channel names as voice commands, you must finish Find Your Service Provider. Find Your Service Provider can be set in > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Service Provider Info & Settings. Try Now

  If the settings for the service provider are not configured yet, configure them in > left directional button > Settings > All Settings > General & Privacy > Factory data reset. Try Now

  Service provider settings in initial setup may not be supported on geographical area.
- To use the voice text input function and the search function, you must consent to provisions allowing third parties to collect and use your voice data.
- To use the Bixby function, you must:
  - Agree to Smart Hub's Terms of Use.
  - Agree to a guidance regarding the collection and use of personal information for the Smart Hub service.
  - Consent to the collection and use of personal information for the voice interaction-based service.

Provisions for using Bixby

- The voice interaction rate differs with the volume/tone, pronunciation, and ambient sound environment (TV sound and ambient noise).

Using the Gesture function

Use your custom Gesture to easily control the TV.

USB cameras may not be supported depending on the model.

This function may not be supported depending on the model or geographical area.

> left directional button > Settings > All Settings > Advanced Features > Gesture

Connect a camera to the TV, and use your custom Gesture to easily save and load services or settings.

- Gesture Interaction

  Enable or disable the gesture interaction feature. To enble this, an optical recognition device, such as a USB camera, is required.

  This may not work for some functions.

- Gesture Guide

  Enable or disable to display the Gesture Guide.

- Delete Saved Gesture

  Delete the Gesture you saved.

- Learn Gesture Functions

  Check out how to use Gesture functions.

Using Game Mode

You can set the Game Mode to optimize the TV screen for better gaming performance.

Playing games on an optimized screen

Home > left directional button > Settings > All Settings > Advanced Features > Game Mode Settings > Game Mode

Home / Home > Settings > All Settings > Advanced Features > Game Mode Settings > Game Mode

Try Now

Some screen setting features may not be available on the Smart Hub Home screen.

When you connect a video game console such as PlayStation and Xbox, Game Mode is set to Auto. When you connect the other game source such as PC, set the Game Mode to On through the above path. You can also set the Game Mode quickly from Home Screen (Home > left directional button > Settings > Game Mode).

This function may not be supported depending on the model.

The game mode is not available for normal TV viewing.

The screen may shake somewhat.

When you press and hold the button on the Samsung Smart Remote for 1 second or more in Game Mode, the Game Bar appears. This function may not be supported depending on the model.

When Game Mode is enabled, Picture Mode and Sound Mode are switched to Games automatically. Sound Mode may not be automatically switched depending on the selected audio device on the Sound Output menu.

When Game Mode is set to On, some functions are not available.

To use a different external device on the same port, remove the game console connection, set Game Mode to Off, and then connect the external device to the port.

The Game Mode functions used for Nintendo Switch™ are subject to change without prior notice.

Setting the Game Mode details

Home > left directional button > Settings > All Settings > Advanced Features > Game Mode Settings Try Now

These functions may not be supported depending on the model or geographical area.

- Virtual Aim Point Try Now

  You can see the virtual aim point on the screen.

  This function may not be supported depending on the model or geographical area.

- Minimap Auto Detection

  Automatically finds and zooms in on the minimap by analyzing the screen when using the Minimap Zoom feature.

- Surround Sound Try Now

  You can make your games more immersive by using intense, three-dimensional sound optimized for games.

  This function may not be supported depending on the model or geographical area.

- Dynamic Black Equalizer Try Now

  You can easily detect items or hidden enemies lurking in dark corners by improving visibility and object details in dark scenes without washing out colors and contrast in brighter scenes.

  This function may not be supported depending on the model or geographical area.

- Game Motion Plus Settings Try Now

  You can configure the Game Motion Plus settings.

  This function may not be supported depending on the model.

  – Game Motion Plus

    Turn on this function to obtain a softer and clearer picture quality when playing a role-playing game (RPG) or adventure game which involves many dynamic scenes.

  – Blur Reduction

    Reduce game screen blur to optimize fast-moving images.

    This function may not be supported depending on the model or geographical area.

- Judder Reduction

  Remove flicker from a game video to play the game with a clearer picture quality.

- LED Clear Motion

  Turn on this function to adjust the LED backlight to make dynamic scenes look clearer.

  This function may not be supported depending on the model.

- Clear motion

  Turn on this function to make dynamic scenes look clearer.

  This function may not be supported depending on the model.

- **Game Picture Expert**

  You can adjust the options for specific picture quality features of your game.

  This function may not be supported depending on the model or geographical area.

  - HDR10+ GAMING

    Basic mode provides the most accurate representation of the game's original creative intent. Advanced mode provides enhanced representation of game content to maximize visual impact.

  - Game HDR

    In accordance with the HGiG (HDR Gaming Interest Group) standard, it sets the optimal image quality for HDR games according to the brightness information of the contents.

    When HDR sources are input in Game Mode, this menu is activated.

    This function may not be supported depending on the model.

    Game HDR entry path may be different in some models. (> left directional button > Settings > All Settings > Advanced Features > Game Mode Settings > Game HDR)

- **Autorun Game Bar**

  Set whether or not to automatically launch the Game Bar, by enabling/disabling game mode or switching between external inputs.

  This function may not be supported depending on the model or geographical area.

Using the Game Bar

Control the Game Settings Monitoring and Game Enhancer Settings easily by using the Game Bar.

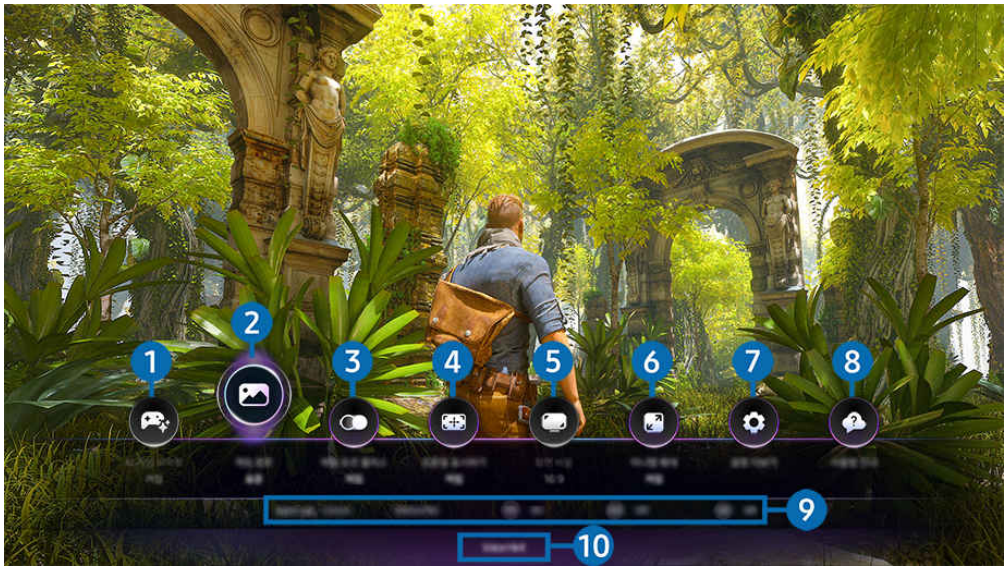
This function may not be supported depending on the model.

Starting the Game Bar

When Game Mode (Home) > left directional button > Settings > All Settings > Advanced Features > Game Mode Settings > Game Mode) is On or Auto, press and hold the Play/Pause button on your Samsung Smart Remote to start the Game Bar. Try Now

To select whether or not to automatically start Game Bar when changing the external input or enabling game mode, enable or disable the Autorun Game Bar feature (Home > left directional button > Settings > All Settings > Advanced Features > Game Mode Settings > Autorun Game Bar) (123 / 123 > Settings > All Settings > Advanced Features > Game Mode Settings > Autorun Game Bar).

Learning about the Game Bar



The image on your TV may differ from the image above depending on the model and geographical area.

1 AI Gaming Optimizer

When you launch a game, the AI automatically recognizes the title and applies optimum settings for the genre, such as FPS, RPG, RTS, or Racing.

2 Game Genre

Specify the Game Picture Mode according to the current game genre. To customize the picture quality, select Custom 1 or Custom 2.

3 Game Motion Plus

Turn on this function to obtain a softer and clearer picture quality when playing a role-playing game (RPG) or adventure game which involves many dynamic scenes.

4 Virtual Aim Point

Display a virtual aim point on the screen. Manually select your desired type of virtual aim point. When Auto Hide is turned on, the virtual aim point is automatically displayed when a situation requiring an aim point is detected in a video.

5 Screen Ratio

You can change the screen ratio from 16:9 (previous setting) to Ultra wide (21:9 or 32:9).

You have to set the resolution from your PC only once at first time.

The Game Bar's Screen Ratio can be changed only when the Ultra Wide resolution is supported in a game or PC. Whether or not to support the screen ratio of 21:9 and 32:9 depends on the title of the game so be sure to consult the game company.

6 Minimap Zoom

Use the directional buttons and Select button on the remote control to zoom in on specific areas of the game screen and adjust the zoom rate.



- For the Minimap supported resolution, refer to the table below.

Game Bar Screen Ratio	Resolution set in PC
16:9	3840 x 2160 (60/*120 Hz)
21:9	2560 x 1080 (60/*120 Hz) 3840 x 1600 (60/*120 Hz)
32:9	3840 x 1080 (60/*120 Hz)

*: The refresh rate may not be supported depending on the model.

7 More settings

Configure specific settings to suit your preferences.

8 Help Guide

View details on how to use each menu item.

9 Current status display

- Input Lag: Shows the status of game input lag.
- Resolution: Shows the resolution of the currently running game.
- FPS: Shows the number of frames per second in real time. If VRR is active, the frame rate changes.
- HDR: Shown as On when an HDR game is running.
- VRR: Shows the variable refresh rate.

10 Voice Hint

View Voice Hint for controlling functions using voice commands.

For more information about Voice Assistant, refer to "Using Voice Assistants."

This function may not be supported depending on the model or geographical area.

Using FreeSync

The FreeSync feature allows you to play seamless games without video interruption or delay. To use the FreeSync feature, activate the FreeSync feature from the external device.

The FreeSync (VRR) function may not be supported depending on the model.

For the FreeSync supported resolution, refer to "Supported Resolutions for FreeSync (VRR)."

QN990H, QN990F, The Frame (LS03FW, LS03HW) supports FreeSync Premium Pro only when the input source is connected through MICRO HDMI.

Setting the Super Ultra Wide Game View

Set your PC Screen resolution to match the selected Screen Ratio in the Game Bar before activating the **Super Ultra Wide Game**.

If the TV is connected to a computer and Game Mode is set to either ON or Auto, the wide screen (21:9 or 32:9) is activated from the Game Bar.

- This function may not be supported depending on the model.
- Check if the game supports Ultra Wide resolution (21:9 or 32:9).
- If you set the resolution on your PC for the first time, you can change the Screen Ratio through the Game Bar on your TV.

Game Bar Screen Ratio	Resolution set in PC
21:9	3840 x 1600 (60 Hz) *3840 x 1600 (120 Hz) 2560 x 1080 (60 Hz) 2560 x 1080 (120 Hz)
32:9	3840 x 1080 (60 Hz) 3840 x 1080 (120 Hz)

- *: The resolution may not be supported depending on the model.
- The supportable resolutions may differ depending on the model or HDMI port connected to the PC.
- After setting the resolution, check if the PC's Window or Mac screen changes when you change the Screen Ratio on the Game Bar of your TV.
- This function may not be supported depending on the OS or device.
- If the connected external device is a gaming device, the function does not work even if you change the name of Source to "PC."

⚠ While you are playing a game, the screen ratio cannot be changed. Before running a game, first Select the desired screen ratio on the Game Bar and then run the game.

For some games, you need to match the game resolution with the selected screen ratio in the Game Bar.

Changing the Super Ultra Wide Screen position

When playing a game at the Super Ultra Wide resolution, you can adjust the game screen position to the height of your eyes.

At the Super Ultra Wide resolution, use the ∧/∨ (channel) buttons to move the screen position to the top, center, or bottom.

Configuring 144 Hz / 165 Hz / 240 Hz game settings

This feature supports 144 Hz, 165 Hz or 240 Hz gaming, depending on the model.

- Resolutions that support 144 Hz / 165 Hz / 240 Hz are as follows:

Game Bar Screen Ratio	Resolutions supported at 144 Hz	Resolutions supported at 165 Hz	Resolutions supported at 240 Hz
16:9	1920 x 1080p @ 144 3840 x 2160p @ 144	1920 x 1080p @ 165 3840 x 2160p @ 165	1920 x 1080p @ 240 3840 x 2160p @ 240
21:9	2560 x 1080p @ 144 3840 x 1600p @ 144	2560 x 1080p @ 165 3840 x 1600p @ 165	2560 x 1080p @ 240 3840 x 1600p @ 240
32:9	3840 x 1080p @ 144	3840 x 1080p @ 165	3840 x 1080p @ 240

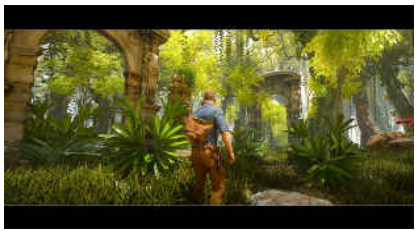
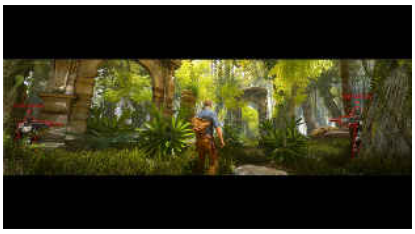
This function may not be supported depending on the model.

Refer to the "Supported Refresh Rates" section for supported refresh rates by model.

Troubleshooting of the game screen and audio problems

After changing the Screen Ratio on the Game Bar, if the game screen and sound are not output properly, try to solve the problems as shown below.

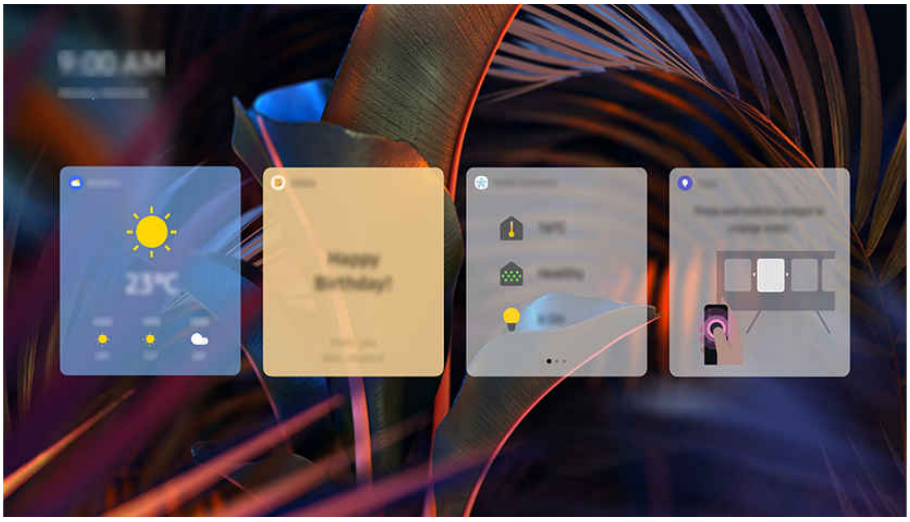
- Check to see if the game supports Ultra Wide or your PC supports the Ultra Wide resolution.
- Restart the game after exiting it.
- Select the same resolution as that of the Game Bar.
- When the Screen Ratio changes properly, the screen appears as shown below.

16:9	21:9	32:9
		

Using Now brief

Even when the TV is off, easily access useful daily information through the smart screen, which switches on when a user is detected or when it is activated by voice.

This function may not be supported depending on the model or geographical area.



The image on your TV may differ from the image above depending on the model and geographical area.

Starting Bixby with voice

Home > left directional button > Settings > All Settings > Advanced Features > Now brief > Enable with Voice

Home > left directional button > Settings > All Settings > Advanced Features > Voice > Hands-free wake-up > Always

The location of this function may vary depending on the model or geographical area.

When the TV is off, say "**Hi, Bixby**." You can use Now brief which provides a variety of daily information, even when you are not watching TV.

For best results, you need to be within 10 feet (3-4 m) of your TV. If Bixby does not answer, refer to "I spoke "Hi, Bixby/Alexa" but Bixby/Alexa does not answer." in "Troubleshooting."

If you do not want to use Wallpapers or Widgets from Now brief, navigate to Edit from the Now brief screen and then turn off Wallpapers or Widgets.

Starting Now brief through user detection

> left directional button > Settings > All Settings > Advanced Features > Now brief > Enable with User Detection

Turn on Now brief to automatically display the Now brief screen if a user is detected in the vicinity, even when the TV is off.

Now brief can be turned on in > left directional button > Settings > All Settings > Advanced Features > Now brief Try Now

- Users are detected by sensing sound and movement around the TV.
- Users may not be detected properly, depending on the environment in which the TV is used. If this happens, say "Hi, Bixby" to activate Bixby and then activate Now brief. (> Bixby Settings > Voice Wake-up > Hands-free wake-up > Always)
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.
- If Night Mode is turned on in Now brief > Edit > Settings, users are not detected when it is dark around them.
- When Inactive Schedule is turned on in Now brief > Edit > Settings > User Detection, users are not detected during a set time period.
- OLED model automatically activate the Panel Care function when the TV is turned off after being watched for a long time. When the Panel Care function is operating, the Now brief's user detection function temporarily does not work.

Information provided in Now brief

Weather, notes, SmartThings (Home Insight, Camera, Energy), music, and many other forms of useful daily information is provided as widgets.

Use Edit > Widgets to configure settings so that only specific widgets are displayed.

Supported widgets may vary depending on the model, region, and environment where the service is used.

Setting the wallpaper for Now brief

On the Now brief screen, select Edit and set the wallpaper.

Choose a wallpaper image or turn off the wallpaper from Edit > Wallpapers.

Images saved from Generative Wallpaper can be used as the Wallpapers. For more information, refer to "About the Generative Wallpaper."

Changing the Settings of Now brief

On the Now brief screen, use the Edit menu to change settings.

- User Detection

  Navigate to Edit > Settings and configure User Detection On/Off, Sensitivity or Inactive Schedule settings. Inactive Schedule disables the User Detection feature during a set time period.

- Screen Timeout

  Adjust the off timer time from Edit > Settings > Screen Timeout.

- Night Mode

  Navigate to Edit > Settings and enable Night Mode to prevent the Now brief from turning on when the surrounding is dark, even if a user is detected.

- Auto Loop

  Adjust the page transition time from Edit > Settings > Auto Loop.

- Widget Auto Adjustment

  Adjust the order of widgets automatically based on usage frequency and information updates in Edit > Settings > Widget Auto Adjustment.

- Adjust Location

  Adjust your TV's location information from Edit > Settings > Adjust Location.

  To use this feature, make sure the product is registered with the mobile SmartThings app.

- Tips

  Explore various tips and press the Try it button to try a feature instantly.

Configuring Start Screen

Configure settings for the start screen that is displayed when turning on the TV or using content.

Launching Smart Hub automatically

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Start with Smart Hub Home Try Now

Enabling Start with Smart Hub Home automatically launches Smart Hub when the TV is turned on. Navigate to this option to enable or disable the feature.

Launching Samsung TV Plus automatically

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Samsung TV Plus

Automatically launches Samsung TV Plus when the TV is turned on. If this option is turned off, the last used source will be displayed instead.

- This function may not be supported depending on the model or geographical area.

Launching Samsung Business TV app automatically

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Samsung Business TV App

If Autorun Samsung Business TV App is set to On, Samsung Business TV app is automatically run when you turn on the TV. You can also turn this function on or off. Press the Select button at the current menu.

To use the Samsung Business TV app on your TV, install the app from Google Play Store or App Store. Use the Samsung Business TV app by following the screen instructions on the mobile device.

- When Autorun Samsung Business TV App is set to On while Autorun Last App is turned On, the Samsung Business TV app runs automatically when your TV is turned on.
- This is available in Android 6.0/iOS 9.0 or higher.
- The Samsung Business TV app on the Home Screen is installed automatically after you consent to the service agreement and the collection and use of personal information.
- This function may not be supported depending on the model or geographical area.

Automatic casting in Multi View

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Multi View Casting Try Now

Casting YouTube content from the mobile device automatically displays the content on Multi View.

- It is available on the screen for any broadcast, external device, or app that supports Multi View.
- This function may not be supported depending on the model.

Automatic Mirroring from Multi View

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Multi View Mirroring

If you screen mirror your mobile device, the Multi View automatically displays the device screen. Navigate to this option to enable or disable the feature.

- This function may not be supported depending on the model or geographical area.

Launching Multi View automatically When rotating

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Multi View When Rotating

Multi View runs automatically when you rotate the screen to portrait mode.

- This function may not be supported depending on the model.
- This function is activated when the Auto Rotating Accessory (sold separately) is connected.

Launching the last used app automatically

> left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Autorun Last App Try Now

If Autorun Last App is set to on, the last used app is automatically run when you turn on the TV. You can turn this function on or off. Press the Select button at the current menu.

- This function may not be supported depending on the app.
- This function may not be supported depending on the model.

TV Viewing and Recording

Use a variety of convenience features offered by your Samsung TV while watching TV. You can also edit your list of channels and create a list of favorite channels.

Using the Guide

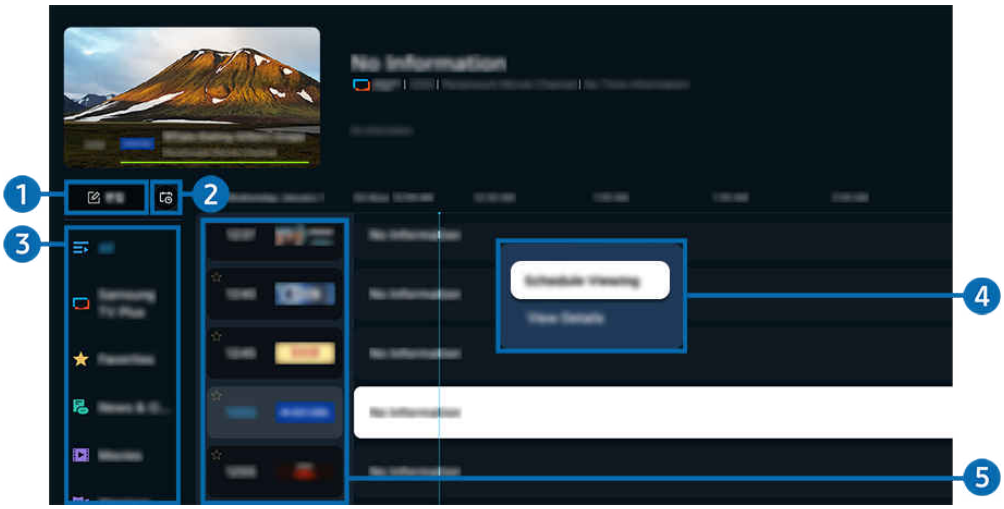
See the program schedules of different channels on a single screen.

Press the ∧/∨ (Channel) or GUIDE button to access the Guide screen.

In the Guide, you can see the daily program schedules for each station, see program information, choose a program to watch, and set up a schedule viewing or recording.

