SAMSUNG

E-MANUAL

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Model_____ Serial No._____

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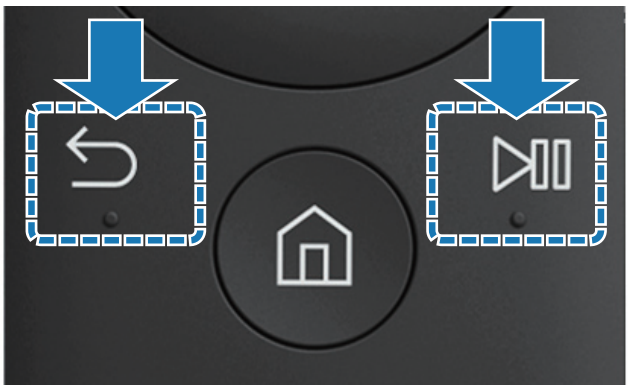
Licence

Connecting to Samsung Smart Remote

Can connect Samsung Smart Remote to your TV for control.

When you turn on the TV for the first time, the Samsung Smart Remote pairs to the TV automatically. If the Samsung Smart Remote does not pair to the TV automatically, point it at the remote control sensor of the TV, then press the ⮌ and ⏯ buttons on the Samsung Smart Remote simultaneously for 3 seconds or more.



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

Guide for Samsung Smart Remote Buttons

You can see the basic usage of the buttons on Samsung Smart Remote.

Move it up or down to adjust the volume.

Use to move to up/down/left/right.

Press to mute the sound.

Press to select an item.

Move it up or down to change the channel.

Press to pop up the play control screen.

Press to perform Guide.

Select the desired function after pressing the ⏯ button.

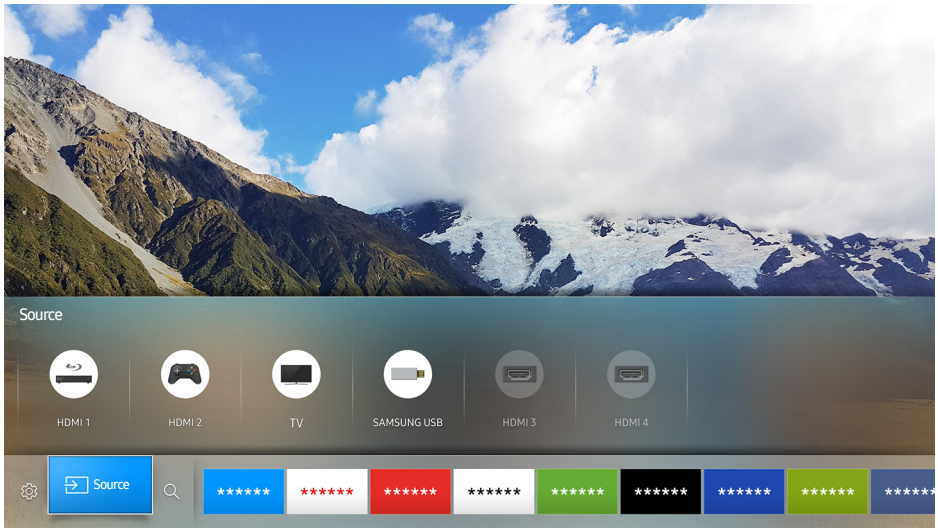
This function may not be supported depending on the model or geographical region.

Using Smart Hub

Connect to Smart Hub for apps, games, movies, and more.

Using Smart Hub

Enjoy the multiple functions provided by Smart Hub on a single screen.



When you press the ⌂ button on the Samsung Smart Remote, you can use the following functions and features.

- ⚙ Settings

  When the focus is moved, a quick settings appears on the top of the menu. You can quickly set the frequently used functions.

- Source

  You can select an external device connected to the TV.

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

- 🔍 Search

  You can search data for channels, programmes, movie titles, and apps from Smart Hub.

For more information, refer to "Smart Hub."

The image may differ by the specific model and area.

Using Voice Interaction

Say command into the microphone on Samsung Smart Remote for the desired operation.

This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.

Setting up Voice Interaction

Turning the voice on/off

Settings > System > Expert Settings > Voice Interaction > Voice Feedback

You can determine whether or not to output response messages using voice against your voice commands.