- The button used to access the Guide screen may differ depending on the model.
- The Record function may not be supported depending on the model geographical area.
- To access information or additional features provided in the Guide from analog channels, you must set Service Provider during the initial configuration stage.
- To view Guide, you must first configure Time (> left directional button > Settings > All Settings > General & Privacy > Time.)
- For details on how to use the remote control, refer to the image guide at the bottom right.

About the Guide screen



- The image on your TV may differ from the image above depending on the model and geographical area.

1 Edit

Edit channels stored on the TV.

- For more information, refer to "Using the channel edit function."

2 Schedule Manager

View, edit, or delete your viewing schedules.

For more information, refer to "Setting Up Schedule Viewing."

3 Channel Filter

View channels and programs classified by type.

4 Additional options related to broadcast programs

Navigate to the desired program and press and hold the Select button to access the following options:

These functions may not be supported depending on the model or geographical area.

- Schedule Viewing

  You can schedule the viewing of a broadcast scheduled program.

- Cancel Scheduled Viewing

  You can cancel scheduled viewings.

- View Details

  You can see detailed information about the selected program. The information may differ or may not be provided depending on the broadcast signal.

- Record

  You can make a recording of a current program.

- Stop

  You can stop the recording function that is currently running.

- Edit Recording Time

  You can change the start and end times of scheduled program recordings.

- Schedule Recording

  You can schedule recording of a broadcast scheduled program.

- Cancel Scheduled Recording

  You can cancel scheduled recordings.

5 Channel List

A list of available channels is provided. Unsafe channels may be marked with * in the channel list.

*: This function may not be supported depending on the model or geographical area.

Using additional features from the Guide

From the Guide, press either the or button to use additional features. Use the directional buttons to navigate to the color button item on the numeric keypad.

These functions may not be supported depending on the model or geographical area.

- Channel Filter

  You can view channels and programs categorized by the types defined in Channel List.

- Schedule Manager

  You can see the Recording & Schedule Manager or Schedule Manager screen.

  For more information about Schedule Recording, refer to "Recording Programs."

  For more information about Schedule Viewing, refer to "Setting Up Schedule Viewing."

- Antenna Type

  You can change the type of broadcast signals the TV receives.

Recording Programs

Record a current or upcoming program using a USB device instead of a video recorder.

- Connect a USB device to use the TV's recording features. Carefully read all related precautions before using a recording feature. For more information, refer to "Before Using the Recording and Timeshift Functions."
- You can record only the programs that are received through an antenna.
- The appears next to the programs and channels scheduled for recording.
- This function may not be supported depending on the model or geographical area.

The Instant and Timer Recording options from the Guide

- Record
  1. Select a program that is currently being broadcast and press the Select button.
  2. Select Record from the pop-up menu to start recording.
- Schedule Recording
  1. Select a program scheduled to be broadcast, and press the Select button.
  2. Select Schedule Recording from the pop-up menu to schedule recording.

Recording while watching a broadcast

- Record
  1. On the remote control, press the or button.
  2. Use the directional buttons to navigate to the control pad.
  3. Select Record to start recording.

  Or press the button while watching a broadcast.
- Schedule Recording
  1. Press the Select button while watching a broadcast to load the program details window.
  2. Use the left or right directional button to navigate to a program scheduled to be broadcast, and press the Select button.
  3. Select Schedule Recording to schedule the recording of the program.

Using the recording schedule management screen

1. On the remote control, press the or button.
2. Use the directional buttons to navigate to the control pad.
3. Select either Schedule Manager or Recordings to access the Recording & Schedule Manager screen.

The following options are available on the Recording & Schedule Manager screen:

Displayed menu options may vary depending on the model.

- Recordings

  Watch Recordings.

  Buttons shown on the display will vary depending on the file being played back. For more information about playback controls, refer to "Getting to know Recording and Timeshift controls and options."

  From the list, select a recording you wish to watch. The selected recording will start to play.

  Move the focus to a recording to display Play, Delete, and View Details options on the right-side menu.

- Schedule Recording

  Navigate to Schedules and press Schedule Recording. Add, edit, or cancel a program recording schedule.

  Specify the Antenna, Channel, Repeat, Date, Start Time, and End Time settings and then select Save to schedule a recording of a specific program at a specific time on a specific date.

  Up to thirty Schedule Viewing and Schedule Recording events may be created.

  Ensure that the TV's Time( ) > left directional button > Settings > All Settings > General & Privacy > Time.

  – Edit

    Configure the Start Time and End Time settings of a scheduled recording. If a scheduled recording event has been created after selecting a program from Guide, Start Time and End Time can be set as up to ten minutes before and ten minutes after, respectively.

  – Delete

    Remove a scheduled recording.

  – View Details

    See detailed information about a scheduled recording.

- Settings

  – Start Recording Early

    Change this setting so that the recording starts slightly earlier than the program start time shown in the Guide.

  – Continue Recording After

    Change this setting so that the recording ends slightly later than the program end time shown in the Guide.

Setting Up Schedule Viewing

Configure the TV to show a specific channel or program at a specific time and date.

- This function may not be supported depending on the model or geographical area.
- The appears next to programs that have been configured for a scheduled viewing.
- To set up a schedule viewing, you must first set the TV's clock (> left directional button > Settings > All Settings > General & Privacy > Time) and set the time.

Using the schedule viewing options from the guide screen

On the Guide screen, select a program you would like to view, press the Select button, and then select Schedule Viewing in the pop-up menu that appears.

Using the schedule viewing options while watching a program

1. Press the Select button while watching TV.
2. The Program Info window appears.
3. Select a program that will be broadcast using the left or right directional buttons.
4. Press the Select button, and then select Schedule Viewing to schedule viewing of that program.

Using the viewing schedule management screen

1. On the remote control, press the or button.
2. Use the directional buttons to navigate to the control pad.
3. Select either Schedule Manager or Recordings to access the Recording & Schedule Manager screen.

- Displayed menu options may vary depending on the model.

- Schedule Viewing

  Navigate to Schedules and press Schedule Viewing. Add, edit, or cancel a program viewing schedule.

  - Up to thirty Schedule Recording and Schedule Viewing events may be created.
  - Ensure that the TV's Time (> left directional button > Settings > All Settings > General & Privacy > Time) setting is correct.

  – Edit

    You can set the start time of a scheduled viewing. If you choose a program from the Guide, the Start Time can be set to up to 10 minutes before the program.

  – Delete

    You can delete scheduled viewings.

  – View Details

    You can view detailed information about scheduled viewings.

Using Timeshift

Watch scenes you missed and rewind to specific points of the program using Time Shift.

To activate Timeshift while watching a broadcast, press either the or button, and then use the directional buttons on the remote control to select Timeshift or press the button. Try Now

Save the current broadcast program you are watching to a USB device to pause at specific scenes, view missed scenes, or rewind to specific points in the timeline.

- When the Timeshift function is running, some functions are not available in > left directional button > Settings > All Settings > General & Privacy > Broadcasting.
- To use Timeshift, you must connect a USB device for recording.
- Read all precautions before using the Timeshift function. For more information, refer to "Before Using the Recording and Timeshift Functions."
- This function may not be supported depending on the model or geographical area.

Getting to know Recording and Timeshift controls and options

These are the controls and options available while recording broadcasts and using Timeshift.

Press the down directional button to display the control pad with the following options:

- This function may not be supported depending on the model or geographical area.
- The available buttons and functions may differ with the functions.

- Pause / Play

  You can use the following functions when the video is paused. Note that with the video paused, the TV does not play audio.

  – Slow Rewind or Slow Forward: Use or button to slow rewind or slow forward. Available speeds are 1/8, 1/4 and 1/2. Press the corresponding repeatedly to quickly increase the speed in slow mode by up to 3 times. To resume playback at normal speed, select button.

    - While using Slow Rewind, you will be able to see the time difference between the recorded broadcast's current time and the rewound time.

- Jump Backward / Jump Forward

  Press the up directional button to move the focus to the playback control bar, and then select the left or right directional button in the playback control bar to move backward or forward by 10 seconds in the video.

  - When the Jump Backward function is activated, you can view the difference between the current recording time and the current rewind time.

- Rewind / Fast Forward

  Use ◀◀ or ▶▶ button to rewind or fast forward.

  This function is not available while you are watching a program that is currently being broadcast.

- Stop Recording / Stop Timeshift

  Ends the recording or Timeshift function.

- Record

  You can switch from the Timeshift function to the recording function. When switching to the recording function, you can include the content recorded by the Timeshift function in the new recording.

  This function is only available when the Timeshift function is running.

- Edit Recording Time

  You can set for what period of time the program will be recorded.

  This function is only available when a program is being recorded.

- Go to Live TV

  While using Timeshift to view a previous scene, select Go to Live TV to return to live TV.

- Info

  Loads a window containing information about the program being recorded or Time Shift has been activated for.

- Schedule Viewing / Schedule Recording

  Add a viewing or recording schedule.

Using the Channel List

Change the channel or check programs on other digital channels.

Use the Channel List screen to change channels or see what programs are being broadcast on other digital channels.

Accessing the channel list

Press and hold the ∧/∨ (Channel) button to open the Channel List.

Using the functions on the channel list screen

The Channel List screen icons indicate the following:

- ★: A favorite channel.
- *: Information on channel safety

*: This function may not be supported depending on the model or geographical area.

The following options are accessible from the top left of the Channel List screen.

- Air / Cable

  Select Air or Cable as your preferred channel method.

  Depending on the incoming broadcast signal, this option may not be supported.

Press the left button while in the Channel List screen to access the following options:

- Edit Channels

  Edit the channels stored on your TV.

- All

  Displays all saved channels.

  The channels received to the currently selected Air or Cable are displayed.

- Samsung TV Plus

  While the TV is connected to the Internet, you can watch popular programs or highlights for each theme through a virtual channel at any time. As with regular channels, the TV provides the daily program schedules for Samsung TV Plus.

  This function may not be supported depending on the model or geographical area.

- Genre

  Select a genre to sort and display specific channels to suit your preferences.

  This function may not be supported depending on the model or geographical area.

- Favorites

  Displays favorite channels from Favorites, My List 1 through My List 4.

  It displays only the Favorites that includes the favorite channel.

Using the channel edit function

Edit the channels stored on your TV.

Accessing the channel edit screen

- Display the Guide screen, and press Edit on the left of the screen to access the edit-channel screen.
- Display the Channel List screen, and press Edit Channels on the bottom of the screen to access the edit-channel screen.

Using the channel edit functions

The Edit Channels screen icons indicate the following:

- ★: A favorite channel.

Select a channel from the Edit Channels screen to access the following options:

- Delete / Restore

  Remove or recover a registered channel.

  Once a channel is removed, it will not appear on Channel List. On the Edit Channels screen, the removed channel will appear in grey. A recovered channel will once again be visible on Channel List.

- Lock

  Set the channel to lock or unlock.

- Rename Channel

  From Edit Channels, select the channel you wish to rename and then select Rename Channel.

  Only one channel can be renamed at a time.

  Available for analog channels only.

- Save and Exit

  Save the changes made under Edit Channels and exit.

Using a Personal Favorites List

Create frequently watched channels as favorite channels.

On the Edit Channels and Channel List screens, the ★ icon appears next to favorite channels.

Creating a Favorites List

1. Access the Edit Channels screen.

   For details on how to access the channel edit screen, refer to "Accessing the channel edit screen."

2. Press the left directional button on the remote control to select the desired Favorites.
3. Press the right directional button to select Add Channels.
4. Select the desired channel in the list on the screen.
5. Press Add to add the selected channel to the favorites list.

Select Favorites, My List 1 - My List 4 on the Edit Channels screen and the following functions are available.

Up to five Favorites can be created, which allows each member of the family to create their own favorites list.

- Add Channels

  In the channel list, select one or more channels to add in the favorite list and then select Add Channels.

- Remove

  Removes one or more channels from a favorites list.

- Change order

  Changes the order of one or more channels selected in a favorites list.

- Rename Favorites

  Renames a My list.

- Save and Exit

  Saves and closes the Edit Channels screen.

TV-Viewing Support Functions

Use the functions that are available while watching TV.

Scanning for available channels

Home > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Auto Program Try Now

- Do not use this function if your TV is connected to a cable box or satellite box.
- If the TV has saved channels, Auto Program deletes the existing list, and then saves the newly scanned channels.

Using Program Rating Lock

Home > left directional button > Settings > All Settings > General & Privacy > Parental Settings > Program Rating Lock Settings Try Now

This function is useful for controlling what programs children can watch on the TV based on their ratings. Program Rating Lock Settings does not, however, block programs originating from external sources, such as Blu-ray players, DVD players, or USB files.

Every time you access Program Rating Lock Settings, you must enter the security PIN. You must also enter this PIN to watch a blocked program. To change the PIN, go to Home > left directional button > Settings > All Settings > General & Privacy > PIN Settings > Change PIN. Try Now

- Program Rating Lock Settings may not be supported depending on your input signal.
- For more information about how to set your password, refer to "Setting up a password."
- For more information about the rating system of different countries, refer to "Blocking programs based on their TV Rating."

Watching blocked / restricted programs

To watch a blocked program, enter the PIN when requested.

When initially showing a restricted program or movie, the screen is blank because the Program Rating Lock Settings blocks it. Enter the PIN to unblock the program when a message appears requesting the code.

Enable Data Service

Home > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Data Service Try Now

Access services from entertainment providers, online providers, and CE manufactures through Data Service.

This function may not be supported depending on the model or geographical area.

Some channels may not include the Data Service.

You can use the following functions:

- Data Service Try Now

  Enable or disable data services.

- Do Not Track Try Now

  Ask apps and services not to track your browsing activity.

- Private Browsing Try Now

  Enable Private Browsing to stop the browser from saving your Internet history.

- Delete Browsing Data Try Now

  Delete all saved cookies.

If you want this function enabled or disabled, use the Data Service menu item to turn it on or off.

An application on broadcast channel may malfunction temporarily depending on the circumstances of the broadcast station or application provider.

Configuring advanced broadcasting audio settings

Home > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Audio Options Try Now

Audio Options functions differently for analog and digital channels.

These functions may not be supported depending on the model or geographical area.

- Preferred Language

  This is the language you will hear while watching TV if the language is included in the broadcast signal.

- Multi-Track Sound

  You can select the multi-track sound function depending on broadcasting signal.

- Preferred Object Audio

  Configure the audio properties of the broadcast to your preferred configuration.

Setting the functions for the service provider

> left directional button > Settings > All Settings > General & Privacy > Broadcasting > Service Provider Try Now

Enable or disable the broadcast service provider feature.

This function may not be supported depending on the model or geographical area.

Viewing broadcast service provider info

> left directional button > Settings > All Settings > General & Privacy > Broadcasting > Service Provider Info & Settings Try Now

Find out who the current broadcast service provider is and look up related information.

These settings can be configured only for available Service Provider.

Using Secure Channel Viewing

> left directional button > Settings > All Settings > General & Privacy > Broadcasting > Secure Channel Viewing

Provides you with warnings about insecure channels.

This function may not be supported depending on the model or geographical area.

The icon may be displayed if an unsafe channel is selected. Information on the safety of each channel is provided in the Guide or Channel List.

Checking digital channel signal info and strength

> left directional button > Settings > Support > Device Care > Self Diagnosis > Broadcast Signal

If your TV is attached to a separate, over-the-air antenna, you can use the signal strength information to adjust the antenna for increased signal strength and improved HD channel reception.

This function is only available for digital channels.

This function may not be supported depending on the geographical area.

Picture and Sound

You can change the settings for the picture and the sound according to your preference.

Adjusting the Picture Quality

Change the Picture Mode and adjust Expert Settings.

Choosing a picture mode

> left directional button > Settings > All Settings > Picture > Picture Mode

/ > Settings > All Settings > Picture > Picture Mode Try Now

Some screen setting features may not be available on the Smart Hub Home screen.

You can select the Picture Mode that provides the best viewing experience.

Entertain and Graphic are supported only when you change the external device name to PC in PC mode.

- Dynamic

  Makes the picture brighter and clearer in bright viewing environments.

- Standard

  Is the default mode suitable for general viewing environments.

- Eco

  This screen is provided to save energy.

  This function may not be supported depending on the model or geographical area.

- Movie

  Is suitable for watching TV or movies in a dark room.

- FILMMAKER MODE

  This screen mode provides picture quality certified by UHD Alliance. The image defined as FILMMAKER MODE automatically switches to FILMMAKER MODE while watching.

  This function may not be supported depending on the model or geographical area.

  FILMMAKER MODE may look darker than other picture modes.

  You can change FILMMAKER MODE to a different Picture Mode. However, the changed Picture Mode will be maintained even after watching the picture defined by FILMMAKER MODE.

  FILMMAKER MODE™ logo is a trademark of UHD Alliance, Inc.

Configuring advanced picture settings

Home > left directional button > Settings > All Settings > Picture > Expert Settings Try Now

Configure the screen settings to your taste by using the following functions:

- Brightness Try Now

  Adjust the overall picture brightness. The higher the setting's value, the brighter the overall picture.

- Contrast Try Now

  Adjust the difference between the darkest and brightest areas between objects and their background. The higher the setting's value, the greater the difference.

- Sharpness Try Now

  Adjust the outline sharpness of objects. The higher the setting's value, the sharper the outline.

- Color Try Now

  Adjust the chroma of a video. The higher the setting's value, the darker the chroma.

- Tint (G/R) Try Now

  Adjust the color tone. The higher either value, the redder or greener the video.

- Auto HDR Remastering Try Now

  Enjoy HDR-like picture quality – even with SDR content.

  This function may not be supported depending on the model or geographical area.

- Auto HDR Remastering Pro

  Convert SDR content to be similar to HDR content, and add three-dimensionality through object analysis for each scene.

  This function may not be supported depending on the model or geographical area.

- HDR Tone Mapping Try Now

  Automatically adjusts the brightness with tone mapping processing according to the HDR content information.

  This function may not be supported depending on the model or geographical area.

- Contrast Enhancer Try Now

  Automatically adjust the contrast to prevent excessive brightness differences between brighter and darker areas.

- Shadow Detail Try Now

  Adjust the brightness of a dim picture. The higher the setting's value, the brighter the dim picture.

- Gamma Try Now

  Adjust the medium brightness of a video.

- Apply Picture Settings Try Now

  Apply the selected picture settings to the current input source or all input sources.

- Local Dimming Try Now

  Maximize the contrast ratio by automatically adjusting brightness for each section of the picture.

  This function may not be supported depending on the model or geographical area.

- Film Mode Try Now

  Touch up an old video to improve the picture quality for a better viewing experience.

  This function is only available when the input signal is TV or HDMI (1080i). The terminals and inputable signals may differ depending on the model.

- Color Space Settings Try Now

  Select a range of colors that can be expressed on the picture.

- Color Booster Try Now

  Select a range of colors that can be expressed on the picture.

  This function may not be supported depending on the model or geographical area.

- Color Booster Pro

  AI classifies colors for each scene and implements optimal color intensity accordingly.

  This function may not be supported depending on the model or geographical area.

- Color Tone Try Now

  Select an appropriate color tone, according to the viewing situation.

- White Balance Try Now

  Adjust the brightness of the colors red, green and blue so that the brightest area of the picture becomes white.

- Picture Clarity Settings Try Now

  Optimize a video that has many dynamic scenes.

  When **LED Clear Motion** or **Clear motion** is set to **On**, the screen is flashing or has become darker than when it is **Off**.

  This function may not be supported depending on the model or geographical area.

- Blue Light Reduction

  Ensure eye comfort by limiting blue light and using warmer colors.

  This function may not be supported depending on the model or geographical area.

- Picture Size Settings

  Configure the picture size settings. You can change the size of the picture displayed on the TV screen.

  This function may not be supported depending on the model or geographical area.

- Peak Brightness

  Adjust the maximum peak brightness for a brighter screen.

  This function may not be supported depending on the model or geographical area.

- Reset Picture Try Now

  Reset the picture settings to the default values.

Changing to a comfortable display mode suitable for sleep

> left directional button > Settings > All Settings > Picture > EyeComfort Mode Settings

/ > Settings > All Settings > Picture > EyeComfort Mode Settings

Some screen setting features may not be available on the Smart Hub Home screen.

Enable comfortable display mode, and adjust the mode start and end times.

The location of this function may vary depending on the model or geographical area.

This function may not be supported depending on the model.

- EyeComfort Mode

  EyeComfort Mode syncs the sunrise/sunset times and ambient light intensity. After sunset, the mode provides warmer colors and lower brightness. The sunrise and sunset times can manually be changed.

  This function may not be supported by some models, modes or apps. (e.g., Ambient Mode, Art Mode, and Game Mode).

  To use EyeComfort Mode, first you need to set the current time. Configure the Time(> left directional button > Settings > All Settings > General & Privacy > Time) setting.

  The sunrise/sunset time sync function provided in EyeComfort Mode may work differently, depending on the area and network connection.

  – EyeComfort Mode Duration

    Set the sunrise and sunset time automatically. Or you can manually select the schedule.

  – Start Time

    Set the Start Time manually.

    This function is available only when EyeComfort Mode Duration is set to Custom.

  – End Time

    Set the End Time manually.

    This function is available only when EyeComfort Mode Duration is set to Custom.

  – EyeComfort Mode Level

    Adjust the level of the EyeComfort Mode screen.

Automatically adjusting image quality

> left directional button > Settings > All Settings > Picture > Smart Calibration

Automatically adjust the picture quality of a movie to obtain the quality intended by the movie producer.

This function may not be supported depending on the model or geographical area.

To use this function, use a Smartphone that is compatible with the function. The list of compatible models is shown below.

- Galaxy models: Galaxy S, Galaxy Note, Galaxy Fold, and Galaxy Flip series models that were released after January 2019.
- iPhone models: Models with a Face ID function that were released after January 2019.

Supported models may differ depending on the situation.

Setting the Panel Care

> left directional button > Settings > All Settings > Picture > Panel Care

Adjusts settings to protect the screen.

This function may not be supported depending on the model or geographical area.

- Pixel Shift

  Moves pixels at regular intervals to prevent screen issues.

  When the Pixel Shift mode is used, some of the screen edges may move outside the screen borders and may not be visible. To fix the screen at the home position, turn off the Pixel Shift mode.

  To prevent afterimage when viewing content with a lot of static images, turn on the Pixel Shift mode.

- Adjust Logo Brightness

  Prevents screen issues by lowering the brightness of fixed images, such as logos and banners.

- Pixel Refresh

  Adjusts pixels to provide a clearer screen. Some features, such as reservation, recording, and voice recognition, do not work during Pixel Refresh.

  Run this function when there are after-images on the screen.

Setting the Viewing Environment for External Devices

You can optimize the TV for viewing specific video formats.

Using Cable Box IP Remote

> left directional button > Settings > All Settings > General & Privacy > External Device Manager > Cable Box IP Remote Try Now

Set the cable box that supports IP control to be controlled with Samsung remote control.

- This function may not be supported depending on the model.

Using Input Signal Plus

> left directional button > Settings > All Settings > General & Privacy > External Device Manager > Input Signal Plus Try Now

Expands the input signal range for HDMI connections.

- If the **Input Signal Plus** feature is turned off, HDR signals sent from an external device cannot be received.
- When you select the HDMI connector you want to use for **Input Signal Plus**, and then press the Select button to set the **Input Signal Plus** function to **On**, the TV screen may flicker.
- When you connect the TV to an external device that supports only the UHD 24 Hz or UHD 30 Hz frequency, or any FHD frequency, the **Input Signal Plus** function may not be available. In this case, turn off the **Input Signal Plus** function.
- For more information about the supported UHD resolutions, refer to "Supported Resolutions for UHD Input Signals."
- For more information about the supported 8K resolutions, refer to "Resolutions for Input Signals supported by 8K models."

Using HDMI Black Level

> left directional button > Settings > All Settings > General & Privacy > External Device Manager > HDMI Black Level Try Now

Use HDMI Black Level to adjust the black level to compensate for low black levels, low contrast, or dull colors generated by external devices connected to the TV via an HDMI cable.

- This function is only available when the input signal connected to the TV via an HDMI connector is set to RGB444.

Using Media Switching Settings

> left directional button > Settings > All Settings > General & Privacy > Media Switching Settings

Configure specific settings related to media transition.

This function may not be supported depending on the model.

- Quick Media Switching

  Quickly and seamlessly switches AV streams with different frequencies.

  This feature is available only when a device that supports fast media switching is connected.

- Picture Adjustment

  Display media images smoothly and clearly.

Configuring a Sound Mode and Expert Settings

Change the Sound Mode and adjust Expert Settings.

Choosing a sound mode

> left directional button > Settings > All Settings > Sound > Sound Mode Try Now

You can select the available sound mode that you prefer for a content type or your listening environment.

When an external device is connected, Sound Mode may change accordingly.

This function may not be supported depending on the model.

Configuring advanced sound settings

> left directional button > Settings > All Settings > Sound > Expert Settings Try Now

You can personalize the sound quality by adjusting the following settings.

Supported menu options may vary depending on the Sound Output setting.

- Balance Try Now

  Adjust the volumes of the left and right speakers to balance the sound levels.

  When the TV is used in portrait mode, the Balance function may not work properly.

- Equalizer Try Now

  Customize the TV sound by adjusting the volume of high-pitched and low-pitched sounds.

  This function is not available when the Adaptive Sound Pro or Active Voice Amplifier function is turned on.

  This function is not available when the Sound Mode function is set to Adaptive Sound, Games, or Amplify.

  The name and properties of this function may appear differently depending on the connected external device.

- HDMI-eARC Mode Try Now

  You can connect an audio device that supports eARC via HDMI-eARC. Muting occurs temporarily during device connection.

  This function may not be supported depending on the model.

- Digital Output Audio Format Try Now

  Select a digital audio output format. If you select Auto, the audio output mode automatically changes to the mode supported by the connected soundbar or A/V receiver.

  If you select the Pass-Through option, audio data is output with no processing.

  This function is available when the input source is HDMI and the receiver is connected via HDMI-eARC.

- **Digital Output Audio Delay** Try Now

  Adjust the output delay time for digital audio.

  > This function is available when the input source is HDMI and the receiver is connected via HDMI-ARC or HDMI-eARC. When the receiver can't process the input source, it may operate in the **Auto** option.

  > This function may not be supported depending on the model.

- **Dolby Atmos Compatibility**

  You can set the TV to allow Dolby Digital+ with Atmos streams that are input from external devices.

  Set to **On** if the audio device connected via HDMI (eARC) supports Dolby Atmos. The TV screen may flicker when this function is turned on or off.

  > If this function is on, set **Digital Output Audio Format** to **Auto**.

  > This function may not be supported depending on the model.

- **Dolby Atmos**

  When watching Product through the embedded speakers, the virtual surround sound effect of Dolby Atmos can be turned on or off.

  If the TV has been installed in portrait mode by using separate accessories, the virtual surround sound effect through the TV speakers does not work.

  > This function may not be supported depending on the model.

- **Auto Volume** Try Now

  Automatically adjusts the sound to a certain level when changing channels or switching to another external input.

- **Simultaneous Optical Output**

  The device connected via optical always outputs sound.

  > This function may not be supported depending on the model or geographical area.

- **Auracast**

  You can listen to the TV's audio by connecting to a Bluetooth audio device that supports **Auracast**.

  > This function may not be supported depending on the model or geographical area.

  > Some models support the **Auracast** feature. For more information about **Auracast**, refer to "Using Auracast."

- **Reset Sound** Try Now

  Reset changed sound settings.

Using the Sound Support Functions

Configure the sound settings for your TV.

Selecting speakers

Home > left directional button > Settings > All Settings > Sound > Sound Output Try Now

You can select which speakers the TV uses for audio output.

If the soundbar is connected to the TV via both HDMI and Optical, HDMI may be selected first even if you select Optical.

External speakers may not be controlled with the Samsung Smart Remote. When an external speaker is enabled, some sound menus are not supported.

Samsung TV supports the Q-Symphony function.

- Q-Symphony links speakers that support symphony to your TV speakers, to play sounds from the different speakers simultaneously, offering the ultimate surround sound experience.

This function may not be supported depending on the model.

Your Samsung TV supports a USB sound device connection.

- USB 2.0 and higher devices are supported.
- Two USB sound devices can be connected at the same time.

Make sure to connect a USB sound device directly to a USB port. (USB hubs are not supported.)

Some USB sound device models may not be compatible with the TV.

Listening to the TV through Bluetooth devices

Home > left directional button > Settings > All Settings > Sound > Sound Output > Bluetooth Speaker List

You can connect Bluetooth audio devices to the TV. They must be paired using the TV's Bluetooth function. Refer to the user manual for your audio device such as Bluetooth speaker, soundbar, and headphones for detailed connection and usage.

- If the TV fails to find a Bluetooth audio device, place the device closer to the TV, and then select Scan.
- When you turn on a paired Bluetooth audio device, the TV detects it automatically, and then displays a pop-up window. Use this pop-up window to activate or deactivate the Bluetooth audio device.
- The sound quality may be affected by the condition of the Bluetooth connection.
- Before using a Bluetooth audio device, refer to "Read Before Using Bluetooth Devices."
- On some models, you can connect and use two Bluetooth devices simultaneously.
- If multiple Bluetooth audio devices and Bluetooth input devices are simultaneously connected, sound from the audio devices may be choppy or key data from the input devices may be dropped.

  The number of Bluetooth audio devices for connection can be limited to one device, for a stable game service.
- If a call comes in while you listen to TV sound with Galaxy Buds, the Buds connects to the mobile phone and the TV sound is muted for connecting to the call.

  When the call is ended, the Buds automatically connects to the TV. This feature is supported only when the TV and mobile phone are connected to the same Samsung account.
- If the Galaxy Buds is disconnected while listening to TV sound with the Buds, the TV sound is muted.
- Some models support the Auracast feature. For more information about Auracast, refer to "Using Auracast."

Using Auto-Connect Bluetooth

Home > left directional button > Settings > All Settings > Connections > Auto-Connect Bluetooth

Automatically connects to the last Bluetooth audio device used.

- This function may not be supported depending on the model or geographical area.

Playing TV sounds by configuring Q-Symphony Settings

> left directional button > Settings > All Settings > Sound > Q-Symphony Setting

Use the Q-Symphony Setting feature to configure wired or wireless symphony settings.

- This function may not be supported depending on the model.
- Configuring wired symphony settings is possible only when an audio device that supports wired symphony functionality is connected to HDMI or Optical.
- For audio devices that support Wi-Fi and Q-Symphony, it is possible to configure wireless symphony settings.
- It is not possible to turn on wired symphony and wireless symphony modes simultaneously.
- A maximum of five audio devices can be connected simultaneously, depending on the device model and the mode setting.
- This feature may not be supported, depending on your TV model and audio device.
- This function is not supported if your TV model is The Frame and installed in portrait orientation. To use the TV in landscape orientation, set up the feature again.

If soundbars or wireless speakers that support Q-Symphony are connected, surround sound configuration can be used when the following conditions are met.

- Make sure two or more wireless speakers are connected to the same wireless network.
- An audio device that supports Wi-Fi is connected to the same wireless network as the TV.

- For details on how to connect and use an audio device that supports Wi-Fi, refer to the device user manual.
- Some wireless audio devices may not support a configuration that includes soundbars.

  If you turn on screen mirroring mode while using an audio device that supports Wi-Fi, the connection is disconnected.

Set different configurations by choosing desired audio devices.

This function may not be supported depending on the model or geographical area.

- Apply

  Set up your desired symphony configuration by selecting wired or wireless audio devices.

  – Auto Position

    The Auto Position feature automatically changes the positions of configured audio devices.

    This function may not be supported depending on the model or geographical area.

    Auto Position may not be supported, depending on the models of your wireless audio devices.

    This feature may not work, depending on the TV microphone and sound output settings.

    The perceived position may not match the actual position, depending on the obstacles and reflective characteristics at the site where the audio device is installed.

    Position recognition may fail, depending on the environment in which the audio devices are installed.

  – Adjust Position

    Change the positions of audio devices configured in Q-Symphony Mode.

    If you set a wireless audio device as a device for wireless symphony, it is possible to set a position.

    Position setting may not be supported, depending on the wireless audio device.

    For device specifications, refer to the user manual for the audio device.

  – Adjust Level

    Adjust the volume of audio devices configured in Q-Symphony Mode.

    Adjust Level may not be supported, depending on the models of your wireless audio devices.

System and Support

You can configure system and support settings, such as clock, timers, energy usage and software updates.

Using the Time Functions and the Timers

Set the current time and use the timer function.

> left directional button > Settings > All Settings > General & Privacy > Time Try Now

You can set the Time manually or automatically. Once the Clock is set, you can view the current time on the TV anytime.

You must set the clock in the following cases:

- The power cord is disconnected and then connected.
- The Clock Mode is changed from Auto to Manual.
- The TV is not connected to the network.
- No broadcast signals are received.

Setting the clock automatically

> left directional button > Settings > All Settings > General & Privacy > Time > Clock Mode > Auto

- This function works only when the TV is connected to the network or is receiving digital broadcasts through a connected antenna.
- The accuracy of the time information received may differ with the channel and signal.
- If you get your TV signal from a cable broadcast receiver/set-top box or a satellite receiver/satellite set-top box connected to an HDMI or Component port, you must set the current time manually.

Adjusting the clock for DST and time zone

Home > left directional button > Settings > All Settings > General & Privacy > Time

Sets the right time by setting Daylight Savings Time (DST) and your local time zone.

- Time Zone

  Selects your time zone.

  This function is only available when the Clock Mode is set to Auto.

  This function may not be supported depending on the model or geographical area.

- DST

  Automatically adjusts for Daylight Saving Time (DST).

  This function is only available when the Clock Mode is set to Auto.

Changing the current time

Home > left directional button > Settings > All Settings > General & Privacy > Time > Time Offset Try Now

Time Offset adjusts the time through a network connection.

This function is available only when Clock Mode is set to Auto, the TV fails to receive time information through normal broadcast signals, and the TV is connected to a network.

Setting the clock manually

Home > left directional button > Settings > All Settings > General & Privacy > Time > Clock Mode > Manual

When Clock Mode is set to Manual, you can directly enter the current date and time. Select the Date and Time by using the directional buttons on the remote control.

When power is cut off and then supplied, the settings for Date and Time are reset to deactivate the On Timer. When their settings are assigned again, the On Timer is activated.

Using the Power and Energy Saving Functions

Use the power saving functions to reduce the TV power consumption.

Reducing the power consumption of the TV

Home > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving Try Now

Reduce energy consumption by changing your power preferences and other energy-saving options.

- Energy Saving Solution Try Now

  Reduce power consumption by adjusting brightness settings.

  This function is not available when the AI Picture Mode Settings function is turned on.

- Brightness Optimization Try Now

  Automatically adjust the picture brightness based on the ambient light level.

  This function is not available when the AI Picture Mode Settings function is turned on.

  – Minimum Brightness Try Now

    When Brightness Optimization is turned on, you can manually adjust the minimum brightness of the TV screen. This function acts only when the value is less than the setting in Home > left directional button > Settings > All Settings > Picture > Expert Settings > Brightness. Try Now

    This function is not available when the AI Picture Mode Settings function is turned on.

- Motion Lighting Try Now

  Adjusts the brightness in response to on-screen movements to reduce power consumption.

  This function is not available when the AI Picture Mode Settings or Game Mode function is turned on.

- Screen Saver Try Now

  Activate a screensaver when your TV displays a still image for two hours or more.

  This function may not be supported depending on the model.

  If your TV displays the same still image for 2 minutes, Screen Saver is automatically activated. Screen Saver cannot be turned off, to ensure protection of pixels. (S8*F/S9*F/S8*H/S9*H)

- **Auto Power Saving** Try Now

  When the TV is connected to Wi-Fi, this feature checks Wi-Fi signals and remote control usage data to determine whether the TV is used. If the TV is left idle, the feature automatically switches off the screen.

  This function may not be supported depending on the model.

  This feature may not be supported, depending on the Wi-Fi router.

- **Auto Power Off** Try Now

  Automatically turns off the TV to reduce unnecessary power consumption if the TV Controller and the remote control are not used for the set period of time.

  In some regions, the Auto Power Off function may not be supported when Samsung TV Plus is operating.

- **Power Off Mode**

  Choose which screen mode you would like when the power is turned off.

  This function may not be supported depending on the model.

- **Sleep Timer**

  You can use this function to automatically shut off the TV after a pre-set period of time. You can set the sleep timer for up to 180 minutes after which it will turn off the TV.

  This function may not be supported in some viewing modes.

- **On Timer**

  You can set On Timer to turn on the TV automatically at a specific time. On Timer is only available if the Clock has been set.

  This function may not be supported depending on the model or geographical area.

- **Off Timer**

  You can set Off Timer to shut off the TV automatically at a specific time. Off Timer is only available if the Time has been set.

  To use this function, first set the Time (> left directional button > Settings > All Settings > General & Privacy > Time).

  This function may not be supported in some viewing modes.

  This function may not be supported depending on the model or geographical area.

Updating the TV's Software

View your TV's software version and update it if necessary.

⚠ DO NOT turn off the TV's power until the update is complete. The TV will turn off and on automatically after completing the software update. Video and audio settings may be reset to their defaults after a software update.

> left directional button > Settings > Support > Software Update Try Now

Updating through the network

> left directional button > Settings > Support > Software Update > Update Now Try Now

Updating from the network requires an active network connection.

Updating through a USB device

> left directional button > Settings > Support > Software Update > Update Now Try Now

After downloading the update file from the Samsung website and storing it on a USB device, connect the USB device to the TV to update.

To update using a USB device, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.

Updating the TV automatically

> left directional button > Settings > Support > Software Update > Auto Update Try Now

If the TV is connected to the network, you can have the TV's software update itself automatically while you are watching the TV. When the background update is completed, it is applied the next time the TV is turned on.

If you agree to the Smart Hub terms and conditions, Auto Update is set to On automatically. If you want this function disabled, use the Select button to turn it off.

This function may take a longer time if another network function is running concurrently.

This function requires a network connection.

Security updates information

Security updates are provided to strengthen the security of your device and protect your personal information. For more information on security updates, visit https://security.samsungtv.com.

The website supports only some languages.

Using the Parental Settings function

Configure content or app security settings.

Home > left directional button > Settings > All Settings > General & Privacy > Parental Settings Try Now

Restrict access to content or apps that require parental guidance. Locked content or apps can be accessed by entering the password.

These functions may not be supported depending on the model and geographical area.

- Parental Lock Try Now

  Enable or disable all Parental Settings.

- Program Rating Lock Settings Try Now

  This function is useful for controlling what programs children can watch on the TV based on their ratings.

  For more information, refer to "Using Program Rating Lock."

- App Lock Try Now

  Set the installed app to lock or unlock.

Audio and Video Functions for the Visually or Hearing Impaired

You can configure the functions for the visually or hearing impaired.

Running the accessibility functions

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility

Try Now

Running Accessibility Shortcuts

The Accessibility Shortcuts provide easy access to the accessibility functions. To display the Accessibility Shortcuts, press and hold the +/− (Volume) button for 2 seconds or more. You can easily turn on or turn off the functions, such as Voice Guide, Audio Description, Audio Subtitles, Audio Phone Number, Auto Picture Off, Magnification, High Contrast, Relumino Mode, Zoom Menu and Text, Grayscale, Color Inversion, SeeColors Mode, Learn TV Remote, Learn Menu Screen, Caption, Sign Language Zoom, Sign Language Guide, Learn Gesture Functions, Multi-output Audio, Slow Button Repeat, Auto Menu Sort, Accessibility Settings, etc.

- Even if the Voice Guide is set to Off or muted, the voice guide for Accessibility Shortcuts is enabled.
- The shortcut menus may not appear depending on the model or geographical area.
- The menu name may differ depending on the model.

Enabling voice guides for the visually impaired

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility > Voice Guide Settings Try Now

You can activate voice guides that describe the menu options aloud to aid the visually impaired. To activate this function, set Voice Guide to On. With Voice Guide on, the TV provides voice guides for channel change, volume adjust, information on current and upcoming programs, schedule viewing, other TV functions, and various content in the Internet, and in Search.

You can go to Voice Guide, and then press the Select button to turn the function on or off.

- The Voice Guide is provided in the language that is specified on the TV Language. However, some languages are not supported by Voice Guide even though they are listed in the TV Language. English is always supported.
- For more information about the TV Language settings, refer to "Changing the menu language."

Changing the volume, speed, pitch, and the TV background volume of the Voice Guide

You can configure the Volume, Speed, Pitch, and the TV Background Volume of the voice guide.

Enabling audio for the audio (video) description function

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Audio (Video) Description Try Now

You can activate an audio guide that provides an audio description of video scenes for the visually impaired. This function is only available with broadcasts that provide this service.

- The menu name may differ depending on the model.
- This function may not be supported depending on the model or geographical area.

Setting the audio subtitles

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Audio Screen Try Now

Hear on-screen information read aloud through voice guidance.

- This function may not be supported depending on the model or geographical area.

The TV screen is turned off but audio continues

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Auto Picture Off Try Now

Turn off the TV screen and provide only sound to reduce overall power consumption. When you press a button on the remote control other than Volume and Power while the screen is off, the TV screen turns back on. The screen automatically turns off if the Auto Picture Off feature is enabled and there is no button input for a certain period of time.

Enlarge the screen

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Magnification Try Now

Enlarge the screen to make the picture or text bigger. You can adjust the zoom level or move the zoom area by following the displayed instructions.

- This function may not be supported depending on the model or geographical area.

White text on black background (high contrast)

> left directional button > Settings > All Settings > General & Privacy > Accessibility > High Contrast Try Now

You can change Smart Hub and setting menu screens to white text on a black background and change the transparent TV menus to opaque automatically so that text can be more easily read.

If High Contrast is on, some Accessibility menus are not available.

Setting the outline emphasis feature for viewers with low vision

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Relumino Mode Settings Try Now

This feature increases the contrast and brightness of the screen and emphasizes the outlines of images, so that viewers with low vision can see the screen more clearly.

This feature is only available when the input signal is TV or HDMI. It may not be available for some videos.

This input signal may differ depending on the model and geographical area.

- Together Mode

  Shows the screen displayed when Relumino Mode is turned on and the screen displayed when the mode is turned off, side by side simultaneously.

This function may not be supported depending on the model or geographical area.

Enlarging the font (for the visually impaired)

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Zoom Menu and Text Try Now

You can enlarge the size of the font on the screen. To activate, set Zoom Menu and Text to On.

Setting the screen to black and white

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Grayscale Try Now

You can change the color of the TV screen to black and white to sharpen blurred edges caused by colors.

If Grayscale is on, some Accessibility menus are not available.

This function may not be supported depending on the model or geographical area.

Inverting the screen color

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility > Color Inversion Try Now

You can invert the colors of the text and background for the setting menus displayed on the TV screen to make it easier to read them.

- If Color Inversion is on, some Accessibility menus are not available.
- This function may not be supported depending on the model or geographical area.

Setting the color correction feature for users with color blindness

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility > SeeColors Mode Try Now

This feature helps users with color blindness experience richer colors.

Use this feature to customize the colors for your unique viewing conditions, to experience richer colors on the screen.

- When SeeColors Mode is in use, some menus are disabled.
- This function may not be supported depending on the model.

Learning about the remote control (for the visually impaired)

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility > Learn TV Remote Try Now

This function helps individuals with a visual impairment to learn the positions of the buttons on the remote control. When this function is activated, you can press a button on the remote control and the TV will tell you its name. Press the Return button twice to exit Learn TV Remote.

Learning about the TV menu

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility > Learn Menu Screen Try Now

Learn the menus on the TV screen. Once enabled, your TV will tell you the information and features of the menus you select.

Showing captions

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings Try Now

Set Caption to On to watch programs with the captions displayed.

- Captions are not displayed by programs that do not support captions.
- This function has no relationship with the features for controlling subtitles of DVD or Blu-ray players. To control DVD or Blu-ray subtitles, use the subtitle feature of the DVD or Blu-ray player and the player's remote control.

Adjusting the caption position

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Auto Caption Position

You can adjust the caption position automatically.

- This function is activated only for programs that support broadcast captions.
- This function may not be supported depending on the model.

Splitting the caption

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Separate Closed Caption Try Now

You can display the caption in the area separated from the broadcast screen.

- This feature is enabled when Digital Closed Caption is supported.

Configuring Caption Language

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Caption Language

Change caption language.

- This function may not be supported depending on the model or geographical area.

Selecting the caption language

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Caption Mode Try Now

- Default / CC1 ~ CC4 / Text1 ~ Text4

  Operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcast signal, the analog caption function may or may not work with digital channels.)

- Default / Service1 ~ Service6 / CC1 ~ CC4 / Text1 ~ Text4

  Works with digital channels. These functions may not be available in digital caption mode depending on the broadcast.

Setting the digital caption related options

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Digital Caption Options Try Now

You can change the font color, background color, size settings, and position, etc.

The foreground and background colors and opacity settings cannot be the same.

The Position function is activated only for programs that support broadcast captions.

Enlarging the sign language screen for the hearing impaired

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Sign Language Zoom Settings Try Now

You can zoom in the sign language screen when the program you are watching provides it. First, set Sign Language Zoom to On, and then select Edit Sign Language Zoom to change the position and magnification of the sign language screen.

This function may not be supported depending on the model or geographical area.

Configure Sign Language Guide options

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Sign Language Guide Settings Try Now

You can configure the size, speed, position, and mode of the sign language guide.

Listening to the TV through Bluetooth devices (for the hearing impaired)

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Multi-output Audio Try Now

You can turn on both the TV speaker and Bluetooth headphone at the same time. When this function is active, you can set the volume of the Bluetooth headphone higher than the volume of the TV speaker.

- This function may not be supported depending on the model or geographical area.
- For more information, refer to "Listening to the TV through Bluetooth devices."

Configuring the repeat settings for remote control buttons

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Remote Button Repeat Settings Try Now

You can configure the operation speed of the remote control buttons so that they slow down when you continually press and hold them. First, set Slow Button Repeat to On, and then adjust the operation speed in Repeat Interval.

Using Accessibility Shortcut Settings

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Accessibility Shortcut Settings

Set the accessibility shortcut to activate when the Volume button is pressed and held.