Selecting the desired voice's gender

Settings > System > Expert Settings > Voice Interaction > Voice Gender

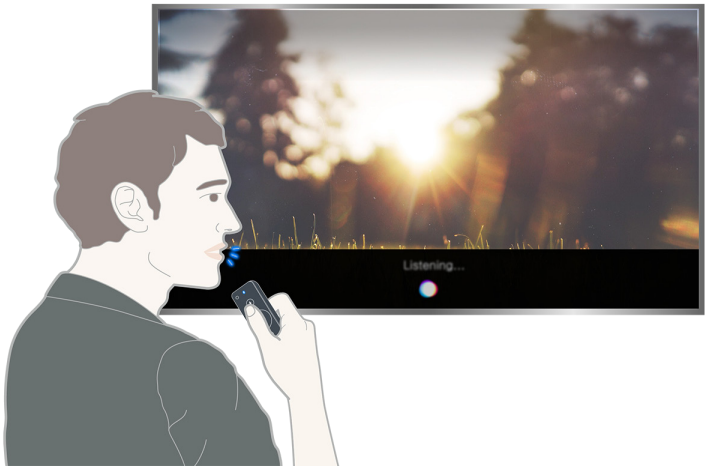
You can select the desired voice's gender for response voice messages.

Running Voice Interaction

Say a command while the button is pressed and release the button. The voice command is then identified.

If the command is not identified, try again with correct pronunciation.

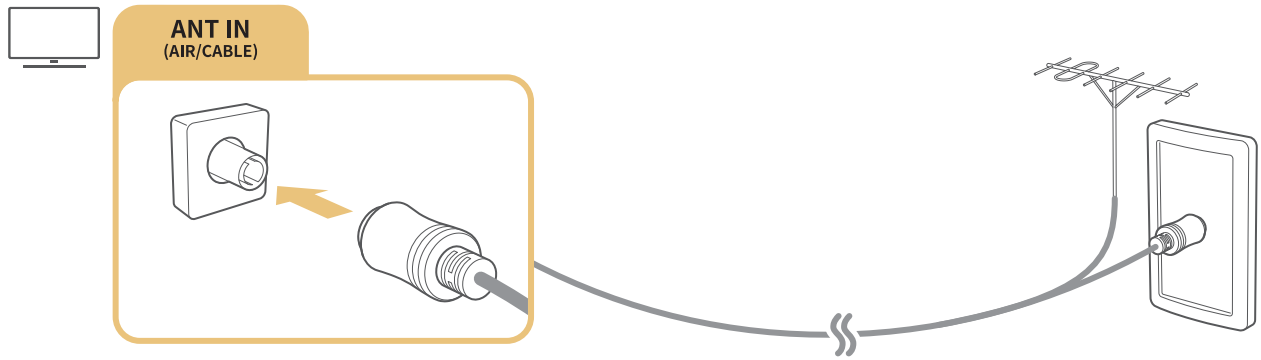
This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.

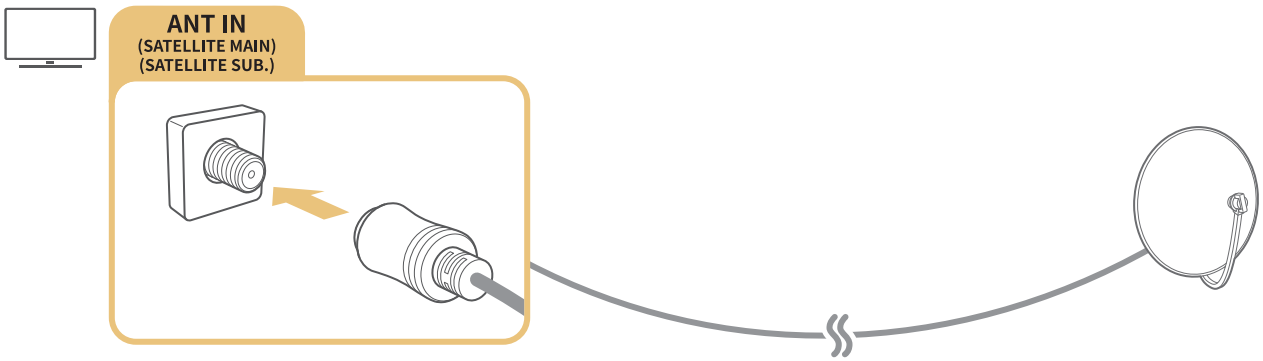


Connecting an Antenna (Aerial)

Can connect the antenna cable to your TV.