- This function may not be supported depending on the model or geographical area.

Using Time to Take Action

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Time to Take Action

Choose how long messages, like pop-ups, stay on screen before you take action.

- This function may not be supported depending on the model or geographical area.

Using Moving Text and Image

> left directional button > Settings > All Settings > General & Privacy > Accessibility > Moving Text and Image

Some screen effects may be limited, but this can be helpful for those sensitive to screen motion.

- This function may not be supported depending on the model or geographical area.

Using Other Functions

You can view other functions.

Changing the menu language

> left directional button > Settings > All Settings > General & Privacy > Language Try Now

Changing the Menu Style

> left directional button > Settings > All Settings > General & Privacy > Menu Style

Change the size and transparency of the menu items displayed on the screen.

This function may not be supported depending on the model or geographical area.

Checking the remote control battery level

> left directional button > Settings > All Settings > General & Privacy > Remote Control

You can check the Samsung smart remote's remaining amount of the battery.

- Remote Grip Sensor

  Alerts users so that they can hold the remote control correctly, if the remote-control grip sensor senses any incorrect orientation of the remote control. When turned off, the alert turns off.

  This function may not be supported depending on the model or geographical area.

- Power Button Option

  Set extra control options for your remote control's Power button.

  This function may not be supported depending on the model.

Adjusting the Sound Feedback volume

> left directional button > Settings > All Settings > General & Privacy > Sound Feedback

Adjust the volume of the notification sound when using menu items or selecting options.

This function may not be supported depending on the model or geographical area.

Selecting Usage or Retail Mode

Home > left directional button > Settings > All Settings > General & Privacy > Usage Mode Try Now

You can set the TV for retail environments by setting Usage Mode to Retail Mode.

- For all other uses, select Home Mode.
- Use Retail Mode only in a store. With Retail Mode, some functions are disabled, and the TV settings automatically reset after a preset amount of time.
- This function may not be supported depending on the model.

Setting up a password

Home > left directional button > Settings > All Settings > General & Privacy > PIN Settings > Change PIN Try Now

The PIN input window appears. Enter a PIN. Enter it again to confirm it.

- This function may not be supported depending on the model or geographical area.
- If you forget your PIN, you can reset it with your remote control. With the TV turned on, press the following buttons on the remote control in the order shown to reset the PIN to "0000."

  Press +/− (Volume) button. > Volume Up > Return > Volume Down > Return > Volume Up > Return.

Setting up the Samsung Account PIN Setting

Home > left directional button > Settings > All Settings > General & Privacy > PIN Settings > Samsung Account PIN Setting Try Now

Set your Samsung account PIN to protect your privacy.

- This function may not be supported depending on the model or geographical area.

Restoring the TV to the factory settings

Home > left directional button > Settings > All Settings > General & Privacy > Factory data reset Try Now

You can restore all TV settings to the factory defaults.

1. Select Factory data reset. The security PIN entry window appears.
2. Enter the security PIN, and then select Reset. All settings are then reset. The TV turns off and on again automatically and displays the Initial Setup screen.

- For more information on Factory data reset, refer to the Simple User Guide that came with the TV.
- If you skipped some steps in the initial setup, run Set Up TV (Home > left directional button > Connected Devices > TV > Press and hold the Select button > Set Up TV), and then configure the settings in the steps you skipped. This function may not be supported depending on the model or geographical area.

Controlling your Galaxy device with the keyboard and mouse

> left directional button > Settings > All Settings > Connections > Multi Control

Turn on Multi Control to connect nearby Galaxy devices and use them with your keyboard and mouse.

- To connect to nearby devices, turn on Multi Control, Wi-Fi and Bluetooth on the devices, and ensure that the devices are connected to the same wireless network and logged in with the same Samsung account.
- This function may not be supported depending on the model or geographical area.

Setting up the Button Lock

> left directional button > Settings > All Settings > General & Privacy > System Manager > Button Lock

You can set the TV Controller button lock. If this function is On, you cannot use TV Controller button.

- This function may not be supported depending on the model.

Setting up the USB Lock

> left directional button > Settings > All Settings > General & Privacy > System Manager > USB Lock

You can block connection to any external USB device.

- This function may not be supported depending on the model.

Setting up the Zero Touch Configuration

> left directional button > Settings > All Settings > General & Privacy > System Manager > Zero Touch Configuration

Set up the device via Tizen Business Manager. Before using Zero Touch Configuration, register the device at Tizen Business Manager.

- This function may not be supported depending on the model.

Setting up the SmartThings Settings

> left directional button > Settings > All Settings > General & Privacy > System Manager > SmartThings Settings

You can control the devices registered to the SmartThings cloud with remote control.

- This function may not be supported depending on the model.
- For more information, refer to "Using SmartThings."

Managing External Devices

> left directional button > Settings > All Settings > Connections > Device Connect Manager

Try Now

When you connect external devices, such as mobile devices or tablets connected to the same network as the TV so you can share content, you can view the list of allowed devices and connected devices.

- Access Notification

  Set whether to display a notification when an external device such as a mobile device or tablet attempts to connect to the TV.

- Device List

  Manage a list of external devices registered to the TV.

Using AirPlay

> left directional button > Settings > All Settings > Connections > Apple AirPlay Settings

Try Now

You can use AirPlay to view content from your iPhone, iPad, or Mac on the TV screen.

This function may not be supported depending on the model.

Using the Maintenance Mode

> left directional button > Settings > Support > Maintenance Mode

Protect your personal information while the TV is repaired or used by someone else. Once service mode turns on, access to the apps or content is blocked. To back up data in which settings are saved, connect a USB stick to the TV.

This function may not be supported depending on the model.

Using the Cold Weather Mode

> left directional button > Settings > All Settings > General & Privacy > System Manager > Cold Weather Mode

This function is supported only in The Terrace.

For more information on Cold Weather Mode, refer to the user manual that came with the TV.

The menu name may differ depending on the model.

Using Google Cast

> left directional button > Settings > All Settings > Connections > Google Cast Settings

Try Now

Cast movies, music, shows, and more from your mobile devices or computer to this TV with Google Cast.

This function may not be supported depending on the model.

Precautions and Notes

Instructions and information that you must read after installation are available for you.

Before Using the Recording and Timeshift Functions

Read these instructions before using Recording and Timeshift.

Before using the recording and schedule recording functions

Recording and schedule recording are not supported in the U.S.A. and Canada.

Recording may not be supported depending on the model or geographical area.

- To schedule a recording, set Clock Mode to Auto. Set the Time.
  - > left directional button > Settings > All Settings > General & Privacy > Time
- You can set up a maximum total of 30 Schedule Viewing and Schedule Recording entries.
- Recordings are DRM-protected and therefore cannot be played back on a computer or on a different TV. In addition, these files cannot be played back on your TV if its video circuit has been replaced.
- For a USB device for recording, it is recommended to use the USB hard disk that supports USB 2.0 or later and 5,400 rpm or higher. However, RAID-type USB hard drives are not supported.
- USB memory is not supported.
- The total recording capacity may differ with the amount of available hard drive space and the recording quality level.
- Schedule Recording requires at least 100 MB of free space on the USB storage device. Recording will stop if the available storage space falls below 50 MB while recording is in progress.
- If the available storage space falls below 500 MB while both the Schedule Recording and Timeshift functions are in progress, only the recording will stop.
- The maximum recording time is 720 minutes.
- Videos are played according to the TV settings.
- If the input signal is changed while recording is in progress, the screen will go blank until the change is made. In this case, recording will resume, but the ● button will not be available.

- When using the Record or Schedule Recording function, the actual recording may start a second or two later than the specified time.
- If the Schedule Recording function is operating while a recording is being made on an HDMI-CEC external device, the priority is given to the Schedule Recording.
- Connecting a recording device to the TV automatically deletes abnormally saved recorded files.
- If the Sleep Timer or Auto Power Off has been set, the TV will override these settings, continue to record, and turn off after the recording has ended.
  - > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Sleep Timer Try Now
  - > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Auto Power Off Try Now

Before using the timeshift function

Timeshift is not supported in the U.S.A. and Canada.

Timeshift may not be supported depending on the model or geographical area.

- For a USB device for recording, it is recommended to use the USB hard disk that supports USB 2.0 or later and 5,400 rpm or higher. However, RAID-type USB hard drives are not supported.
- USB memory or flash drives are not supported.
- The total recording capacity may differ with the amount of available hard drive space and the recording quality level.
- If the available storage space falls below 500 MB while both the Schedule Recording and Timeshift functions are in progress, only the recording will stop.
- The maximum amount of time available for the Timeshift function is 90 minutes.
- The Timeshift function is not available for locked channels.
- Time-shifted videos are played according to the TV settings.
- The Timeshift function may be terminated automatically once it reaches its maximum capacity.
- The Timeshift function requires at least 1.5 GB of free space available on the USB storage device.

Read Before Using Apps

Read this information before using Apps.

- If you want to download new apps using Apps, first sign in to your Samsung account.
- Due to the product characteristics featured on Samsung Smart Hub, as well as limitations in available content, certain features, applications, and services may not be available on all devices or in all territories. Visit https://www.samsung.com for more information on specific device information and content availability. Services and content availability are subject to change without prior notice.
- Samsung Electronics takes no legal responsibility whatsoever for any interruption of app services caused by the service provider for any reason.
- Application services may be provided in English only and available content may differ with the geographical area.
- For more information about applications, visit the applicable service provider's website.
- An unstable network connection may cause delays or interruptions. In addition, applications may terminate automatically depending on the network environment. If this occurs, check your network connection and try again.
- Application services and updates may become unavailable.
- Application content is subject to change by the service provider without prior notice.
- Specific services may differ with the version of the application installed on the TV.
- An application's functionality may change in future versions of the application. If this occurs, run the application's tutorial or visit the service provider's website.
- Depending on the service provider's policies, certain applications may not support multitasking.
- For details on how to subscribe or unsubscribe from an app, please contact the service provider.

Read Before Using the Internet Function

Read this information before using the Internet function.

- File download is not supported.
- The Internet function may not be able to access certain websites, including websites operated by certain companies.
- The TV does not support playback of flash videos.
- E-commerce for online purchases is not supported.
- ActiveX is not supported.
- Only a limited number of fonts are supported. Certain symbols and characters may not be displayed properly.
- The response to remote commands and the resulting on-screen display may be delayed while a webpage is loading.
- Loading a webpage may be delayed or suspended completely depending on the status of the participating systems.
- Copy and paste operations are not supported.
- When composing an email or a simple message, certain functions such as the font size and color selection may not be available.
- There is a limit to the number of bookmarks and the size of the log file that can be saved.
- The number of windows that can be opened concurrently is limited.
- Web browsing speed will differ with the network environment.
- Browsing history is saved from latest to oldest, with the oldest entries being overwritten first.
- Depending on the types of video/audio codecs supported, you may not be able to play certain HTML5 video and audio files.
- Video sources from PC-optimized streaming service providers may not play properly on our proprietary Internet browser.

Read before setting up a wireless network connection

Precautions for wireless network

- This Product supports the IEEE 802.11 a /b /g /n communication protocols. In addition to these communication protocols, some models support all or some of the IEEE 802.11 ac /ax protocols. Video files stored on a device connected to the Product via a Home Network may not play back smoothly.

  Some of the IEEE 802.11 communication protocols may not be supported depending on the model or geographical area.

- To use wireless network, the TV must be connected to a wireless access point or modem. If the wireless access point supports DHCP, the TV can use a DHCP or static IP address to connect to the wireless network.
- Select a channel that is not currently being used by the wireless access point. If the channel set is currently being used by the wireless access point to communicate with another device, the result is usually interference or a communications failure.
- Most wireless networks have an optional security system. To enable a wireless network's security system, you need to create a password using characters and numbers. This password is then needed to connect to a security-enabled access point.

Wireless security protocols

The TV only supports the following wireless network security protocols. The TV cannot connect to non-certified wireless access point.

- Authentication Modes: WEP, WPAPSK, WPA2PSK
- Encryption Types: WEP, TKIP, AES

In compliance with the Wi-Fi certification specifications, Samsung TVs do not support WEP or TKIP security encryption in networks running in the 802.11n mode. If the wireless access point supports WPS (Wi-Fi Protected Setup), you can connect the TV to your network using PBC (Push Button Configuration) or a PIN (Personal Identification Number). WPS automatically configures the SSID and WPA key settings.

Read Before Playing Photo, Video, or Music Files

Read this information before playing media content.

Limitations to the use of photo, video, and music files Try Now

- The TV supports Mass Storage Class (MSC) USB devices only. MSC is a class designation for mass storage devices. Types of MSC devices include external hard drives, flash card readers, and digital cameras. (USB hubs are not supported.) These kinds of devices must be connected directly to the USB port. If a USB extension cable is used or two external hard drives are used simultaneously, a USB device cannot be recognized or files contained in the device cannot be read. Do not disconnect USB devices while they are transferring files.
- When connecting an external hard drive, use the USB (HDD 5V 1A) port. We recommend that you use an external hard drive with its own power adapter.

  On models without the HDD 5V 1A marking, connect the drive to one of the USB (5V 1.0A/0.5A) ports.

  Some models do not support the HDD 5V 1A USB port. On such models that have 5V 1.0A and 5V 0.5A USB ports, connect the drive to one of those ports.
- Certain digital cameras and audio devices may not be compatible with the TV.
- If there are multiple USB devices connected to the TV, the TV might not be able to recognize some or all the devices. USB devices that use high-power input should be connect to the USB (HDD 5V 1A) port.

  Some models do not support the HDD 5V 1A USB port. On such models that have 5V 1.0A and 5V 0.5A USB ports, connect the drive to one of those ports.
- The TV supports the FAT, exFAT, and NTFS file systems.
- The maximum number of items that can be displayed in the media content list is 8,000. If the connected device has more than 8,000 files or folders in a folder, some files or folders may not be visible.
- Certain files, depending on how they are encoded, may not play on the TV.
- Certain files are not supported on all models.
- Models released in 2025/2026 do not support WMA, WMV or VC1.

Supported subtitles

Subtitle formats

Name	Format
MPEG-4 Timed text	.ttxt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
SMPTE-TT Text	.xml

Video formats with subtitles

Name	Container
Xsub	AVI
SubStation Alpha	MKV
Advanced SubStation Alpha	MKV
SubRip	MKV
VobSub	MKV
MPEG-4 Timed text	MP4
TTML in smooth streaming	MP4
SMPTE-TT TEXT	MP4
SMPTE-TT PNG	MP4

Supported image formats and resolutions

File extension	Format	Resolution
*.jpg *.jpeg	JPEG	16320 x 12240
*.png	PNG	4096 x 4096
*.bmp	BMP	4096 x 4096
*.mpo	MPO	15360 x 8640
*.heic	HEIF	16320 x 12240

- The MPO format is supported partly.
- The HEIF format is may not be supported depending on the model or geographical area.
- HEIF supports only the single image of grid type (grid) and its minimum resolution must be at least 512 pixels in width or height.

Supported music formats and codecs

File extension	Format	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Supports up to 16/24 Bit, 48/96/192 kHz, 5.1 channel
*.ogg	OGG	Vorbis	Supports up to 2 channels
*.wma	WMA	WMA	WMA is supported up to 10 Pro 5.1 channels. WMA lossless audio is not supported. Depending on the model, this may not be supported.
*.wav	wav	wav	
*.mid *.midi	midi	midi	Supports type 0 and type 1. Seek is not supported. Supports USB device only.
*.ape	ape	ape	
*.aif *.aiff	AIFF	AIFF	
*.m4a	ALAC	ALAC	

Supported video codecs (2026 models)

Find out the supported video codecs and resolution, and other information.

Supported video codecs (R8*H/M8*H/M9*H/C8*H/QN8*H/S8*H/The Frame (LS03HE)/U9***H)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="13">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="13">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="13">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160</td><td>4096 x 2160: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="6">1920 x 1080</td><td rowspan="3">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS.
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz
- Eclipsa Audio is supported for up to the IAMF V1.1 (Base-Enhanced profile).
  - The Opus core codec is supported.
  - Up to 28 channels are supported when the input audio channel has a 3rd order Ambisonics (projection mode) + 7.1.4 ch configuration.
  - Up to 14 audio elements are supported.
  - Only 48 kHz sampling frequency is supported.

Supported video codecs (QN7*H/QN1EH)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="2">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="2">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td rowspan="2">4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="9">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="5">1920 x 1080</td><td rowspan="3">60</td><td rowspan="4">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>3840 x 2160: 60
1920 x 1080: 120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td rowspan="2">3840 x 2160</td><td rowspan="2">3840 x 2160: 60
1920 x 1080: 120</td><td>80</td></tr>
<tr><td>AV1</td><td>40</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS.
- HEVC UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz
- Eclipsa Audio is supported for up to the IAMF V1.1 (Base-Enhanced profile).
  - The Opus core codec is supported.
  - Up to 28 channels are supported when the input audio channel has a 3rd order Ambisonics (projection mode) + 7.1.4 ch configuration.
  - Up to 14 audio elements are supported.
  - Only 48 kHz sampling frequency is supported.

Supported video codecs (R95H/S9*H/The Frame (LS03HW))

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="13">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="13">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="13">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="5">1920 x 1080</td><td rowspan="3">60</td><td rowspan="5">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td rowspan="2">3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>120</td><td>40</td></tr>
</table>

The specified resolution may not be supported depending on the model.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS.)
- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz
- Eclipsa Audio is supported for up to the IAMF V1.1 (Base-Enhanced profile).
  - The Opus core codec is supported.
  - Up to 28 channels are supported when the input audio channel has a 3rd order Ambisonics (projection mode) + 7.1.4 ch configuration.
  - Up to 14 audio elements are supported.
  - Only 48 kHz sampling frequency is supported.

Supported video codecs (M7*H/M1EH/U8***H)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">3840 x 2160</td><td>3840 x 2160: 30
1920 x 1080: 60</td><td>50</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>60</td><td>50</td></tr>
<tr><td>Motion JPEG</td><td rowspan="6">1920 x 1080</td><td rowspan="3">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG4 SP/ASP</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td><td rowspan="3">30</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td><td rowspan="2">3840 x 2160</td><td rowspan="2">60</td><td rowspan="2">40</td></tr>
<tr><td>AV1</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>50</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS.)
- HEVC FHD is supported up to Level 4.1.
- HEVC UHD is supported up to Level 5.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz
- Eclipsa Audio is supported for up to the IAMF V1.1 (Base-Enhanced profile).
  - The Opus core codec is supported.
  - Up to 28 channels are supported when the input audio channel has a 3rd order Ambisonics (projection mode) + 7.1.4 ch configuration.
  - Up to 14 audio elements are supported.
  - Only 48 kHz sampling frequency is supported.

Supported video codecs (QN990H)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="6">1920 x 1080</td><td rowspan="3">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>7680 x 4320</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- HEVC 8K is supported up to Level 6.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz
- Eclipsa Audio is supported for up to the IAMF V1.1 (Base-Enhanced profile).
  - The Opus core codec is supported.
  - Up to 28 channels are supported when the input audio channel has a 3rd order Ambisonics (projection mode) + 7.1.4 ch configuration.
  - Up to 14 audio elements are supported.
  - Only 48 kHz sampling frequency is supported.

Supported video codecs (2025 models)

Find out the supported video codecs and resolution, and other information.

Supported video codecs (QN1EF/Q7F (98-inch model)/Q8F (55-inch and larger models)/QN7*F/ QN8*F/S8*F/The Frame (LS03FA))

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160</td><td>4096 x 2160: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="5">1920 x 1080</td><td rowspan="3">60</td><td rowspan="5">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td><td rowspan="2">3840 x 2160</td><td rowspan="2">120</td><td rowspan="2">40</td></tr>
<tr><td>AV1</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS.
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz

Supported video codecs (QEF1/Q7F (except for 98-inch model)/Q8F (50-inch and smaller models)/QN60F)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td rowspan="2">4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="5">1920 x 1080</td><td rowspan="3">60</td><td rowspan="4">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>3840 x 2160: 60
1920 x 1080: 120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td rowspan="2">3840 x 2160</td><td rowspan="2">3840 x 2160: 60
1920 x 1080: 120</td><td>80</td></tr>
<tr><td>AV1</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Supported video codecs (U7***F/U8***F)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td>4096 x 2160: 30
1920 x 1080: 120</td><td>100</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td rowspan="6">1920 x 1080</td><td>60</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="2">60</td><td rowspan="2">60</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td><td>30</td><td>60</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td><td rowspan="3">20</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>40</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>AV1</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>60</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS.
- HEVC UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz

Supported video codecs (QN9*F/S9*F/The Frame (LS03FW)/MR95F)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="13">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="13">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="13">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="5">1920 x 1080</td><td rowspan="3">60</td><td rowspan="5">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td rowspan="2">3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>120</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

The specified resolution may not be supported depending on the model.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS.)
- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz

Supported video codecs (Q6F/BEFH)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="19">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="19">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td rowspan="2">H.264 BP/MP/HP</td><td rowspan="2">3840 x 2160</td><td>3840 x 2160: 30
1920 x 1080: 60</td><td>50</td><td rowspan="19">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>60</td><td>50</td></tr>
<tr><td>Motion JPEG</td><td rowspan="7">1920 x 1080</td><td rowspan="3">60</td><td rowspan="7">20</td></tr>
<tr><td>MPEG4 SP/ASP</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td><td rowspan="4">30</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>50</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
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Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS.)
- HEVC FHD is supported up to Level 4.1.
- HEVC UHD is supported up to Level 5.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz

Supported video codecs (F6***F/H5***F/Q5F/BEFM/BEFB)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="16">1920 x 1080</td><td>60</td><td>50</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>60</td><td>50</td></tr>
<tr><td>Motion JPEG</td><td rowspan="4">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG4 SP/ASP</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>60</td><td>50</td></tr>
<tr><td>AV1</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS)
- HEVC FHD is supported up to Level 4.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (QN900F/QN950F)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="6">1920 x 1080</td><td rowspan="3">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Supported video codecs (QN990F)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="6">1920 x 1080</td><td rowspan="3">60</td><td rowspan="6">20</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>7680 x 4320</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- HEVC 8K is supported up to Level 6.1.
- GMC 2 or above is not supported.

Audio decoders

- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- Supported sample rates are as follows (varies depending on the codec):
  - 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz

Supported video codecs (2023/2024 models)

Find out the supported video codecs and resolution, and other information.

Supported video codecs (QLED TV(except for Q6*C/Q6*D/QE1C/QE1D/Q7*C/Q7*D)/The Frame (except for 32LS03C)/The Serif/S8*C/S8*D/S9*C/S9*D/DU9/98DU8)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
3840 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160</td><td>4096 x 2160: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="5">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>120</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Supported video codecs (Q7*C, 85CU8)

File format	Container	Video codecs	Resolution	Frame rate (fps)	Bitrate (Mbps)	Audio codecs
*.avi *.mkv *.asf *.wmv *.mp4 *.mov *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.flv *.vob *.svi *.m2ts *.mts	AVI MKV ASF MP4 3GP MOV FLV VRO VOB PS TS	H.264 BP/MP/HP	3840 x 2160	3840 x 2160: 60 1920 x 1080: 120	80	AC3 LPCM ADPCM(IMA, MS) AAC HE-AAC WMA Dolby Digital+ MPEG(MP3) MPEG-H AC-4 G.711(A-Law, µ-Law) OPUS
		HEVC (H.265 - Main, Main10)	3840 x 2160	120	100	
		Motion JPEG	3840 x 2160	30	30	
		MPEG4 SP/ASP	1920 x 1080	60	70	
		Window Media Video v9 (VC1)				
		MPEG2				
		MPEG1		60	60	
		Microsoft MPEG-4 v1, v2, v3		30	20	
		Window Media Video v7 (WMV1), v8 (WMV2)				
		H.263 Sorenson				
		VP6				
		AV1	3840 x 2160	120	80	
*.webm	WebM	VP8	1920 x 1080	60	70	Vorbis
		VP9 (Profile 0, profile 2 supported)	3840 x 2160	3840 x 2160: 60 1920 x 1080: 120	80	
		AV1	3840 x 2160	120	80	
*.rmvb	RMVB	RV8/9/10 (RV30/40)	1920 x 1080	60	70	RealAudio 6

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - TV does not support FMO / ASO / RS
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (Q7*D, 85DU8)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td rowspan="2">4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="5">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - TV does not support FMO / ASO / RS
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (Q6*C/Q6*D/QE1C/QE1D (except for 32Q6*C/32Q6*D)/DU8/DUX1 (except for 85DU8/98DU8))

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>60</td><td>60</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="5">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Supported video codecs (CU8 (except for 85CU8))

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096 x 2160</td><td>4096 x 2160: 30
1920 x 1080: 120</td><td>100</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td rowspan="7">1920 x 1080</td><td>60</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="3">60</td><td rowspan="3">60</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td><td>30</td><td>60</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="3">30</td><td rowspan="3">20</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>40</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>AV1</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>100</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>60</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - TV does not support FMO / ASO / RS
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (DU6/CU7/DU7/BEC/BED, 32Q6*C/32Q6*D)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="14">*.avi
*.mkv
*.asf
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*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="2">3840 x 2160</td><td>3840 x 2160: 30
1920 x 1080: 60</td><td>50</td><td rowspan="14">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>60</td><td>50</td></tr>
<tr><td>Motion JPEG</td><td rowspan="8">1920 x 1080</td><td rowspan="4">60</td><td rowspan="8">20</td></tr>
<tr><td>MPEG4 SP/ASP</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>50</td></tr>
<tr><td>AV1</td><td>3840 x 2160</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS)
- H.264 UHD is supported up to Level 5.1. (TV does not support FMO / ASO / RS)
- HEVC FHD is supported up to Level 4.1.
- HEVC UHD is supported up to Level 5.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (The Frame (32LS03C model))

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td rowspan="18">1920 x 1080</td><td>60</td><td>50</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
OPUS
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>60</td><td>50</td></tr>
<tr><td>Motion JPEG</td><td rowspan="5">60</td><td rowspan="7">20</td></tr>
<tr><td>MPEG4 SP/ASP</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>60</td><td>40</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>60</td><td>50</td></tr>
<tr><td>AV1</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 FHD is supported up to Level 4.2. (TV does not support FMO / ASO / RS)
- HEVC FHD is supported up to Level 4.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (QN7**C)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>3840 x 2160</td><td>3840 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>1920 x 1080</td><td>60</td><td>20</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="4">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1, and H.264 FHD is supported up to Level 4.2 (TV does not support FMO / ASO / RS).
- HEVC UHD is supported up to Level 5.2, and HEVC FHD is supported up to Level 4.1.
- HEVC 8K is supported up to Level 6.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported video codecs (QN8**C/QN8**D/QN9**C)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="13">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="13">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="13">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="4">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>3840 x 2160</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Supported video codecs (QN9**D)

<table>
<tr><th>File format</th><th>Container</th><th>Video codecs</th><th>Resolution</th><th>Frame rate (fps)</th><th>Bitrate (Mbps)</th><th>Audio codecs</th></tr>
<tr><td rowspan="15">*.avi
*.mkv
*.asf
*.wmv
*.mp4
*.mov
*.3gp
*.vro
*.mpg
*.mpeg
*.ts
*.tp
*.trp
*.flv
*.vob
*.svi
*.m2ts
*.mts</td><td rowspan="15">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS</td><td>H.264 BP/MP/HP</td><td>4096 x 2160</td><td>4096 x 2160: 60
1920 x 1080: 120</td><td>60</td><td rowspan="15">AC3
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital+
MPEG(MP3)
MPEG-H
AC-4
G.711(A-Law, µ-Law)
OPUS</td></tr>
<tr><td>HEVC (H.265 - Main, Main10)</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>100</td></tr>
<tr><td>Motion JPEG</td><td>3840 x 2160</td><td>30</td><td>80</td></tr>
<tr><td>MPEG4 SP/ASP</td><td rowspan="8">1920 x 1080</td><td rowspan="4">60</td><td rowspan="8">20</td></tr>
<tr><td>Window Media Video v9 (VC1)</td></tr>
<tr><td>MPEG2</td></tr>
<tr><td>MPEG1</td></tr>
<tr><td>Microsoft MPEG-4 v1, v2, v3</td><td rowspan="4">30</td></tr>
<tr><td>Window Media Video v7 (WMV1), v8 (WMV2)</td></tr>
<tr><td>H.263 Sorenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td rowspan="3">*.webm</td><td rowspan="3">WebM</td><td>VP8</td><td>1920 x 1080</td><td>60</td><td>20</td><td rowspan="3">Vorbis</td></tr>
<tr><td>VP9 (Profile 0, profile 2 supported)</td><td>7680 x 4320</td><td>60</td><td>80</td></tr>
<tr><td>AV1</td><td>7680 x 4320</td><td>7680 x 4320: 60
3840 x 2160: 120</td><td>80</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920 x 1080</td><td>60</td><td>20</td><td>RealAudio 6</td></tr>
</table>

Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

Some third-party standards may not be supported.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The video played on the panel may have a different frame rate than the actual footage.

Video decoders

- H.264 UHD is supported up to Level 5.1.
  - Resolution is changed during video playback (Up to 3840 x 2160 is supported)
- H.264 FHD is supported up to Level 4.2.
  - TV does not support FMO / ASO / RS
- HEVC UHD is supported up to Level 5.2.
  - Resolution is changed during video playback (Up to Level 5.1 3840 x 2160 is supported)
- HEVC FHD is supported up to Level 4.1.
- HEVC 8K is supported up to Level 6.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Supported Refresh Rates

Find out the refresh rates supported by each model.

2023/2024 Models

Supported specifications may vary from region to region. Visit samsung.com for more information.

- Models that support up to 50/60 Hz
  - Q6*C, Q6*D, QE1C, QE1D, Q8*C/Q8*D (50-inch and smaller models), QN700C, DU6, CU7, DU7, BEC, BED, CU8/DU8/DUX1 (75-inch and smaller models), The Frame/The Serif (50-inch and smaller models)
- Models that support up to 120 Hz
  - Q7*C, Q7*D, Q8*C/Q8*D (55-inch and larger models), QN8**C, QN85C, QN8*D, QNX1D, QN90C (55-inch and larger models), QN90D (98-inch model), QN990C, S89CA, S8*D, S90C (83-inch model), CU8/DU8 (85-inch and larger models), DU9, The Frame/The Serif (55-inch and larger models)
- Models that support up to 144 Hz
  - S95D, S90D, QN95D, QN90D (except for 98-inch models), QN900C, QN95C, S95C, S90C (except for 83-inch model), QN90C (43/50 inches only), S89CB
- Models that support up to 165 Hz
  - QN800D, QN850D
- Models that support up to 240 Hz
  - QN900D

2025 Models

Supported specifications may vary from region to region. Visit samsung.com for more information.

- Models that support up to 50/60 Hz
  - QEF1, Q5F, Q6F, Q7F (except for 98-inch model), Q8F (50-inch and smaller models), QN8*F (50-inch model), H5***F, F6***F, U7***F, U8***F, The Frame (50-inch and smaller models), BEFM, BEFB, BEFH
- Models that support up to 120 Hz
  - S8*F, Q7F (98-inch model), QN60F, QN990F (98-inch model)
- Models that support up to 144 Hz
  - S90F, QN85F, QN80F (except for 50-inch models), QN70F, The Frame (LS03FW), The Frame (LS03FA) (55-inch and larger models), Q8F (55-inch and larger models), QN1EF, QN90F (115-inch model), MR95F
- Models that support up to 165 Hz
  - QN950F, QN900F, S95F, QN90F (except for 115-inch model)
- Models that support up to 240 Hz
  - QN990F (except for 98-inch models)

2026 Models

Supported specifications may vary from region to region. Visit samsung.com for more information.

- Models that support up to 50/60 Hz
  - QN7*H (50-inch and smaller models), QN1EH (50-inch and smaller models), QN80H (50-inch model), M7*H (50-inch and smaller models), M1EH (50-inch and smaller models), U8***H (43/50/58 inches only), The Frame (50-inch and smaller models)
- Models that support up to 120 Hz
  - S8*H, QN7*H (55-inch and larger models), QN1EH (55-inch and larger models), M7*H (55-inch and larger models), M1EH (55-inch and larger models), U8***H (55-inch model, 65-inch and larger models)
- Models that support up to 165 Hz
  - S9*H
- Models that support up to 240 Hz
  - R9*H, R8*H, QN8*H (except for 50-inch models), QN990H, C8*H, M8*H, M9*H, U9***H, The Frame (LS03HW), The Frame (LS03HE) (55-inch and larger models)

Read After Installing the TV

Read this information after installing the TV.

Picture sizes and input signals

The Picture Size is applied to the current source. The applied Picture Size will remain in effect whenever you select that source unless you change them.

Input signal	Picture size
Component	16:9 Standard, Custom, 4:3
Digital channel (720p)	16:9 Standard, Custom, 4:3
*Digital channel (1080i, 1080p)	16:9 Standard, Custom, 4:3
* Digital channel (3840 x 2160p @ 24/30 Hz)	16:9 Standard, Custom
* Digital channel (3840 x 2160p @ 50/60 Hz)	16:9 Standard, Custom
* Digital channel (4096 x 2160p)	16:9 Standard, Custom
HDMI (720p)	16:9 Standard, Custom, 4:3
* HDMI (1080i, 1080p)	16:9 Standard, Custom, 4:3
* HDMI (3840 x 2160p)	16:9 Standard, Custom
* HDMI (4096 x 2160p)	16:9 Standard, Custom
*HDMI (7680 x 4320p)	16:9 Standard, Custom
USB (720p)	16:9 Standard, Custom, 4:3
*USB (1080i/p @ 60 Hz)	16:9 Standard, Custom, 4:3
* USB (3840 x 2160p @ 24/30 Hz)	16:9 Standard, Custom
* USB (3840 x 2160p @ 60 Hz) * USB (4096 x 2160p @ 24/30/60 Hz)	16:9 Standard, Custom
*USB (7680 x 4320p @ 24/30/60 Hz)	16:9 Standard, Custom

*: This input signal may differ depending on the model and geographical area.

The input ports for external devices may differ depending on the model and geographical area.

Installing an anti-theft lock

An anti-theft lock is a physical device that can be used to protect the TV against theft. Look for the lock slot on the back of the TV. The slot has a icon next to it. To use the lock, wrap the lock cable around an object that is too heavy to carry and then thread it through the TV's lock slot. The lock is sold separately. The method of using an anti-theft lock may differ for each model. Refer to the lock's user manual for more information.

This function may not be supported depending on the model or geographical area.

Supported Resolutions for UHD Input Signals

Check the supported resolution for UHD input signals.

- Resolution: 3840 x 2160p, 4096 x 2160p

This function may not be supported depending on the model.

Refer to the "Supported Refresh Rates" section for supported refresh rates by model.

If Input Signal Plus is set to Off

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	-	-	-	O

If Input Signal Plus is set to On

- Models that support 50/60 Hz

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	O	O	O	O
	10 bit	-	-	O	O

- Models that support 120 Hz and more

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	O	O	O	O
	10 bit	O	O	O	O
120	8 bit	O	O	O	O
	10 bit	O	O	O	O

Resolutions for Input Signals supported by 8K models

Check the resolutions for input signals supported by 8K models.

This function may not be supported depending on the model.

If Input Signal Plus is set to Off

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	-	-	-	O

If Input Signal Plus is set to On

- Resolution: 3840 x 2160p, 4096 x 2160p

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	O	O	O	O
	10 bit	O	O	O	O
120	8 bit	O	O	O	O
	10 bit	O	O	O	O

- Resolution: 7680 x 4320p

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
24 / 30 / 50 / 60	8 bit	O	O	O	O
	10 bit	O	O	O	O

Supported Resolutions for FreeSync (VRR)

Check the supported resolutions for the FreeSync (VRR) signal.

When Game Mode is set to On or Auto, the FreeSync (VRR) function is activated.

FreeSync (VRR) is only available in select models.

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
1920 x 1080	120 Hz	135.000	120	297.000	progressive
2560 x 1080	120 Hz	150.000	120	495.000	progressive
2560 x 1440	120 Hz	150.000	120	495.000	progressive
3840 x 2160	120 Hz	270.000	120	1188.000	progressive
3840 x 1080	120 Hz	137.250	120	549.000	progressive
3840 x 1600	120 Hz	99.419	120	521.750	progressive
*4096 x 2160	120 Hz	270.000	120	1188.000	progressive
*7680 x 4320	60 Hz	264.000	60	2376.000	progressive

*: The resolution may not be supported depending on the model.

- Only models that support 144 Hz are supported.

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
1920 x 1080	144 Hz	166.587	144	346.500	progressive
2560 x 1080	144 Hz	172.339	144	470.830	progressive
3840 x 2160	144 Hz	323.677	144	1424.180	progressive
3840 x 1080	144 Hz	166.607	144	653.100	progressive
3840 x 1600	144 Hz	246.569	144	1035.590	progressive

- Only models that support 165 Hz are supported.

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
1920 x 1080	165 Hz	192.788	165	401.000	progressive
2560 x 1080	165 Hz	192.831	165	524.500	progressive
3840 x 2160	165 Hz	385.750	165	1543.000	progressive
3840 x 1080	165 Hz	196.502	165	1053.250	progressive
3840 x 1600	165 Hz	285.750	165	1143.000	progressive

- Only models that support 240 Hz are supported.

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
1920 x 1080	240 Hz	291.587	240	606.500	progressive
2560 x 1080	240 Hz	291.544	240	793.000	progressive
3840 x 2160	240 Hz	540.000	240	2376.000	progressive
3840 x 1080	240 Hz	291.563	240	1166.250	progressive
3840 x 1600	240 Hz	431.750	240	1727.000	progressive

Read Before Connecting a Computer (Supported Resolutions)

Check the resolutions supported for PC input signals.

When you connect your TV to a computer, set the computer's video card to one of the standard resolutions listed in the tables below. The TV will automatically adjust to the resolution you choose. Note that the optimal and recommended resolutions are 3840 x 2160 @ 60 Hz (UHD models), and 7680 x 4320 @ 60 Hz (8K models). Choosing a resolution not included in the tables can result in a blank or flickering screen or can turn on only the receiver of the remote control. Refer to the user manual of your graphics card for compatible resolutions.

- The native resolutions are 3840 x 2160 @ 60 Hz (UHD models) and 7680 x 4320 @ 60 Hz (8K models) with the Input Signal Plus set to On. The native resolution is 3840 x 2160 @ 30 Hz with the Input Signal Plus set to Off.
- The specified resolution may not be supported depending on the model.

IBM

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
720 x 400	70 Hz	31.469	70.087	28.322	- / +

MAC

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
640 x 480	67 Hz	35.000	66.667	30.240	- / -
832 x 624	75 Hz	49.726	74.551	57.284	- / -
1152 x 870	75 Hz	68.681	75.062	100.000	- / -

VESA DMT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
640 x 480	60 Hz	31.469	59.940	25.175	- / -
640 x 480	72 Hz	37.861	72.809	31.500	- / -
640 x 480	75 Hz	37.500	75.000	31.500	- / -
800 x 600	60 Hz	37.879	60.317	40.000	+ / +
800 x 600	72 Hz	48.077	72.188	50.000	+ / +
800 x 600	75 Hz	46.875	75.000	49.500	+ / +
1024 x 768	60 Hz	48.363	60.004	65.000	- / -
1024 x 768	70 Hz	56.476	70.069	75.000	- / -
1024 x 768	75 Hz	60.023	75.029	78.750	+ / +
1152 x 864	75 Hz	67.500	75.000	108.000	+ / +
1280 x 720	60 Hz	45.000	60.000	74.250	+ / +
1280 x 800	60 Hz	49.702	59.810	83.500	- / +
1280 x 1024	60 Hz	63.981	60.020	108.000	+ / +
1280 x 1024	75 Hz	79.976	75.025	135.000	+ / +
1440 x 900	60 Hz	55.935	59.887	106.500	- / +
1600 x 900	60 Hz	60.000	60.000	108.000	+ / +
1680 x 1050	60 Hz	65.290	59.954	146.250	- / +
1920 x 1080	60 Hz	67.500	60.000	148.500	+ / +

VESA CVT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
2560 x 1440	60 Hz	88.787	59.951	241.500	+ / -
2560 x 1440	120 Hz	192.996	119.998	497.750	+ / -

The resolution may not be supported depending on the model.

2560 x 1440 @ 60 Hz resolution is not supported in Game Mode.

CTA-861

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
1920 x 1080i	50 Hz	28.125	50.000	74.250	+ / +
1920 x 1080i	60 Hz	33.750	60.000	74.250	+ / +
*1920 x 1080	100 Hz	112.500	100.000	297.000	+ / +
*1920 x 1080	120 Hz	135.000	120.003	297.000	+ / +
3840 x 2160	30 Hz	67.500	30.000	297.000	- / -
*3840 x 2160	60 Hz	135.000	60.000	594.000	- / -
*3840 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*3840 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
*4096 x 2160	24 Hz	54.000	24.000	297.000	+ / +
*4096 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*4096 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*4096 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*4096 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*4096 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
*7680 x 4320	24 Hz	108.000	24.000	1188.000	+ / +
*7680 x 4320	30 Hz	132.000	30.000	1188.000	+ / +
*7680 x 4320	50 Hz	220.000	50.000	2376.000	+ / +
*7680 x 4320	60 Hz	264.000	60.000	2376.000	+ / +

*: The resolution may not be supported depending on the model.

Supported Resolutions for Video Signals

Check the resolutions supported for video signals.

CTA-861

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
720 (1440) x 576i	50 Hz	15.625	50.000	27.000	- / -
720 (1440) x 480i	60 Hz	15.734	59.940	27.000	- / -
720 x 576	50 Hz	31.250	50.000	27.000	- / -
720 x 480	60 Hz	31.469	59.940	27.000	- / -
1280 x 720	50 Hz	37.500	50.000	74.250	+ / +
1280 x 720	60 Hz	45.000	60.000	74.250	+ / +
1920 x 1080i	50 Hz	28.125	50.000	74.250	+ / +
1920 x 1080i	60 Hz	33.750	60.000	74.250	+ / +
1920 x 1080	24 Hz	27.000	24.000	74.250	+ / +
1920 x 1080	25 Hz	28.125	25.000	74.250	+ / +
1920 x 1080	30 Hz	33.750	30.000	74.250	+ / +
1920 x 1080	50 Hz	56.250	50.000	148.500	+ / +
1920 x 1080	60 Hz	67.500	60.000	148.500	+ / +
*1920 x 1080	100 Hz	112.500	100.000	297.000	+ / +
*1920 x 1080	120 Hz	135.000	120.003	297.000	+ / +
3840 x 2160	24 Hz	54.000	24.000	297.000	+ / +
3840 x 2160	25 Hz	56.250	25.000	297.000	+ / +
3840 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*3840 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*3840 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*3840 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*3840 x 2160	120 Hz	270.000	120.000	1188.000	+ / +

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
*4096 x 2160	24 Hz	54.000	24.000	297.000	+ / +
*4096 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*4096 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*4096 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*4096 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*4096 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
*7680 x 4320	24 Hz	108.000	24.000	1188.000	+ / +
*7680 x 4320	30 Hz	132.000	30.000	1188.000	+ / +
*7680 x 4320	50 Hz	220.000	50.000	2376.000	+ / +
*7680 x 4320	60 Hz	264.000	60.000	2376.000	+ / +

*: The resolution may not be supported depending on the model.

VESA CVT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
2560 x 1440	60 Hz	88.787	59.951	241.500	+ / -
2560 x 1440	120 Hz	192.996	119.998	497.750	+ / -

The resolution may not be supported depending on the model.

Read Before Using Bluetooth Devices

Read this information before using a Bluetooth device.

This function may not be supported depending on the model or geographical area.

Restrictions on using Bluetooth

- Compatibility issues may occur, depending on the Bluetooth device (A Mobile exclusive headphone may not be available, depending on the environment).
- Lip-sync errors may occur.
- The TV and Bluetooth device may disconnect, depending on the distance between them.
- A Bluetooth device may hum or malfunction:
  - When a part of your body is in contact with the receiving/transmitting system of the Bluetooth device or the TV.
  - When the device is subject to electrical variation from obstructions caused by a wall, corner, or office partitioning.
  - When the device is exposed to electrical interference from same frequency-band devices including medical equipment, microwave ovens, and wireless LANs.
- If the problem persists, we recommend you use a wired connection.
  - DIGITAL AUDIO OUT (OPTICAL) port
  - HDMI (eARC/ARC) port

Blocking programs based on their TV Rating

Read this information before viewing a blocking program.

To block content in TV Rating, select a rating category to lock. All programs at that level and higher are blocked and require the PIN to watch. To unblock a category, select the lock icon. To unblock all the categories in a row, select the lock under ALL.

This function may not be supported depending on the model or geographical area.

Categories on the left:

- TV-Y: Young children.
- TV-Y7: Children 7 and over.
- TV-G: General audience.
- TV-PG: Parental guidance.
- TV-14: Viewers 14 and over.
- TV-MA: Mature audience.

Categories on the top:

- ALL: Lock all TV ratings.
- FV: Fantasy violence.
- V: Violence.
- S: Sexual situations.
- L: Adult language.
- D: Sexually suggestive dialog.

Blocking movies based on their Motion Picture Association of America (MPAA) rating

The Movie Rating (MPAA) system applies to all materials with supplied ratings in the U.S.A.

From the MPAA:

“The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.”

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- G: General audience (no restrictions).
- PG: Parental guidance suggested.
- PG-13: Parents strongly cautioned.
- R: Restricted. Children under 17 should be accompanied by an adult.
- NC-17: No children under age 17.
- X: Adults only.
- NR: Not rated.

Blocking programs based on their Canadian English Rating

The Canadian English Rating system applies to all rated material viewed on English-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- C: Programming intended for children under age 8.
- C8+: Programming generally considered acceptable for children 8 years and over to watch on their own.
- G: General programming, suitable for all audiences.
- PG: Parental Guidance.
- 14+: Programming containing themes or content that may not be suitable for viewers under the age of 14.
- 18+: Adult programming.

Blocking programs based on their Canadian French Rating

The Canadian French Rating system applies to all rated material viewed on French-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- G: General.
- 8 ans+: Programming acceptable for children 8 years and over to watch on their own.
- 13 ans+: Programming that may not be suitable for children under the age of 13.
- 16 ans+: Programming not suitable for children under the age of 16.
- 18 ans+: Programming restricted to adults.