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





It is best to connect the both connectors using a Multi-Switch or DiSEqC. Switch, etc and to set Aerial Connection Type to Dual Oscillator.

A connection method may differ with the models.

DVB-T2 system may not be available in specific geographical areas.

Connecting to the Internet

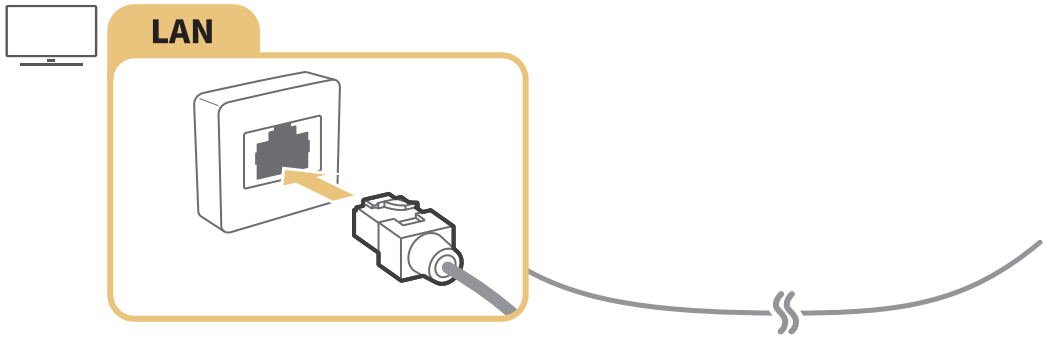
Can get access to the Internet through your TV.

Connecting Internet network

Settings > Network > Open Network Settings Try Now

Connect to an available network.

Establishing a wired Internet connection



- Use Cat7 (*STP Type) cable for the connection.

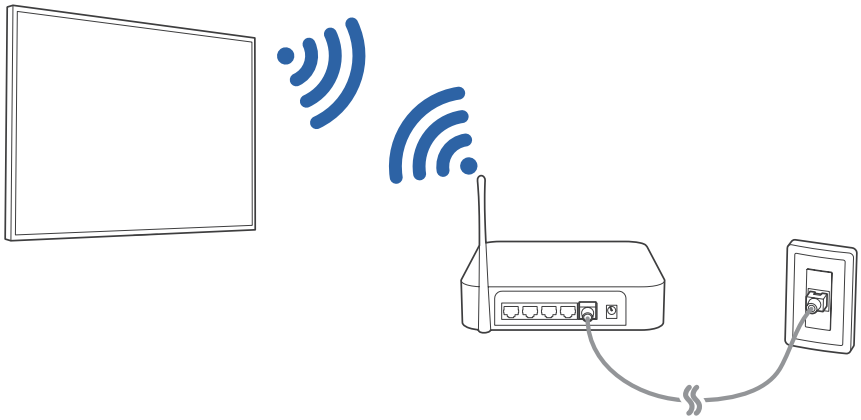
  * Shielded Twist Pair

- The TV will not be able to connect to the Internet if the network speed is below 10Mbps.
- If the LAN cable is connected, accessing the Internet is automatically enabled.

Establishing a wireless Internet connection

Home > Settings > Network > Open Network Settings > Wireless

Make sure that you have the wireless router's SSID (name) and password settings before attempting to connect.



- The image may differ by the specific model and area.
- If the network you want doesn't appear in the list, select Add Network, and then enter the network's SSID (name) manually.
- Select WPS in the network setup screen and then press the WPS or PBC button on the wireless router. The TV is automatically connected to the Internet.

Checking the internet connection status

Home > Settings > Network > Network Status Try Now

View the current network and Internet status.

Changing the name of the TV on a network

Home > Settings > Network > Device Name Try Now

You can change the name of the TV on the network. Select User Input at the bottom of the list and change the name.

Troubleshooting Internet Connectivity Issues

If the Internet is not accessed, find solutions.

Troubleshooting wired Internet connectivity issues Try Now

After referencing the following content, troubleshoot the wired Internet connection issue. If the problem persists, contact your Internet Service Provider.

No network cable found

Make sure that the network cable is plugged in. If it is connected, make sure that the router is turned on. If it is on, try turning it off and on again.

IP auto setting failed

1. Do the following or configure the IP Settings manually.
2. Make sure that the DHCP server is enabled on the router, and reset the router.

Unable to connect to the network

1. Check all IP Settings.
2. After checking the DHCP server status (must be active) on the router, remove the LAN cable and connect it again.

Connected to a local network, but not to the Internet

1. Make sure that the Internet LAN cable is connected to the router's external LAN port.
2. Check the DNS values in IP Settings.

Network setup is complete, but unable to connect to the Internet

If the problem persists, contact your Internet Service Provider.

Troubleshooting wireless Internet connectivity issues

After referencing the following content, troubleshoot the wireless Internet connection issue. If the problem persists, contact your Internet Service Provider.

Wireless network connection failed

If a selected wireless router is not found, go to Open Network Settings and select the correct router.

Unable to connect to a wireless router

1. Check if the router is turned on. If it is, turn it off and on again.
2. Enter the correct password if required.

IP auto setting failed

1. Do the following or configure the IP Settings manually.
2. Make sure that the DHCP server is enabled on the router. Then, unplug the router and plug it back in.
3. Enter the correct password if required.

Unable to connect to the network

1. Check all IP Settings.
2. Enter the correct password if required.

Connected to a local network, but not to the Internet

1. Make sure that the Internet LAN cable is connected to the router's external LAN port.
2. Check the DNS values in IP Settings.

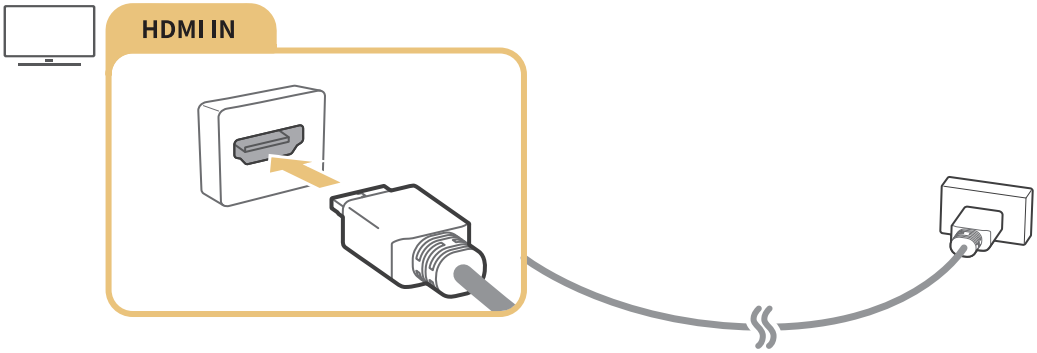
Network setup is complete, but unable to connect to the Internet

If the problem persists, contact your Internet Service Provider.

Connecting Video Devices

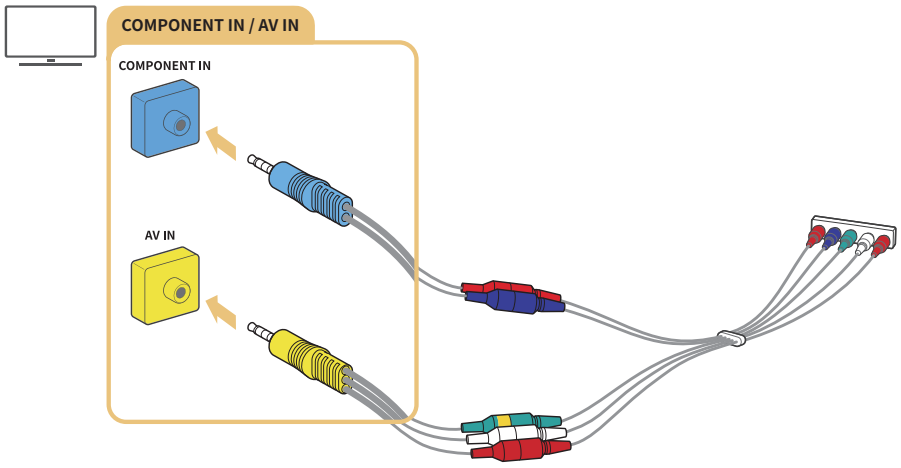
Make proper video connection between your TV and the other external device.