Blocking Programs based on their Downloadable U.S. Rating

The Downloadable U.S. Rating system only applies to material originating from US DTV channels.

Parental restriction information is automatically downloaded while you watch DTV channels. This download may take several seconds. If the information is unavailable from the broadcasting station, the Downloadable U.S. Rating menu is deactivated.

Parental restriction levels differ with the broadcasting station. The default menu name and the Downloadable U.S. Rating name changes depending on the downloaded information.

Even when the on-screen display is set to another language, the Downloadable U.S. Rating menu appears only in English.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

Licenses & Other Information

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To find the nearest recycling location, go to our website: www.samsung.com/recycling or call, 1-800-SAMSUNG

For battery recycling go to call2recycle.org or call 1-800-822-8837

Troubleshooting

The following are troubleshooting solutions for each problem.

Picture Issues

When the TV has trouble with the picture, these steps may help resolve the problem.

The screen is flashing or has become dark

If your TV is flickering or dimming sporadically, you may need to disable some of the energy efficiency features.

Disable Brightness Optimization, Energy Saving Solution, Motion Lighting, or Contrast Enhancer.

- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Brightness Optimization Try Now
- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Energy Saving Solution Try Now
- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Motion Lighting Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Contrast Enhancer Try Now

Some OLED models automatically decrease the screen brightness when the ambient temperature is high, to prevent afterimages.

Run Picture Test. When the tested image quality is normal, check the signal of the connected device.

- > left directional button > Settings > Support > Device Care > Self Diagnosis > Picture Test Try Now

The picture is not bright, or the picture colors do not look clear

If the screen appears too dim, try changing the settings under Reset Picture or disabling Brightness Optimization, Energy Saving Solution.

- > left directional button > Settings > All Settings > Picture > Expert Settings > Reset Picture Try Now
- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Brightness Optimization Try Now
- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Energy Saving Solution Try Now

Go to Picture and adjust the Picture Mode, Contrast, Brightness, and Sharpness settings.

- > left directional button > Settings > All Settings > Picture > Picture Mode Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Contrast Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Brightness Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Sharpness Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Color Try Now
- > left directional button > Settings > All Settings > Picture > Expert Settings > Tint (G/R) Try Now

The picture colors are black and white or do not look the way they should look

If the product's colors or absolute whites/blacks seem to be off, launch Picture Test.

- > left directional button > Settings > Support > Device Care > Self Diagnosis > Picture Test Try Now

If the test results indicate that the problem is not caused by the TV, do the following:

When using the One Connect Box, confirm that its video input connectors are connected to the correct external device video output connectors.

If using a component cable, ensure that the green (Y), blue (Pb), and red (Pr) cables are connected properly. Incorrect connections may cause color problems or a blank screen.

Component port may not be supported depending on the model.

Check whether Grayscale is set to On.

- > left directional button > Settings > All Settings > General & Privacy > Accessibility > Grayscale Try Now

The TV automatically turns off by itself

If your TV appears to turn off by itself, try disabling some of the TV's energy efficiency functions.

See if Sleep Timer has been enabled. The Sleep Timer automatically turns the TV off after a specified period of time.

- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Sleep Timer Try Now

If the Sleep Timer has not been enabled, see if Auto Power Off or Off Timer has been enabled and disable it.

- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Auto Power Off Try Now
- > left directional button > Settings > All Settings > General & Privacy > Power and Energy Saving > Off Timer Try Now

TV cannot be turned off.

On some models, you can turn off the TV by pressing and holding the Power button. To switch from Art mode to TV mode or vice versa, short-press the Power button when the TV is on.

Configure operation settings for the power button on the remote control in > left directional button > Settings > All Settings > General & Privacy > Remote Control > Power Button Option. This feature is set to Art/TV by default.

If you briefly press the power button on the remote control, switches to Art mode or TV mode. If you set this feature to On/Off, the TV turns on or off.

This function may not be supported depending on the model.

Unable to power on

If you are having problems powering on your TV, there are a number of things to check before calling the service department.

Confirm that the TV's power cord is connected correctly at both ends and that the remote control is operating normally.

Make sure that the antenna cable or cable TV cable is firmly connected.

If you have a cable box or satellite box, confirm that it is plugged in and turned on.

If your TV model supports the One Connect Box, check the One Connect Cable connecting the TV to the One Connect Box or check the connection between the TV and One Connect Box.

The TV remains on or does not turn on automatically.

If the surrounding area is too dark or bright, the motion sensor may not work normally. The performance of the motion sensor may be affected by the installation environment (height, tilt, obstacles). If the clothes you wear or your skin color is similar to the surrounding shading, the motion sensor may not work properly.

Motion Sensor may not be supported depending on the model or geographical area.

The TV responds to all visual changes around it (lights, displays, dogs, out-of-window changes, and other occurrences). You can adjust the response level by adjusting the sensitivity of the motion detector.

- > (top of Smart Hub Home screen) > Art > Art Options > Sleep Options > Motion Detector

Art Options can be found at the bottom of the Art home. To configure the option settings, scroll down to the far bottom.

Motion Detector may not be supported depending on the model or geographical area.

Unable to find a Channel

If your TV is not connected to a cable box or satellite box, run Auto Program.

- > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Auto Program Try Now

When using a broadcast receiver such as set-top box and IPTV, check the connection to the TV.

- > left directional button > Connected Devices > Connection Guide Try Now

When the symptom persists, contact your service provider.

The TV image does not look as good as it did in the store

Store displays are tuned to a digital UHD channel or HD channel.

Change the output resolution of your devices, such as digital broadcast receiver, IPTV, and set-top box to UHD or HD.

Be sure to use an HDMI cable to enjoy high quality videos.

- > left directional button > Connected Devices > Connection Guide > Video Device > HDMI

To connect the TV with your PC, make sure that your PC's graphic card supports UHD resolutions.

For more information about the supported UHD resolutions, refer to "Supported Resolutions for UHD Input Signals."

For more information about the supported 8K resolutions, refer to "Resolutions for Input Signals supported by 8K models."

Make sure that the set-top box or cable box supports the content or broadcast for UHD and set the resolution. For more information, contact your service provider.

When using a Samsung TV Plus channel, check the network connection. When the network speed is slow, the app may not work or the image quality may be poor.

Displayed video looks blurry

If you notice blurring or juddering on the screen, use the Picture Clarity Settings function to resolve the issue.

- > left directional button > Settings > All Settings > Picture > Expert Settings > Picture Clarity Settings Try Now

The picture is distorted

The compression of video content may cause picture distortions, especially in fast moving pictures from sports programs and action movies.

Remove and reconnect the power cord, and check the remote control battery.

If the signal reception is weak or poor, screen distortion may be visible but it is not a malfunction.

Mobile phones used close to the TV (within 3.2 ft) may cause noise on analog and digital channels.

There is a dotted line on the edge of the screen

Change Picture Size to 16:9 Standard.

- > left directional button > Settings > All Settings > Picture > Expert Settings > Picture Size Settings > Picture Size Try Now

Change the output resolution of your external device.

The picture won't display in full screen

HD channels will have black bars on either side of the screen when displaying upscaled SD (4:3) content.

Black bars will appear at the top and bottom of the screen when you watch movies that have aspect ratios different from your TV.

Adjust the picture size options on your external device or set the TV to full screen.

- > left directional button > Settings > All Settings > Picture > Expert Settings > Picture Size Settings > Picture Size Try Now

The Caption function in the TV menu is deactivated

When an external device is connected with an HDMI or Component cable, the Caption function is unavailable. Adjust the caption setting on the external device.

Captions appear on the TV screen

Turn off the Caption function in Caption Settings.

- > left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings > Caption Try Now

The HDR of the connected external device turns off

If the Input Signal Plus feature is turned on, the range of receiving HDMI input signals is expanded, allowing you to view HDR content sent from an external device.

- > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Input Signal Plus Try Now

This function may not be supported depending on the model.

Sound and Noise Issues

When the TV has difficulties with sound, these steps may help resolve the problem.

How can I connect an audio device to the TV?

The connection method, such as HDMI, Optical, Bluetooth, and Wi-Fi may differ depending on the audio device.

For more information about how to connect an audio device, run Connection Guide.

- > left directional button > Connected Devices > Connection Guide > Audio Device

There is no sound or the sound is too low at maximum volume.

Check the volume control of your TV, and then check the volume control of the external device (cable box or satellite box, DVD, Blu-ray, etc.) connected to your TV.

Check the cable connection between an external device and the TV and then try cable connection again.

The picture is good but there is no sound.

Check the Sound Output setting. If it is set to TV Speaker, check the volume setting.

- > left directional button > Settings > All Settings > Sound > Sound Output Try Now

If you are using an external device, check the device's audio output option.

For example, you may need to change your cable box's audio option to HDMI if the box connected to your TV is using an HDMI cable.

To listen to computer sound, connect an external speaker to the computer's audio output connector.

If your TV has a headphone jack, make sure there is nothing plugged into it.

Reboot the connected device by disconnecting and then reconnecting the device's power cord.

With a set-top box or cable box, check the cable connection and reboot the external device. When the symptom persists, contact your service provider.

HDMI (eARC/ARC) is connected, and there is no sound.

Check whether Digital Output Audio Format is set to Pass-Through.

If a soundbar or A/V receiver that does not support Dolby Digital+ is used and Pass-Through is selected, there is no sound when a Dolby Digital+ source is received.

It is recommended to set Digital Output Audio Format to Auto if only limited audio format is supported depending on the performance of the connected soundbar or A/V receiver.

- Home > left directional button > Settings > All Settings > Sound > Expert Settings > Digital Output Audio Format > Auto

The speakers are making an odd sound.

Run Sound Test.

- Home > left directional button > Settings > Support > Device Care > Self Diagnosis > Sound Test Try Now

Make sure that the audio cable is connected to the correct audio output connector on the external device.

For antenna or cable connections, check the Broadcast Signal. A low signal level may cause sound distortions.

- Home > left directional button > Settings > Support > Device Care > Self Diagnosis > Broadcast Signal

The sound is interrupted.

Sound quality may become affected if the wireless router is close to the Bluetooth speaker. Place the Bluetooth speaker as close as possible to the TV without obstacle between them. Do not place the wireless router close to the Bluetooth speaker body.

To minimize interruptions, we recommend a wireless access point that uses a 5 GHz or 6 GHz frequency. 5 GHz or 6 GHz may not be supported depending on the model.

When the symptom persists, it is recommended to use wired connection such as HDMI (eARC/ARC) and Optical.

Whenever a function is used on the TV or the channel is changed, the TV voices the activity. The TV explains in voice-over the video scenes displayed on the screen.

Turn off the Voice Guide function in Voice Guide Settings.

- > left directional button > Settings > All Settings > General & Privacy > Accessibility > Voice Guide Settings > Voice Guide Try Now

The TV audio is not being played through the Soundbar or A/V receiver.

Check the Soundbar or A/V receiver's power supply and its settings.

- When connecting the optical cable between the TV and Soundbar or A/V receiver, make sure that the sound output is set Receiver (Optical) on your TV.
- In case of HDMI eARC connection, make sure that it is connected to the eARC dedicated HDMI port on your TV. However, the eARC can be used only when the Soundbar or A/V receiver supports the eARC feature.

The sound is not heard clearly.

Change to an appropriate sound mode.

- > left directional button > Settings > All Settings > Sound > Sound Mode Try Now

When AI Mode and Adaptive Sound Pro are turned on, the sound effects are automatically adjusted to the surroundings.

- > left directional button > Settings > All Settings > Advanced Features > AI Mode Settings > AI Mode Try Now

This function may not be supported depending on the model.

To optimize the sound depending on the surroundings, select Adaptive Sound Pro.

- > left directional button > Settings > All Settings > Advanced Features > AI Mode Settings > AI Sound Mode Settings > Adaptive Sound Pro Try Now

This function may not be supported depending on the model.

The volume of the external device cannot be adjusted.

Check the cable connection between the TV and the external device.

When connecting an external speaker such as home theater via HDMI, make sure it is connected to the HDMI (eARC/ARC) port on the TV. Make sure that the > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Anynet+ (HDMI-CEC) is active on your TV. Try Now

If a device is connected via Optical, volume control may not be possible, depending on the device.

I want to turn the TV and audio device off and on at the same time.

When you connect the Samsung Soundbar to the TV via Bluetooth, the power turns off and on together. It may not be supported depending on the Samsung Soundbar model.

When you connect an audio device that supports HDMI eARC to the HDMI (eARC) port on the TV, the power turns off and on together.

Channel and Broadcast Issues

When the TV has difficulties receiving broadcasts, these steps may help resolve the problem.

"Weak or No Signal" displayed in TV mode or cannot find channel.

Make sure that the external device is connected securely and turned on. Move to Connected Devices to switch to other input sources.

- > left directional button > Connected Devices > Sources

When using a set-top box or cable box, check the broadcast signals or the network that is connected to the external device.

The TV is not receiving all channels.

Confirm that the coaxial cable is securely connected to the TV.

Run Factory data reset or Auto Program.

- > left directional button > Settings > All Settings > General & Privacy > Factory data reset Try Now
- > left directional button > Settings > All Settings > General & Privacy > Broadcasting > Auto Program Try Now

The captions are not provided on a digital channel.

When watching channels with the antenna cable connected, run Caption Settings.

- > left directional button > Settings > All Settings > General & Privacy > Accessibility > Caption Settings Try Now

Some channels may not have caption data.

When watching a channel on an external device such as a set-top box and cable box, turn on the caption function on the device. For more information, contact your service provider.

Broadcasting is deactivated.

Broadcasting is only available when Sources is set to TV.

Broadcasting cannot be accessed while you watch TV using a cable box or satellite box.

Broadcasting cannot be accessed while a recording is in progress or the Timeshift function is running.

Record and Timeshift may not be supported depending on the model or geographical area.

External Device Connectivity Issues

When the TV has difficulties connecting to external devices such as a PC, game console, or mobile device, these steps may help resolve the problem.

The "Mode Not Supported" message appears.

Adjust the output resolution of the external device to a resolution supported by the TV.

The video is OK but there is no audio.

If you are using an HDMI connection, check the audio output setting on your PC.

If you are using a DVI to HDMI cable, a separate audio cable is required.

To listen to the computer sound, connect external speakers to the audio output connection of the computer.

I want to connect to a PC and mobile device via screen mirroring.

To wirelessly connect the TV to your PC, read the instructions at PC > Screen Sharing (Wireless) in Connection Guide, and then try to connect.

- > left directional button > Connected Devices > Connection Guide > PC > Screen Sharing (Wireless)

Confirm that the TV and your PC are connected to the same network.

To wirelessly connect the TV to your mobile device, read the instructions at Smartphone > Screen Sharing (Smart View) in Connection Guide, and then try to connect.

- > left directional button > Connected Devices > Connection Guide > Smartphone > Screen Sharing (Smart View) Try Now

If the TV has difficulties connecting to your PC or mobile device due to surrounding radio interferences, change the frequency of the wireless access band, and then try to connect.

No screen appears when connecting the TV to an external device.

For more information about how to connect an external device, run Connection Guide.

- > left directional button > Connected Devices > Connection Guide Try Now

Make sure that the external device is connected securely and turned on. Move to Sources to switch to other input sources.

- > left directional button > Connected Devices > Sources

Using HDMI Troubleshooting, you can check the connection to HDMI cable and external devices (takes approximately 2 minutes).

- > left directional button > Connected Devices > Connection Guide > Video Device > HDMI Troubleshooting

When using a set-top box or cable box, check the broadcast signals or the network that is connected to the external device.

I want to connect to a Bluetooth speaker.

For more information on how to connect a Bluetooth speaker, see Audio Device > Bluetooth in Connection Guide.

- > left directional button > Connected Devices > Connection Guide > Audio Device > Bluetooth

The PC screen does not appear or it flickers.

When the PC screen does not appear or the PC is not recognized, check the power supply of the PC and then reconnect the HDMI cable between the PC and TV. When the symptom persists, check that the PC is in Sleep mode and then set Input Signal Plus to On.

- > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Input Signal Plus Try Now

When the set resolution is not matched, it may cause a blank or flickering screen. For the PC supported resolution, refer to "Read Before Connecting a Computer (Supported Resolutions)."

Network Issues

When the TV has difficulties connecting to the network, these steps may help resolve the problem.

Wireless network connection failed. Unable to connect to a wireless access point. Unable to connect to the network.

> left directional button > Settings > Support > Device Care > Self Diagnosis > Smart Hub Connection Test Try Now Try Now

Ensure that the network cable is connected and the router is powered on.

Connect your mobile device to the router via Wi-Fi.

Turn the router off and back on again. (Requires 2 to 3 minutes)

If a security key is required, make sure it has been entered correctly.

Unplug the TV's power cord and plug it back in or press and hold the power button for at least 3 seconds.

Make sure that there is no electromagnetic wave generating device placed between the TV and router.

If unable to establish a wireless internet connection, connect the TV to the wireless router via a LAN cable.

If the TV is able to connect to the internet normally via the cable connection, there might be a problem with the wireless router. In this case, try using a different wireless router.

Wired networks are not supported by some models.

Wired network connection failed.

Check if the LAN cable is plugged in on both ends. If it is plugged in, check if the access point is turned on. If it is on, turn it off, wait 1 or 2 minutes, and then turn it on.

Wired networks are not supported by some models.

Connected to a local network, but not to the Internet.

Connected to a local network, but not to the Internet.

Wired networks are not supported by some models.

1. Check if the Internet LAN cable is connected to the access point's external LAN port.
2. Check the DNS setting in IP Settings.
   - > left directional button > Settings > All Settings > Connections > Network > Network Status > IP Settings

Wireless One Connect Issues

Try the following solutions if you are having issues connecting to Wireless One Connect.

This function may not be supported depending on the model or geographical area.

Wireless One Connect cannot be found.

For detailed instructions on connecting to Wireless One Connect, launch Connection Guide.

- > left directional button > Connected Devices > Connection Guide > Wireless One Connect

  Check that the connected type-C power adapter and cable are the supplied adapter and cable dedicated for Wireless One Connect.

  – The device may not work properly if used with components other than those that came with the device.

Check the connection between the screen and the Wireless One Connect.

- > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status

If Wireless One Connect is left disconnected from the screen for a long period of time, automatic connection may not work properly. If the connection is disconnected, check the power supply to the Wireless One Connect, and view the LED indicator light color to check the connection.

LED Indication	Status	Description
Blue	Good	The connection is very good.
Yellow	Bad	The connection is not good. • Adjust the Wireless One Connect position. • Navigate to the Adjust (Home > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status > Adjust) menu, and adjust the Wireless One Connect position until the antenna icon color becomes blue.
Red	Very bad	The connection is very bad. • Adjust the Wireless One Connect position or reconnect it. • Navigate to the Adjust (Home > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status > Adjust) menu, and adjust the Wireless One Connect position until the antenna icon color becomes blue.
White	Power saving mode	If the screen is switched off, the Wireless One Connect is deactivated and enters power saving mode. • Turn on the screen, then the Wireless One Connect is activated and automatically connected to the screen.

For more information on Wireless One Connect installation, refer to the "Restrictions when using Wireless One Connect."

A message appears saying "Wireless One Connect is disconnected. when viewing content provided by an external input source (e.g., a terrestrial broadcast service, set-top box or game console).

The Wireless One Connect may be disconnected or turned off.

Check that the Wireless One Connect is not turned off. Turn it on and wait, then it will automatically connect.

If it is turned on but disconnected, navigate to the Adjust menu, and adjust the Wireless One Connect position until the antenna icon color becomes blue.

- Home > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status > Adjust

It automatically connects when the signal strength is sufficient.

A message appears saying "The signal strength is low. Adjust the location of your Wireless One Connect." when viewing content provided by an external input source (e.g., a terrestrial broadcast service, set-top box or game console).

The wireless signal is weak between the screen device and Wireless One Connect.

Navigate to the Adjust menu, and adjust the Wireless One Connect position until the antenna icon color becomes blue.

- > left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status > Adjust

It automatically connects when the signal strength is sufficient.

For more information on Wireless One Connect installation, refer to the "Restrictions when using Wireless One Connect."

The device does not automatically connect after position adjustment.

1. Navigate to Wireless One Connect Status (> left directional button > Settings > All Settings > Connections > Wireless One Connect > Wireless One Connect Status), and select Unpair.
2. Press and hold the PAIR button on the Wireless One Connect for 3 seconds to enter pairing mode. (In pairing mode, the LED indicator on the side of the Wireless One Connect blinks blue.)
3. Navigate to Set up Wireless One Connect(> left directional button > Settings > All Settings > Connections > Wireless One Connect > Set up Wireless One Connect), search for the device and reconnect it.

A message appears saying "Please use the enclosed Wireless One Connect power adapter to ensure proper functionality."

Use only the power adapter that came with the product, to ensure stable operation.

Anynet+ (HDMI-CEC) Issues

When Anynet+ (HDMI-CEC) isn't working, these steps may help resolve the problem.

What is Anynet+?

You can use the TV's remote control to control external devices that support Anynet+ (HDMI-CEC) and that are connected to the TV via an HDMI cable. For example, if a connected external device supports Anynet+, you can have the connected device turn on or off when you turn the TV on or off.

Anynet+ does not work. The connected device is not displayed.

Make sure the device is an Anynet+ (HDMI-CEC) device. From the settings menu on the device, check and confirm that the HDMI-CEC option is enabled.

From the TV, check and confirm that the Anynet+ (HDMI-CEC) feature is set to On.

- > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Anynet+ (HDMI-CEC) Try Now

Check and confirm that the device’s power cord is securely plugged in.

Check the device's HDMI cable connection.

Anynet+ (HDMI-CEC) cannot function under specific circumstances. (when the TV is scanning channels or performing Factory data reset)

When connecting or disconnecting an HDMI cable, turn the TV off and then back on again.

I want to start Anynet+. I also want the connected devices to turn on when the TV is turned on.

Check if the Anynet+ device is properly connected to the TV, and then select Anynet+ (HDMI-CEC) menu to see if Anynet+ (HDMI-CEC) is set to On.

- > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Anynet+ (HDMI-CEC) Try Now

I want to exit Anynet+. It is inconvenient to turn on other devices because the TV also turns on. It is inconvenient because the connected devices (e.g. set-top box) turn off together.

To turn off the Anynet+ function of a device connected to the TV, turn off the Anynet+ (HDMI-CEC) function of the device.

- > left directional button > Settings > All Settings > General & Privacy > External Device Manager > Anynet+ (HDMI-CEC) Try Now

When Anynet+ (HDMI-CEC) is turned off, the soundbar connected via the HDMI (eARC) port does not turn off and on together with the TV. To prevent a specific device connected to the TV from turning off automatically, turn off the HDMI-CEC function on a specific device connected to the TV.

The message "Connecting to Anynet+ device..." or "Disconnecting from Anynet+ device" appears on the screen.

You cannot use the remote control when the TV is configuring Anynet+ or switching to the TV viewing screen.

Use the remote control after the TV has completed the Anynet+ configuration or has switched to the TV viewing screen.

The Anynet+ device won't play.

You cannot use the play function when Factory data reset is in progress.