Connecting with an HDMI cable



Connecting with a component cable (Only the models with COMPONENT IN / AV IN)

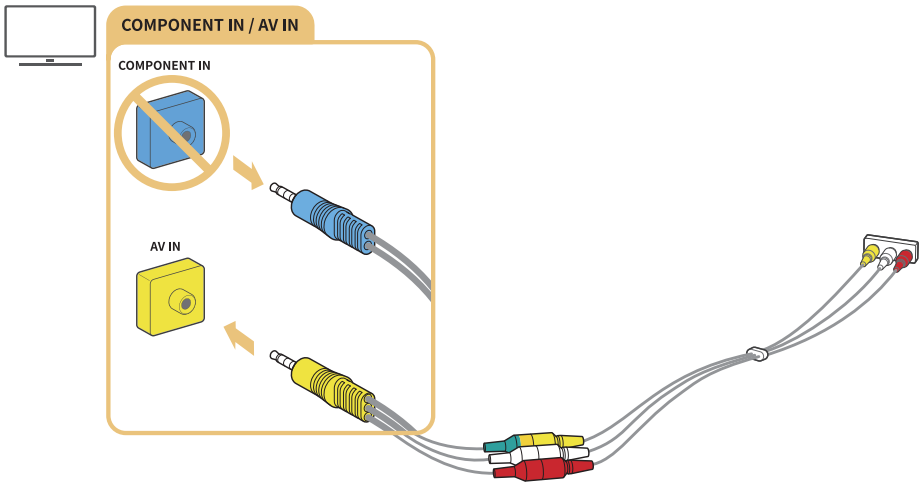
Connect the component cable to the component input connections of the TV and the component output connectors of the device using component and AV adapters as shown in the image below. Make sure to connect the same colour connectors together. (blue to blue, yellow to yellow)



To use component equipment, connect both a component cable(blue) and an AV cable (yellow).

Connecting with a composite cable (only the models with COMPONENT IN / AV IN port)

Connect the video and audio cables to the provided adapters after referencing the following figure and then connect the adapters between the COMPONENT/AV IN port on your TV and the OUT port on an external device. When connecting the cables, be sure to match the colours between the cables and ports.

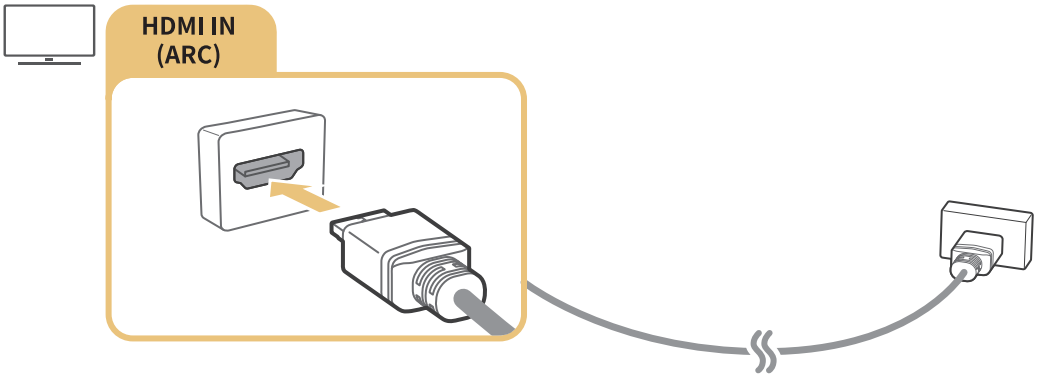


If you want to use AV (composite) equipment, remove the component adapter.

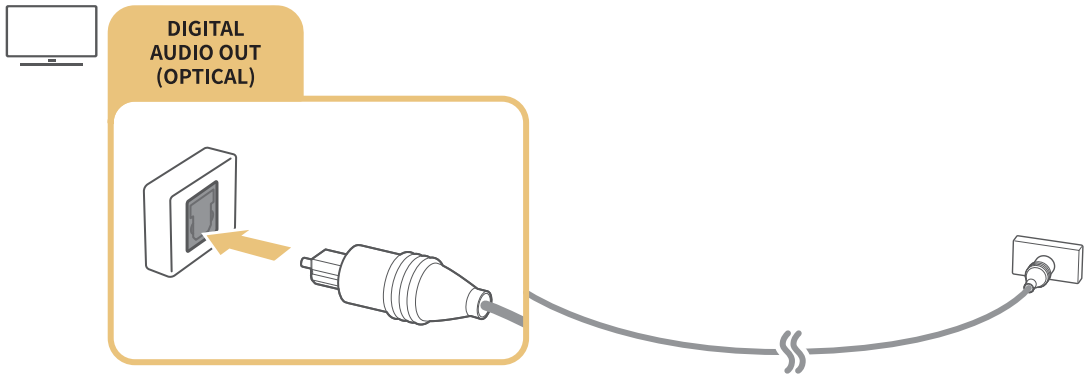
Audio Input and Output Connections

Make proper audio connection between your TV and an external device.

Connecting with an HDMI (ARC) cable



Connecting with a digital audio (optical) cable



Connecting through wireless network

You can connect the TV to a Samsung wireless audio device through wireless network. At this time, two devices must be connected on the same network. For more information, refer to Wireless Speaker Manager (Home > Settings > Sound > Expert Settings > Wireless Speaker Manager).

Connecting Bluetooth Devices

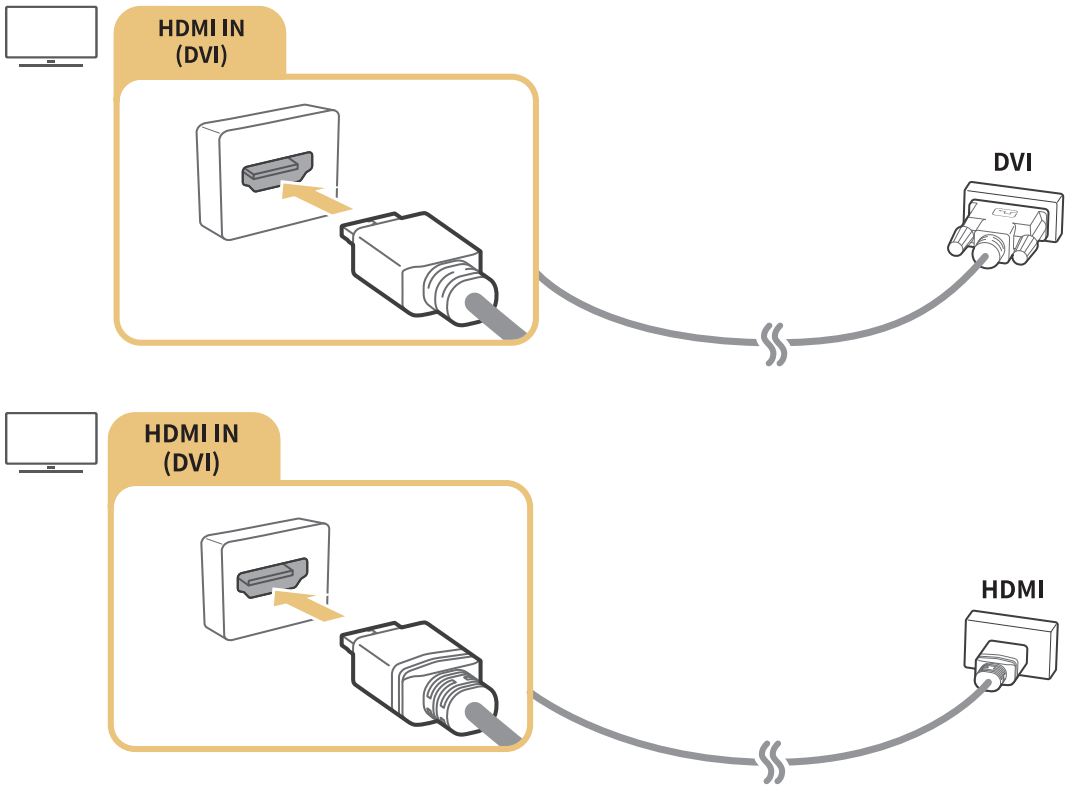
You can connect the TV or audio devices via Bluetooth communication. For more information, refer to Connection Guide (Home > Source > Connection Guide).

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

Connecting a Computer

Use the TV as a computer monitor or connect the TV to a computer via your network and access the computer's content.

Connecting through the HDMI port — Screen sharing



When you connect the PC, set the port to PC. For more information about the port settings, refer to "Editing external devices."

Connecting through the Smart View app — Content sharing

When the TV is connected through the Smart View programme on your PC, you can easily play content for photos, videos, and audios through the TV. For more information, refer to Connection Guide (⌂ > Source > Connection Guide).

Connecting a Mobile Device

View a mobile device's screen by connecting the mobile device to your TV or network.