Remote Control Issues

When the remote control isn't working, these steps may help resolve the problem.

The remote control does not work.

The connection between the remote control and the TV may be lost.

Point the Samsung Smart Remote at the front of the TV, and then press and hold the and buttons simultaneously for 3 seconds or more.

To reset a previously connected remote control, press and hold the and buttons simultaneously for more than 3 seconds. The remote control connection is reset.

Also, if the remote control does not work properly or its response is very slow, the battery might be low or dead.

- Charge the remote control by using the USB port (C-type) on the bottom, or turn over the remote to expose the solar cell.
  - You can check remaining battery of Samsung Smart Remote with solar cell in > left directional button > Settings > All Settings > General & Privacy > Remote Control.

    This function may not be supported depending on the model.
- If the remote control has batteries, replace them with new ones.

The mobile remote control does not work.

If the TV cannot be controlled with the previously used mobile remote control, try the following methods:

- Reconnect the TV from the SmartThings app.
  - If the TV is in an offline state in the mobile SmartThings app, use the offline device diagnosis function to reconnect to the TV.
  - If the connection still fails, delete and re-register the TV from the SmartThings app.

    Register the TV using the add-device function in the mobile SmartThings app.
- Check that the TV power cable is plugged in properly.
  - If the TV power cable is not plugged in properly, the mobile remote control will display an error message and may not work.
- Use the mobile remote control close to the TV.
  - The mobile remote control may not work if it is too distant from the TV.
- Scan the QR code on the screen.
  - Press the power button at the bottom of the TV to turn it on, and scan the QR code on the screen to restart the mobile remote control.

    This function may not be supported depending on the model.

External devices cannot be operated with the TV remote control.

Check the cable connection between the TV and external devices.

When the symptom persists, set it manually in > left directional button > Connected Devices > Universal Remote Setup.

Recording Issues

When Timeshift or Schedule recording aren't working, these steps may help resolve the problem.

The Timeshift or recording function cannot be used.

Check if there is a storage device connected to the TV.

Recording will automatically stop if the signal becomes too weak.

Check the free space on the storage device.

The function will not work if there isn't enough storage space on the USB device.

Before using the recording function, be sure to read all precautions. For more information, refer to "Before Using the Recording and Timeshift Functions."

- This function is not available in the U.S.A. and Canada.
- This function may not be supported depending on the model or geographical area.

Cannot record videos received from an external device or Samsung TV Plus.

The recording function is only available for digital broadcast channels received by the TV. You cannot record videos received from an external device or Samsung TV Plus.

- This function is not available in the U.S.A. and Canada.
- This function may not be supported depending on the model or geographical area.

The "Format Device" message appears when the Timeshift or recording function is used.

To use the recording function, the storage device connected to the TV must have been already formatted.

Formatting the storage device deletes all data from it, and the storage device is formatted in NTFS.

- This function is not available in the U.S.A. and Canada.
- This function may not be supported depending on the model or geographical area.

The recorded files on the TV are not played back on a PC.

The recorded files on the TV can only be played back on the same TV. Those video files cannot be played back on a PC or other TV.

Playback may not work properly if the recording file has a problem. If the problem persists, check the recording file.

- This function is not available in the U.S.A. and Canada.
- This function may not be supported depending on the model or geographical area.

Apps

When apps aren't working, these steps may help resolve the problem.

I cannot find the app I want.

To use smart functions, you should connect to a network, agree to the terms and conditions, and log in with your Samsung account. If these settings were not configured during the initial setting process, you can configure Smart Hub settings by running Apps from the Home Screen.

- > (top of Smart Hub Home screen) > Apps

If Smart Hub settings are complete but the app you want cannot be found on the Home Screen, you can find the app from Search or Apps. To add frequently used apps to the Home Screen, run the Add to Home feature from Apps.

- > (top of Smart Hub Home screen) > Apps > App Settings > List of installed apps > Add to Home

I launched an app, but it's in a different language. How can I change the language?

Languages supported by an app may be different from the TV Language set in the menu.

The ability to change the language depends on the app's provider. Change the language from the settings menu in the app.

The app does not work properly. Its image quality is poor.

Check the network connection. When the network speed is slow, the app may not work or its image quality may be poor.

Uninstall and reinstall the app. For more information about app uninstallation, refer to "Managing installed apps."

The services of your application are not provided by the TV but by the application service provider.

Refer to the Help section on the application service provider's website.

The Smart Hub Home Screen keeps appearing whenever you turn on the TV.

Turn off the Start with Smart Hub Home function in Start Screen Option.

- > left directional button > Settings > All Settings > Advanced Features > Start Screen Option > Start with Smart Hub Home Try Now

Media Files

When files don't play, this may help resolve the problem.

Some files are interrupted during playback.

This problem may occur with unsupported files or high-bitrate files. Most files can be played back, but some files may not play smoothly.

Some files can't be played.

Some files that use an unsupported codec may not be played back.

Make sure that the codec is supported by the TV. For more information, refer to "Read Before Playing Photo, Video, or Music Files."

Voice Assistant Issues

When the Voice Assistant isn't working, these steps may help resolve the problem.

The microphone is off.

Turn on the microphone switch at the bottom of the TV. Each time the switch is turned on or off, the screen displays a pop-up window showing whether the microphone is turned on or off.

- If the microphone is turned off, all voice recognition features and some sound features involving the microphone do not work.
- The position and appearance of the microphone switch may differ depending on the model.
- This function may not be supported depending on the model or geographical area.

The voice commands do not work well.

Voice commands may differ depending on the Voice Assistant. Refer to the command examples for each Voice Assistant.

- Bixby: > Discover Bixby
- Amazon Alexa: > left directional button > Settings > All Settings > Advanced Features > Voice > Amazon Alexa Settings Try Now

- This function and Voice Recognition Solution Partner may not be supported depending on the model or geographical area.
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Bixby/Alexa answers although I did not call it.

The TV may recognize an ambient noise or everyday conversation as a call to Voice Assistant.

Turn off the Hands-free wake-up function or set the Wake-Up Sensitivity to Low.

- > left directional button > Settings > All Settings > Advanced Features > Voice > Bixby Settings > Voice Wake-up
- > Bixby Settings > Voice Wake-up

- This function and Voice Recognition Solution Partner may not be supported depending on the model or geographical area.
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

I spoke "Hi, Bixby/Alexa" but Bixby/Alexa does not answer.

When the TV is far from you or the ambient noise is so loud, the TV may be unable to recognize your voice.

- For best results, you need to be within 10 feet (3-4 m) of your TV. Please look at your TV screen and speak.

Turn on the Hands-free wake-up function.

- > Bixby Settings > Voice Wake-up > Hands-free wake-up

This function and Voice Recognition Solution Partner may not be supported depending on the model or geographical area.

The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Voice recognition does not work with the Samsung Smart Remote unlike other features. There is no response even if the Voice Assistant button is pressed.

The connection between the remote control and the TV may be lost. Try pairing the remote control with the TV.

Point the Samsung Smart Remote at the front of the TV, and then press and hold the and buttons simultaneously for 3 seconds or more.

To reset a previously connected remote control, press and hold the and buttons simultaneously for more than 3 seconds. The remote control connection is reset.

Also, if the remote control does not work properly or its response is very slow, the battery might be low or dead.

- Charge the remote control by using the USB port (C-type) on the bottom, or turn over the remote to expose the solar cell.
  - You can check remaining battery of Samsung Smart Remote with solar cell in > left directional button > Settings > All Settings > General & Privacy > Remote Control.

    This function may not be supported depending on the model.
- If the remote control has batteries, replace them with new ones.

During voice recognition, the heavy load message appears and the function does not work.

Unplug and then plug the TV power cord and then try again after 1 minute and 30 seconds. It may take a while if the voice recognition server is being inspected.

I want to see weather information of the desired area.

Say with the area name included.

Other issues

Use these procedures to resolve other issues that may occur in relation to the product.

The TV is hot.

Watching TV for an extended period of time causes the panel to generate heat.

The heat from the panel is dissipated through internal vents running along the top of the TV.

The bottom, however, may feel hot to the touch after extended use.

Children watching TV need constant adult supervision to prevent them from touching the TV.

This heat, however, is not a defect and does not affect the TV's functionality.

The TV smells like plastic.

This smell is normal and will dissipate over time.

The settings are lost after 5 minutes or every time the TV is turned off.

If Usage Mode is set to Retail Mode, the TV's audio and video settings are automatically reset every 5 minutes.

Change Usage Mode to Home Mode.

- > left directional button > Settings > All Settings > General & Privacy > Usage Mode > Home Mode

This function may not be supported depending on the model or geographical area.

The TV is tilted to the side.

Remove the base stand from the TV and reassemble it.

The stand is wobbly or crooked.

Refer to the Unpacking and Installation Guide and make sure that the stand is assembled correctly.

I want to know how to attach and remove the TV stand.

For details on how to attach the stand, refer to the Unpacking and Installation Guide.

To remove the stand, follow the attachment steps in reverse order.

The Unpacking and Installation Guide can be downloaded from the Samsung Electronics website at https://www.samsung.com/support/.

A POP (TV’s internal banner ad) appears on the screen.

Change Usage Mode to Home Mode.

- > left directional button > Settings > All Settings > General & Privacy > Usage Mode > Home Mode

This function may not be supported depending on the model or geographical area.

The screen is off, but I hear noise.

Even when the screen is off, noise may be heard if the product performs tasks in the background. Noise will not be heard after the tasks are completed.

- For example, noise may be heard when SmartThings is operating or the network is reconnected through Wi-Fi

The TV is making a popping noise.

The expansion and contraction of the TV's outer casing may cause a popping noise.

This does not indicate a product malfunction.

The TV is safe to use.

The TV is making a humming noise.

Your TV utilizes high-speed switching circuits and high levels of electrical current. Depending on the TV's brightness level, the TV may seem slightly noisier than a conventional TV.

Your TV has undergone strict quality control procedures that meet our demanding performance and reliability requirements.

Some noise coming from the TV is considered normal and is not an acceptable cause for an exchange or refund.

The TV narrates the screen events in voice-over.

To turn off Voice Guide, move the focus from Accessibility Shortcuts to Voice Guide and then press the Select button. You can turn on or off Voice Guide. To run Accessibility Shortcuts, see the following:

- Press and hold the +/− (Volume) button on your Samsung Smart Remote or Remote Control.

Diagnosing TV operational issues

You can diagnose issues with your TV and Smart Hub and run reset functions.

Self Diagnosis

> left directional button > Settings > Support > Device Care > Self Diagnosis Try Now

Check whether the product is displaying images and playing sounds normally. Check whether modules and sensors are working normally. You can also configure settings related to Smart Hub reset.

Some functions may not be supported depending on the model or geographical area.

- Power

  View information on the power supply history.

- Video Test

  Play test videos to check for problems with the screen.

- Sound Test

  Play test sounds to check the sound quality.

- Smart Hub Connection Test

  Check the network connection.

- Bluetooth

  Check whether the Bluetooth module is working normally.

- Acceleration Sensor

  Check whether the Acceleration Sensor is working normally.

- Mic Test

  Check whether the microphone module is working normally.

- HDMI Test

  Check the external device signal, signal history and HDMI cable connection, and check for an HDMI-CEC connection that is functioning abnormally.

- SW Version Information

  Check the currently installed software version, and update the software to the latest version, if necessary.

- Wireless One Connect Test

  Check the Wireless One Connect power supply and connection, and check that it operates properly.

- Picture Test

  Use test photos to check for problems with the screen.

- Remote Control

  Check for problems with the Remote Control connection or buttons.

- Wi-Fi

  Check whether the Wi-Fi module is working normally. The result may appear to be a failure if there is no available access point (AP) in the vicinity.

- IoT Module

  Check whether the IoT Module is working normally.

- Light sensor

  Check whether the light intensity sensor is working normally.

- Broadcast Signal

  Check the condition of the current broadcast signal.

Cannot select Broadcast Signal in Self Diagnosis.

Verify that the current channel is a digital channel.

Broadcast Signal is only available for digital channels.

- > left directional button > Settings > Support > Device Care > Self Diagnosis > Broadcast Signal

Reset Smart Hub

Resets all Smart Hub settings to their factory defaults and deletes all information related to Samsung accounts, linked service accounts, Smart Hub service agreements, and Smart Hub applications.

- > left directional button > Settings > Support > Device Care > Reset Smart Hub Try Now

Reset picture

Resets current picture settings to the default settings.

- > left directional button > Settings > All Settings > Picture > Expert Settings > Reset Picture Try Now

Reset sound

Resets current sound settings to the default settings.

- > left directional button > Settings > All Settings > Sound > Expert Settings > Reset Sound Try Now

Getting Support

Get help directly from Samsung if you have a problem with your TV.

Getting support through Remote Management

Home > left directional button > Settings > Support > Remote Management Try Now

After consenting to our service agreement, you can use Remote Management to access Remote Support and have a Samsung service technician diagnose your TV, correct problems, and update your TV's software remotely via the web. You can also turn Remote Management on and off.

This function requires a network connection.

Finding the contact information for service

Home > left directional button > Settings > Support > About TV Try Now

You can view the address of the Samsung website, the call center phone number, your TV's model number, your TV's software version, Open Source License and other information you may need to get service support from a Samsung call agent or the Samsung website.

Press Edit Name to change the unique TV name to be shown on the network.

You can also view information by scanning the QR code of your TV.

You can also start this function by pressing and holding the button for 5 or more seconds. Continue holding the button until the customer information pop-up window appears.

Requesting service

Home > left directional button > Settings > Support > Device Care > Request Support Try Now

You can request service when you encounter a problem with the TV. Select the item matching the problem that you encountered, enter the required item, move the focus to Next, and then press the Select button. Select Request Now > Send or Schedule Appointment > Request > Send. Your service request will be registered. The Samsung Contact Center will contact you to set up or confirm your service appointment.

You must agree to the terms and conditions for the service request.

This function may not be supported depending on the geographical area.

This function requires a network connection.

Accessibility Guidance

Provides a menu and a remote control guide that aid the visually impaired.

Learn Menu Screen

Once "Learn Menu Screen" is enabled, your TV will tell you the information and features of the menus you select.

Using the Remote control

You can see the description of the buttons on the Samsung Smart Remote or Remote Control.

The Samsung Smart Remote may not be supported depending on the model or geographical area.

Orientation of the Samsung Smart Remote or Remote Control

Hold the remote control with the buttons facing towards you. The side with the button in the upper left is the top of the remote control.

Description of the Samsung Smart Remote or Remote Control

The images, buttons, and functions of the remote control may differ with the model or geographical area.

From top to bottom and left to right:

- The button is at the top left.
- Of the three buttons below the button on the Bluetooth-connected Samsung Smart Remote, the left one is the button, the center one is the button, and the right one is the button.
  - The button may not be provided, depending on the model or geographical area.
- There is a small LED (microphone) to the right of the button on the Bluetooth-connected Samsung Smart Remote, which is not noticeable by hand.
- If you press the button and then select the numeric/color button and press the right directional button, while viewing a program, the Recordings, Schedule Manager, Timeshift, Stop (when Record or Timeshift is running), Info, red, green, yellow and blue options appear.
  - Record and Timeshift may not be supported depending on the model or geographical area.
  - This function may not be supported depending on the geographical area.
- Press the button to receive recommendations for related information and content and be provided with AI apps or services.
  - The type of recommended information may differ, depending on the content provider.
  - This function may not be supported depending on the model or geographical area.
  - Available services may differ, depending on the software version.

- Of the 2 buttons below the button on the Remote Control that comes with M70H/U8000F/U8000H, the left one is the button and the right one is the button.
- You can access Setting menu / virtual numeric pad / Color buttons / Option pad / SmartThings directly. Displays a virtual numeric keypad on the screen for use when typing in numbers. Use the button to access function-specific additional features which vary depending on the function running on the product.
- Below the two (or three) buttons below the button is the directional button featuring an inner ring and an outer ring. The inner ring is the Select button, and the outer ring is a four-way (up, down, left, and right) directional button.
- Underneath the directional button are 3 buttons, one on the left, one on the right, and one in the center. The one on the left is the button and the one on the right is the button. The round button in the middle is the button.
- If you press the button while watching a TV program, the screen you are watching stops and a control bar appears. You can select Rewind, Play, Pause, Fast Forward, Stop Timeshift, Record, Go to Live TV, or Info. You can press the up directional button to go to the playback screen and check the time that the actual broadcast program is running and the timeshift time.

  > You can use the Slow Rewind or Slow Forward functions when you select the Pause option.

  > To use Record or Timeshift, you must connect a USB device.

  > This function may not be supported depending on the model or geographical area.

- Underneath the button are 2 thin horizontal buttons. These buttons protrude higher above the surface than the other buttons on the remote control. The one on the left is the volume button and the one on the right is the channel button. Push up from beneath or down from above to use these as rocker buttons to change the channel or volume.
  - Briefly press the +/− (Volume) button to mute the sound.
  - Press and hold the +/− (Volume) button to open the Accessibility Shortcuts menu.
  - Briefly press the ∧/∨ (Channel) button to open the Guide.
  - Press and hold the ∧/∨ (Channel) button to open the Channel List.

  > This function may not be supported depending on the model or geographical area.

Using the Accessibility Menu

View how to use the Accessibility functions and descriptions on their functions.

This function may not be supported depending on the model or geographical area.

Running the Accessibility Shortcuts menu

You can turn on or turn off the accessibility functions such as Voice Guide, Audio Description, Audio Subtitles, Auto Picture Off, Magnification, High Contrast, Relumino Mode, Zoom Menu and Text, Grayscale, Color Inversion, SeeColors Mode, Caption, Sign Language Zoom, Sign Language Guide, Slow Button Repeat, Auto Menu Sort, and you can move to the Learn TV Remote, Learn Menu Screen, Learn Gesture Functions, Multi-output Audio, Accessibility Shortcut Settings, Time to Take Action, Moving Text and Image, and Accessibility Settings pages.

The menu name may differ depending on the model.

- Samsung Smart Remote / Remote Control

  On the Samsung Smart Remote or Remote Control, there are 2 thin horizontal rocker buttons next to each other located slightly below the middle of the remote. The one on the left is the volume button. Press and hold the volume button to open the Accessibility Shortcuts menu.

  Even if the Voice Guide is set to Off or muted, when you press and hold the volume button, the voice guide for Accessibility Shortcuts is enabled.

Running the Accessibility menu functions using the General menu

Home > left directional button > Settings > All Settings > General & Privacy > Accessibility

Try Now

You can also go to the Accessibility menu from the TV settings menu. This provides more options, for example, to change the speed of Voice Guide.

The TV will not verbalize this menu unless Voice Guide is already turned on.

1. Press the Home button.
2. Use the directional buttons to move the focus to the Settings at the top left of the screen.
3. Press the Select button and navigate to All Settings. Press Select to load the TV's Set menu.
4. Press the down directional button to reach General & Privacy, and then press the Select button to open this menu.

5. Place the focus on Accessibility, and press the Select button to open the menu.
6. The menu will appear with Voice Guide Settings as the first selection. Highlight Voice Guide Settings, and then press the Select button.
7. A menu appears with the options to change Voice Guide, Volume, Speed, Pitch, and TV Background Volume.
8. Select the menu using the directional buttons, and then press the Select button.

The menus are activated when Voice Guide is on.

Running the Accessibility menu functions using Bixby

This function is available only if Voice Assistant is set to Bixby. (> left directional button > Settings > All Settings > Advanced Features > Voice > Voice Assistant) Try Now

Bixby may not be supported depending on the model or geographical area.

To use Bixby, the TV must be set up and tuned and must be connected to the network. You can connect the TV to the network during the initial setup or do it later through the settings menu.

There are many commands you can say to control the TV. These can be used together with Voice Guide to give you voice input and voice output. You can use the Samsung Smart Remote but the TV must be connected to the network.

To speak a command, press and hold the button (located near the top right of the Samsung Smart Remote, directly right the button) and say the command, and then release the button. The TV will confirm the command.

For example you can:

- Turn Voice Guide on

  Press the button on the Samsung Smart Remote, and then say "**Voice Guide on**."

- Turn Audio (Video) Description on

  Press the button on the Samsung Smart Remote, and then say "**Video Description on**" or "**Audio Description on**."

- Turn High Contrast on

  Press the button on the Samsung Smart Remote, and then say "**High Contrast on**."

The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Learning about the Accessibility menu functions

- Voice Guide Settings

  Provides voice guides to make it easier for the visually impaired to use the TV. Voice guide supports basic operations such as changing channels and adjusting the volume, provides voice descriptions about the current broadcast and the following broadcast, and offers guidance on setting up Scheduled Viewing events. The feature also provides voice descriptions on Internet, Search, and other smart services.

  Move to Voice Guide and press the Select button to enable/disable the feature.

- Audio Description

  This feature provides commentary about what's happening in the scene as assistance for the visually impaired.

  However, the feature must be supported by the broadcast you are watching.

- Audio Screen

  Hear on-screen information read aloud through voice guidance.

  This function may not be supported depending on the model or geographical area.

  – Audio Subtitles Settings

    This feature is intended for visually impaired viewers and audibly reads captions displayed on video content. You can change the volume or speed of audible captions.

    This function may not be supported depending on the model or geographical area.

  – Audio Phone Number

    Phone numbers in shopping content are automatically detected and read aloud through voice guidance.

    This function may not be supported depending on the model or geographical area.

- Auto Picture Off

  Turn off the TV screen and provide only sound to reduce overall power consumption. When you press a button on the remote control other than Volume and Power while the screen is off, the TV screen turns back on.

- Magnification

  Enlarge the screen to make the picture or text bigger. You can adjust the zoom level or move the zoom area by following the displayed instructions.

  This function may not be supported depending on the model or geographical area.

- High Contrast

  To display all menus with an opaque black background and a white font, providing maximum contrast.

  If High Contrast is on, some Accessibility menus are not available.

- Relumino Mode Settings

  This feature increases the contrast and brightness of the screen and emphasizes the outlines of images, so that viewers with low vision can see the screen more clearly.

  This feature is only available when the input signal is TV or HDMI. It may not be available for some videos.

  This input signal may differ depending on the model and geographical area.

  – Together Mode

    Shows the screen displayed when Relumino Mode is turned on and the screen displayed when the mode is turned off, side by side simultaneously.

  This function may not be supported depending on the model or geographical area.

- Zoom Menu and Text

  You can enlarge important elements on the menu such as the names of programs.

- Grayscale

  You can change the color of the TV screen to black and white to sharpen blurred edges caused by colors.

  If Grayscale is on, some Accessibility menus are not available.

  This function may not be supported depending on the model or geographical area.

- Color Inversion

  You can invert the colors of the text and background displayed on the TV screen to make it easier to read the text.

  If Color Inversion is on, some Accessibility menus are not available.

  This function may not be supported depending on the model or geographical area.

- SeeColors Mode

  This feature helps users with color blindness experience richer colors.

  Use this feature to customize the colors for your unique viewing conditions, to experience richer colors on the screen.

  When SeeColors Mode is in use, some menus are disabled.

  This function may not be supported depending on the model.

- Learn TV Remote

  Learn the names and functions of the buttons on remote control. On this screen, pressing the power button (top left button) will turn off the TV, but when any other button is pressed the TV will say the button name and briefly tell what that button does. This teaching mode helps you to learn the location and operation of the buttons on the remote without affecting normal TV operation. Press the ↩ button twice to exit Learn TV Remote.