Using Smart View (Screen Mirroring) or contents sharing

You can play media content on the TV's screen saved on your mobile device by connecting with mirroring function, and contents sharing.

1. Launch the Smart View (Screen Mirroring) function on your mobile device. The mobile device searches for available devices to connect to.
2. Select the TV from the list. Then the TV is connected to the mobile device.

If the TV system is not searched from your mobile device, turn the TV and the mobile device off and then on and try again.

If there are multiple TVs, you can easily select any of different TV names in > Settings > Network > Device Name.

Connecting mobile devices without a wireless router (Wi-Fi Direct)

> Settings > Network > Expert Settings > Wi-Fi Direct Try Now

Connecting a mobile device via Smart View App

When you install Smart View App app from Google Play Store, Samsung Apps, and App Store, you can play the mobile device's multimedia content on the TV, or control the TV using the mobile device.

To use the Smart View function, the mobile device must support the mirroring function such as AllShare Cast and Smart View. To check whether your mobile device supports the mirroring function, please visit the mobile device manufacturer's website.

Switching between external devices connected to the TV

Watch TV and the content of an external device by switching.

Changing the input signal

Source

If you select any of the connected external devices from the screen, you can see the screen of the selected device.

On the standard remote control, press the SOURCE button.

When you turn on devices (Blu-ray players, game consoles, etc.) that are connected to the TV supporting universal remote control through an HDMI cable, a pop-up message appears that either lets you switch to the output of the device or lets you set up universal remote control for the device automatically. Note that this function may not be supported depending on the device. For smooth automatic setup of universal remote control, place the Samsung Smart Remote so that it is close to and facing the TV.

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.

Editing external devices

Source

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

1. Move the focus to a connected external device.
2. Press the up directional button. Then the following functions can be used. (Note that available functions may differ with the port type.)

- Edit: Can change the port name of an external device to an actual usage for easy identification.
- Add to Home: Can add the port of an external device in Home Screen for quick switching.

Using additional functions

You can use the following functions in the Source screen.

- Guide to device connection (Connection Guide)
- Registration of external devices in Samsung Smart Remote (Universal remote setup)

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

Connection Notes!

When connecting an external device, note the following:

The number of connectors and their names and locations may vary depending on 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 vary depending on the manufacturer.

Connection notes for HDMI

- The following types of HDMI cables are recommended:
  - High-Speed HDMI Cable
  - High-Speed HDMI Cable with Ethernet
- Use an HDMI cable with a thickness of 17mm or less.
- Using a non-certified HDMI cable may result in 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 LAN (Local Area Network) built with coaxial cables standardised by the IEEE.
- Try a cable shorter than 3m to get the best UHD viewing quality.
- Many computer graphics adaptors do not have HDMI ports, but have DVI ports instead. When the PC that does not support HDMI video out, connect your PC with the HDMI-DVI cable.

Connection notes for audio devices

- For better audio quality, it is a good idea to use an AV receiver.
- Connecting a device using an optical cable does not automatically turn off the TV speakers. To turn off the TV's speakers, set Sound Output to something other than TV Speaker.
- An unusual noise coming from the 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.

Connection notes for computers

- As long as file sharing is activated, unauthorised access may occur. When you do not need to access data, disable file sharing.
- Your PC and Smart TV must be connected to each other on the same network.

Connection notes for mobile devices

- To use the Screen Mirroring function, the mobile device must support a mirroring function such as AllShare Cast or Screen Mirroring. To check whether your mobile device supports the mirroring function, please visit the mobile device manufacturer's website.
- To use Wi-Fi Direct, the mobile device must support the Wi-Fi Direct function. Please check if your mobile device supports Wi-Fi Direct.
- The mobile device and your Smart TV must be connected with each other in the same network.
- The video or audio may intermittently stop depending on network conditions.

About the Samsung Smart Remote (Voice Interaction version)

This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.