  This function may not be supported depending on the model.

- Learn Menu Screen

  Learn the menus on the TV screen. Once enabled, your TV will tell you the information and features of the menus you select.

- Caption Settings

  You can view the caption in programs that provide broadcast captions.

  Some functions may not be supported depending on the model or geographical area.

  When watching a channel on an external device such as a set-top box and cable box, turn on the caption function on the device. For more information, contact your service provider.

  – Auto Caption Position

    Automatically adjust the caption position.

  – Separate Closed Caption

    You can see the caption separated from the broadcast image. The captions from the broadcaster are classified into *open caption and *closed caption. Two types of captions can overlap when both are used.

    This feature is enabled when Digital Closed Caption is supported.

    *open caption: Included in content. You cannot turn on or off its display.

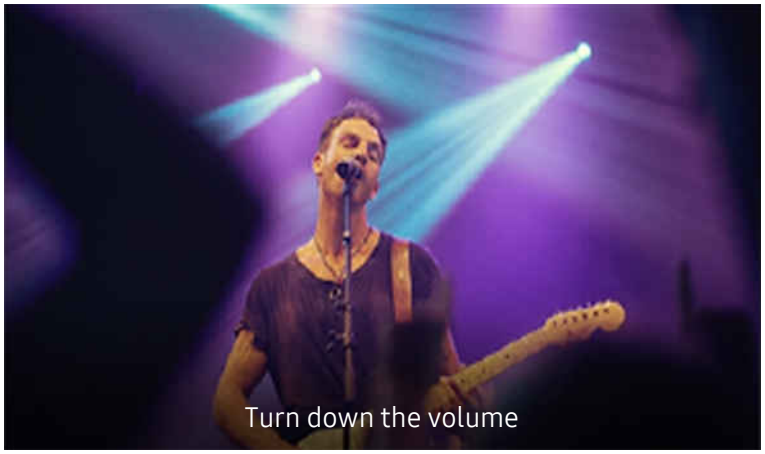
    *closed caption: You can turn on or off its display.

    At this time, you can use this function to separate the caption from the broadcast image, which allows you to see the closed caption without interruption.

    - On: Displays the screen with a separate caption area.



- Off: Displays the caption on the screen.



– Caption Language

  Change caption language.

– Caption Mode

  You can select a desired caption mode from the list.

– Digital Caption Options

  You can set the caption display details.

  > The Position function is available only in the programs that provide captions. Your TV supports the caption from the broadcaster. Using this function, the caption can be positioned on a desired location. It can be used by the hearing impaired for convenience.

- Sign Language Zoom Settings

  You can zoom in the sign language screen when the program you are watching provides it. Set Sign Language Zoom to On and then adjust the window's position and aspect ratio under Edit Sign Language Zoom.

  > This function may not be supported depending on the model or geographical area.

- Sign Language Guide Settings

  Provides a description of menu items with sign language.

- Multi-output Audio

  You can turn on both the TV speaker and Bluetooth headphone designed for the hearing impaired at the same time. The hearing impaired can then set the volume of their Bluetooth headphone higher than the volume of the TV speaker without affecting the volume of the TV speaker, allowing both the hearing impaired and their families to listen to the TV at comfortable sound levels.

  This function may not be supported depending on the model or geographical area.

- Remote Button Repeat Settings

  You can configure the operation speed of the remote control buttons so that they slow down when you continually press and hold them.

- Auto Menu Sort

  Automatically sorts your frequently used menu items.

  This function may not be supported depending on the model or geographical area.

- Accessibility Shortcut Settings

  Set the accessibility shortcut to activate when the Volume button is pressed and held.

  This function may not be supported depending on the model or geographical area.

- Time to Take Action

  Choose how long messages, like pop-ups, stay on screen before you take action.

  This function may not be supported depending on the model or geographical area.

- Moving Text and Image

  Some screen effects may be limited, but this can be helpful for those sensitive to screen motion.

  This function may not be supported depending on the model or geographical area.

Using the TV with Voice Guide on

Turn on Voice Guide that describes the menu options aloud to aid the visually impaired.

Changing channel

There are 3 ways to change the channel. Every time you change channels, the new channel details will be announced. The ways to change the channel are below.

- Channel List

  Press and hold the ∧/∨ (Channel) button to open the Channel List. Use the up or down directional button to move to a channel and press the Select button.

- ∧/∨ (Channel) button

  Of the 2 buttons that protrude from the center of the Samsung Smart Remote or Remote Control, the right one is the ∧/∨ (Channel) button. Push up or pull down the ∧/∨ (Channel) button to change the channel.

- Number button

  Use the or button on the Samsung Smart Remote or Remote Control to open the virtual numeric pad, enter a number, and then select Done.

Using on-screen number entry via the Samsung Smart Remote or Remote Control

Use the virtual numeric pad to enter numbers (e.g., to enter a channel number or to enter a PIN).

Press the or button on the Samsung Smart Remote or Remote Control and the virtual numeric pad with 2 rows appears on screen. Voice Guide speaks "**virtual numeric pad, 6**" which indicates that the number strip is on screen and the focus is on the number 6. This strip has the following buttons:

- In the top row, a list of Most Watched Channel is shown.
- Press the or button: On the bottom row: From the far left: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, -, Delete

The options that you can select in the virtual numeric pad may vary depending on the viewing mode.

Use the left and right directional buttons to move along the row, and then press the Select button to choose the numeric pad. When you have finished selecting all the numbers you need (for example, 123), press the directional button to move to the Done option, and then press the Select button to finish.

When entering a channel number, you can enter the number, and then select the Done option on the top row or you can enter the channel number and wait. After a short while, the channel will change and the virtual numeric pad will disappear from the screen.

Changing volume

Use the +/− (Volume) button on the left to change the volume. Every time you change the volume, the new volume level will be announced.

- Samsung Smart Remote / Remote Control

  Of the 2 buttons that protrude from the center of the Samsung Smart Remote or Remote Control, the left one is the +/− (Volume) button. Push up or pull down the +/− (Volume) button to change the volume.

Using program information

When watching TV, press the Select button to view program information which then appears at the top of the screen. Voice Guide will say program subtitles or audio descriptions if they are available. To view more detailed program information, press and hold the Select button. Voice Guide will say more details such as a synopsis of the program.

Press the left or right directional button to see what you can watch next on the same channel. Press the up or down directional button to move to other channels and see which programs are currently being broadcast on them.

Press ↩ to go back or close the program details.

This function may not be supported depending on the geographical area.

Using the guide

See an overview of each channel's program lineup.

When you want to know the program information for each channel while watching a broadcast program, press the ∧/∨ (Channel) button on the Samsung Smart Remote or Remote Control. Use the directional buttons to view the program information.

You can see the daily program schedules for each channel and program information in the Guide. You can select programs to schedule for viewing or recording.

You can also open the Guide using Bixby. Press and hold the button on your Samsung Smart Remote, and then say “Guide.”

- This function may not be supported depending on the model or geographical area.
- The information in the Guide is for digital channels only. Analog channels are not supported.
- If the Time is not set, the Guide is not provided. Set the Time first. (> left directional button > Settings > All Settings > General & Privacy > Time)
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

If you need to set the clock again, follow the steps below.

1. Press the button.
2. Use the directional buttons to move the focus to the Settings at the top left of the screen.
3. Press the Select button and then use the directional buttons to move the focus to the All Settings.
4. Press the Select button to open the TV's All Settings menu.
5. Use the up and down directional buttons to move to the General & Privacy menu, and then press the Select button.
6. Use the up and down directional buttons to move to the Time menu, and then press the Select button.
7. Select the Clock Mode menu, press the Select button, and then select Auto or Manual.

   - If you select Manual, you can move to the Date or Time menu below to set the time or date.

When you open the Guide, a table grid of channels and programs is displayed. In the top rows, the selected filter type and the time are shown. Each row has a channel name on the left and programs on that channel on the right.

In the Guide, use the up and down directional buttons to move between channels and use the left and right directional buttons to move between programs at different times within a channel.

You can also use the or button to enter a channel number and go to that channel directly. You can use the button to move to the program currently broadcasting.

When you move the focus to a program, you will hear detailed information about the selected program. When you move the focus to a different channel, you will hear the channel name and number, and the program details. If you move to a different day, you will hear the day announced for the first program you reach on that day. The day is not repeated, so if you are not sure what the day is, you can move forwards and backwards 24 hours and then the day will be announced.

To view a program on now

In the Guide, move to the program currently broadcasting, and then press the Select button to go to live TV on the selected channel and program.

Other options in the guide

In the Guide, move to a broadcast scheduled program, and then press the Select button. A pop-up menu listing the functions below appears.

Use the up and down directional buttons to move within this menu, and then press the Select button to choose an item. Press to close the menu and go back to the Guide.

For the program you are currently watching, press the Select button.

- Record

  You can record the program that you are currently watching or a program on another channel.

  This function is not available in the U.S.A. and Canada.

  This function may not be supported depending on the model or geographical area.

- Stop

  You can stop the recording function that is currently running.

  This function is not available in the U.S.A. and Canada.

  This function may not be supported depending on the model or geographical area.

- Edit Recording Time

  You can change the start and end times of scheduled program recordings.

  This function is not available in the U.S.A. and Canada.

  This function may not be supported depending on the model or geographical area.

- Schedule Viewing

  You can schedule the viewing of a broadcast scheduled program.

- Schedule Recording

  You can schedule recording of a broadcast scheduled program.

  This function is not available in the U.S.A. and Canada.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Recording."

- Cancel Scheduled Viewing

  You can cancel your scheduled viewings.

- Cancel Scheduled Recording

  You can cancel your scheduled recordings.

  This function is not available in the U.S.A. and Canada.

  This function may not be supported depending on the model or geographical area.

- View Details

  You can see the detailed information on the selected program. The information may differ with the broadcast signal. If the information is not provided with the program, nothing appears.

  Press the Select button on the View Details option. This will open the details pop-up window for that program which will display a synopsis. The details pop-up window contains detailed information and the OK option. After reading the detailed information, press the Select button on the remote control to close the pop-up window.

Using Schedule Viewing

Configure the TV to show a specific channel or program at a specific time and date.

This function may not be supported depending on the model or geographical area.

The icon appears next to programs that have been configured for a schedule viewing.

To set up a schedule viewing, you must first set the TV's clock (> left directional button > Settings > All Settings > General & Privacy > Time).

Setting up a schedule viewing

You can set up a schedule viewing on two screens.

- The Guide Screen

  On the Guide screen, select a program you would like to view, and then press the Select button. Select Schedule Viewing on the pop-up menu that appears.

- The Program Info Screen

  Press the Select button while watching the TV. The Program Info window appears. Select a broadcast scheduled program by using the left or right directional buttons, and then press the Select button. You can schedule a reminder to watch the program by selecting Schedule Viewing.

Cancelling a scheduled viewing

You have 2 ways to cancel a scheduled viewing.

- Cancelling a scheduled viewing from the Guide

  1. Press the ∧/∨ (channel) button to access the Guide.
  2. Move to to the program to cancel the viewing schedule, and press the Select button.
  3. Move to Cancel Scheduled Viewing, and then press the Select button.
  4. When a pop-up message asking you to cancel the selected scheduled viewing appears, select Yes. The scheduled viewing is canceled and the Guide screen appears.

- Cancelling a scheduled viewing from Schedule Manager or Recordings

  1. On the remote control, press the or button.
  2. Use the directional buttons to move to the control pad.
  3. Press the Select button to open Schedule Manager or Recordings.

     If the TV supports the Recordings function, press the directional buttons to move to Schedules.
  4. Press the up directional button to move to the Schedules option.
  5. Use the down directional button to move to the list of programs scheduled to view.
  6. Use the right directional button to move to the Delete option, and then press the Select button to delete the selected item.

  This function may not be supported depending on the model or geographical area.

Using the Channel List

See how to list the channels available on your TV.

Using Channel List, you can change the channel or check programs on other digital channels while watching TV.

Press and hold the ∧/∨ (Channel) button to open the Channel List.

> The focus is on the channel you are currently watching, and the name and number of the channel, along with the program title, are displayed.

Use the up and down directional buttons to move within the channel list (or use the ∧/∨ (Channel) button to go up and down a page at a time). You can also use the 123 or 123 button to enter a channel number and go to that channel directly.

Press the left directional button in the Channel List to move to the Category List. Use the up and down directional buttons to move within this list. Press the Select button to choose a category you want from the Category List. The Category List contains All, Favorites, Samsung TV Plus, and Air or Cable. Use the up and down directional buttons to move to a channel you want to view, and then press the Select button.

- Air or Cable

  To select Air or Cable, move the focus to Air or Cable, and then press the Select button. Air is suitable for homes equipped with separate, over-the-air antennas. Cable is suitable for homes that subscribe to a local cable-service, but do not have a cable box. You do not need to use this function if your TV is connected to a cable box or satellite box.

  > This function may not be supported depending on the incoming broadcast signal.

- Edit Channels

  Edit the channels stored on your TV.

- All

  Displays the channels that have been automatically searched.

  > These are the channels your TV will receive either over the air if your TV is set to Air or over cable if your TV is set to Cable. See Air or Cable below.

- Samsung TV Plus

  While the TV is connected to the network, you can watch popular programs or highlights for each theme through a virtual channel at any time. As with regular channels, the TV provides the daily program schedules for Samsung TV Plus.

  > This function may not be supported depending on the model or geographical area.

- Genre

  Select a genre to sort and display specific channels to suit your preferences.

  > This function may not be supported depending on the model or geographical area.

- Favorites

  Displays Favorites, My List 1 to My List 4. Use the up and down directional buttons to move between the lists of favorites. Highlight the one you want, and then press the Select button. The channel list will now show only the channels in this list.

Recording

Recording a program to an external hard drive connected via USB.

- This function is not available in the U.S.A. and Canada.
- This function may not be supported depending on the model or geographical area.
- Read all precautions before using the recording feature. For more information, refer to "Before Using the Recording and Timeshift Functions."

Using the instant and schedule recording options from the guide screen:

To record a program that is on now, open the Guide by pressing the ∧/∨ (channel) button, move to the program, and then press the Select button. You will get a pop-up menu. Use the up and down directional buttons to move to Record. Press the Select button to record the program. You will be returned to the program guide. Recording automatically ends at the time when the program ends.

To stop recording, press the down directional button while the program being recorded is displayed. The control bar appears. Move the focus to Stop Recording, and then press the Select button. When a pop-up window appears, select Stop.

To record a program that is on later, move to the program in the Guide, and then press the Select button. You will get a pop-up menu. Use the up and down directional button to move within this menu. Move to the Schedule Recording, and then press the Select button. You will hear a message saying the program has been set to record and then you will be returned to the program guide.

The icon is placed visually next to the program title to show it is set to record. To find out if a program is set to record or to cancel a scheduled recording, press the Select button on the program. If it is already set to record, then the option on the menu will be Cancel Scheduled Recording. You can press the Select button to cancel the scheduled recording or just press the button to go back to the program guide without cancelling the recording.

Recording the program you are watching

To display a menu for recording a program or starting the Timeshift function, press the button twice or press the button while watching the program. You can select the following functions on the menu:

- Record

  Immediately starts to record the program you are watching.

- Timeshift

  Starts the Timeshift function.

- Stop

  Stops the recording or the Timeshift function that is running.

- Info

  Displays the details about the program you ware watching.

Scheduling recording from the program info window

Press the Select button while viewing a program to display the program info window. In the program info window, use the left and right directional buttons to select a broadcast scheduled program, and then press the Select button. To schedule a recording for the program, select Schedule Recording.

Changing the recording time

When recording a live program you can specify how long you want to record for.

Press the down directional button to display the control bar at the bottom. Press the left or right directional buttons to move to Edit Recording Time, and then press the Select button. A slider scale appears and you will hear the recording time currently set. Use the left and right directional buttons to change the time, and then press the Select button. You will hear a menu that gives information about the recording time. To return to the program you are watching, press the button on the remote.

The maximum recording time differs depending on the capacity of the USB device.

Viewing recorded programs

1. On the remote control, press the or button.
2. Use the directional buttons to move to the control pad.
3. Select either Schedule Manager or Recordings to access the Recording & Schedule Manager screen.

To play a program, use the up and down directional buttons to move between program titles. Press the Select button to play the program or press the right directional button to move to a list of options. Use the up and down directional buttons to move between the options in this list. You can play, remove, delete the program, or view the program details.

Select the Play option to play the program. The program will start. If you have watched part of this program before, you will get a pop-up menu on screen allowing you to Play (from start), Continue Playing (from where you left off), or Cancel. Use the left and right directional buttons to move to the required option, and then press the Select button.

This function may not be supported depending on the model or geographical area.

Deleting a recorded program

You can delete any recorded program.

1. Go to the list of Recordings to delete a recorded program.
2. Use the up and down directional buttons to move to the recording you want to delete.
3. Press the right directional button to move to a list of 3 options.
4. Press the down directional button to move to the Delete option, and then press the Select button.

   You will be asked if you want to remove the selected item.
5. Press the left directional button to move to the Delete button, and then press the Select button to delete the program title.

   The program will be deleted and you will be returned to the list of Recordings.

Using Smart Hub

Learn how to use Smart Hub to access apps, games, movies, and more.

Smart Hub

Use a variety of Smart Hub content offered by your Samsung TV.

- Some Smart Hub services are for pay services.
- To use smart functions, you should connect to a network, agree to the terms and conditions, and log in with your Samsung account.
- Some Smart Hub features may not be supported depending on the service provider, language, or geographical area.
- Smart Hub service outages can be caused by disruptions in your Internet service.

Press the button. You are redirected to the Home Screen of the content you are currently using. Move the focus to the top of the Smart Hub Home Screen and then use the directional buttons to move the focus to other items.

Use a variety of Smart Hub content, as follows: Samsung Account, Search, Connected Devices, , Vision AI Companion, For You, Live, Games, Ambient or Art, Daily, Apps, Privacy Choices

- Supported Smart Hub content may vary depending on the model and geographical area.

Using the Smart Hub Home Screen

At the very top of the Smart Hub Home Screen are the following fixed menus. You can quickly and easily use the listed menu items to access the main TV settings or external devices, search, and apps.

- Samsung Account

  Go to the Samsung Account screen to create a new account or sign out of your account.

  - For more information, refer to "Using a Samsung account."

- Search

  Search for channels, programs, movies, and apps offered by Smart Hub.

  - To use the Search service, make sure the TV is connected to a network.
  - This function may not be supported depending on the model or geographical area.

- Connected Devices

  Select an external device that is connected to the TV.

  - For more information, refer to "Switching between external devices connected to the TV."

- Settings

  Manage external devices connected to the TV, and configure settings for various functions available on the TV.

  - For more information, refer to "About the Settings screen."

- Vision AI Companion

  Vision AI Companion is an interactive AI service that answers questions and recommends content and services tailored to the topic or situation.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Using Vision AI Companion."

- For You

  View a variety of TV programs. Install various apps offered by Smart Hub, such as video, music and sports apps, and use the apps from the TV. The app makes personalized recommendations based on the user's viewing experience.

  For more information, refer to "About the For You screen."

- Ambient / Art

  Supported features may vary depending on the model.

  On some models, the Ambient mode is integrated in the Art mode.

  – Ambient

    When the TV is not being used, set your TV to display content that you desire such as the Time or Weather.

    To return to TV mode from Ambient mode, double-press the button. Press the button to turn off the TV.

    This function may not be supported depending on the model or geographical area.

    For more information, refer to "Using Ambient Mode."

  – Art

    When you are not watching TV or when the TV is turned off, you can use the Art mode function to edit image contents such as artworks and photos, or to display the content.

    This function may not be supported depending on the model or geographical area.

    For more information, refer to "About the Art screen."

- Live

  Watch TV programs currently on the air. Access the Guide screen to check the broadcast schedules and set up scheduled viewing for the programs you want.

  For more information, refer to "About the Live screen."

- Games

  Play games from the TV screen by connecting a Controller to the TV. Configure settings to optimize the Controller and audio device for playing games.

  This function may not be supported depending on the model or geographical area.

  For more information, refer to "Using Samsung Gaming Hub."

- **Daily**

  Provides useful services, such as home training, remote work, karaoke, and early childhood education content, allowing users to conveniently experience different lifestyles.

  > This function may not be supported depending on the model or geographical area.

  > For more information, refer to "About the Samsung Daily+ screen."

- **Apps**

  Install a variety of apps offered by Smart Hub, such as video, music, sports and game apps, and use the apps from the TV.

  > For more information, refer to "About the Apps screen."

- **Privacy Choices**

  From your TV, easily manage the privacy policy regarding services related to Smart Hub and verify how personal information is protected.

  > To use Smart Hub, you must agree to the Smart Hub service agreement and the collection and use of personal information. Without giving consent, you cannot use the additional features and services. You can view the entire text of the Terms & Privacy by navigating to > left directional button > Settings > All Settings > General & Privacy > Terms & Privacy. Try Now

  > If you want to stop using Smart Hub, you can cancel the agreement. To cancel the Smart Hub service agreement, select Reset Smart Hub (> left directional button > Settings > Support > Device Care > Reset Smart Hub). Try Now

  > This function may not be supported depending on the model or geographical area.

Launching the User Guide

Open the user manual embedded in your TV.

Home > left directional button > Settings > Support > Tips and User Guides > Open User Guide

You can view the embedded User Guide containing information about your TV's key features.

- Alternatively, you can download a copy of the User Guide from Samsung's website (https://www.samsung.com).
- Words in blue (e.g., Internet) indicate a menu item.

The User Guide's Home Screen contains 1 row of menu icons. Use the left and right directional buttons to move within a row. Press the Select button to open the section you want to read.

- You can use the directional buttons on the remote control to use the functions on the top such as Search, Sitemap, and Index.

The User Guide contains a section called "**Learn TV Remote**" in "**Accessibility Guidance**". This is particularly useful for people who cannot easily see the buttons on the control or who are not clear what each button does. When you are viewing this section of the User Guide, pressing the buttons on the remote control will not affect the TV.

Using Bixby

Set Voice Assistant to Bixby. A guide to using Bixby to control your TV.

To use Bixby, your TV must be connected to the network and you must use the microphone on your Samsung Smart Remote.

To use Bixby, press and hold the button on the Samsung Smart Remote, say a command into the microphone on the remote, and then release the button to run Bixby.

- This function may not be supported depending on the model or geographical area.
- The existing functional specifications may be changed if Bixby is updated.
- This function is available only if Voice Assistant is set to Bixby. (> left directional button > Settings > All Settings > Advanced Features > Voice > Voice Assistant) Try Now
- The supported language may differ depending on the geographical area.
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.

Running Bixby

Press and hold the button on the Samsung Smart Remote. Bixby is activated in the listening mode, the Bixby icon appears at the bottom of the TV screen. Say a command, and then release the button. The TV provides feedback on how it understands the command, and then performs the commanded task.

- If the TV does not understand the command, try again with more precise pronunciation.
- This function may not be supported depending on the model or geographical area.
- You can find a detailed description of the voice commands at Discover Bixby. Press the button. The icon appears at the bottom right of the screen. Press the Select button to go to the Discover Bixby screen.
- The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.