Button	Description
(Voice recognition)	Runs Voice Interaction. Press the button, say a voice command, and then release the button to run Voice Interaction. When pressed once, the guide to Voice Interaction appears.
123 (Number pad)	When pressed, a number strip appears on the screen. Select numbers and then select Done to enter a numeric value. Use to change the channel, enter a PIN, enter a ZIP code, etc. If the Colour Button appears with a number strip on the screen, select the Colour Button and then select a specific color by using the directional pad (up/down/left/right). Use this to access additional options that are specific according to the feature in use.
● ● ● ● / EXTRA (colour/ extra)	Use these coloured buttons to access additional options specific to the feature in use. / While watching content, press to display extra information from the content provider.
Directional pad (up/ down/left/right)	Moves the focus, and changes the values seen on the TV's menu.
Select	Selects or runs a focused item. When pressed while you are watching content, detailed programme 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 programme, the previous channel appears.
(Smart Hub)	Press to return to the Home Screen.
(Play/pause)	When pressed, the playback controls appear. Using these controls, you can control the media content that is playing.
VOL (Volume)	Move the button up or down to adjust the volume. To mute the sound, press the button. When pressed for 1 second or more, the Accessibility Shortcuts appears.
CH (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.

- This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.
- The image, buttons and functions of the Samsung Smart Remote may differ with the model.
- Use the Samsung Smart Remote at a distance of less than 6m. The usable distance may differ with the wireless environmental conditions.
- To use the Samsung Smart Remote through the external device, it is required to configure its settings.

About the Samsung Smart Remote

This function may differ with the model or geographical region.

Button	Description
123 (Number pad)	When pressed, a number strip appears on the screen. Select numbers and then select Done to enter a numeric value. Use to change the channel, enter a PIN, enter a ZIP code, etc. If the Colour Button appears with a number strip on the screen, select the Colour Button and then select a specific color by using the directional pad (up/down/left/right). Use this to access additional options that are specific according to the feature in use.
● ● ● ● / EXTRA (colour/ extra)	Use these coloured buttons to access additional options specific to the feature in use. / While watching content, press to display extra information from the content provider.
Directional pad (up/ down/left/right)	Moves the focus, and changes the values seen on the TV's menu.
Select	Selects or runs a focused item. When pressed while you are watching content, detailed programme 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 programme, the previous channel appears.
⌂ (Smart Hub)	Press to return to the Home Screen.
⏯ (Play/pause)	When pressed, the playback controls appear. Using these controls, you can control the media content that is playing.
VOL (Volume)	Move the button up or down to adjust the volume. To mute the sound, press the button. When pressed for 1 second or more, the Accessibility Shortcuts appears.
CH (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.

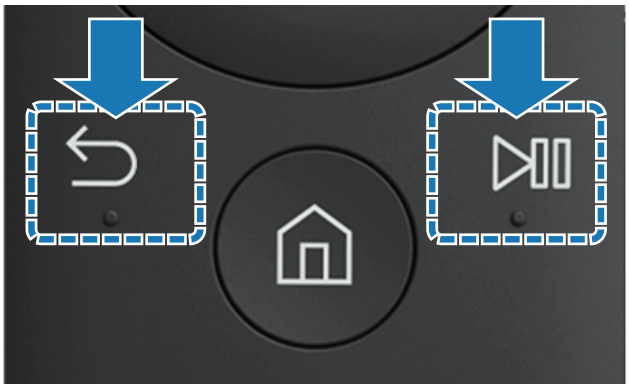
- This function may differ with the model or geographical region.
- The image, buttons and functions of the Samsung Smart Remote may differ with the model.
- Use the Samsung Smart Remote at a distance of less than 6m. The usable distance may differ with the wireless environmental conditions.

Connecting to Samsung Smart Remote

Pair the TV with the Samsung Smart Remote.

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

When you turn on the TV for the first time, the Samsung Smart Remote pairs to the TV automatically. If the Samsung Smart Remote does not pair to the TV automatically, point it at the remote control sensor of the TV, then press the ⮌ and ⏯ buttons on the Samsung Smart Remote simultaneously for 3 seconds or more.



Controlling External Devices with the Samsung Smart Remote - Using the Universal Remote

Control the TV and the connected external devices together with Samsung Smart Remote.

⌂ > Source > Universal remote setup

You can control external devices connected to the TV by using the remote control. For this purpose, register external devices by following the instructions on the screen.

- This function may not be supported depending on the model or geographical region.
- You can also use the Anynet+ (HDMI-CEC) function to operate external Samsung devices with your TV's remote control without any additional setup.
- Certain external devices connected to the TV may not support the universal remote feature.
- Do not place any obstacles in front of an external device. It may cause signals from the remote control not to be transmitted properly.
- The TV memorises both the external device and its connection port (HDMI 1, HDMI 2, etc.).

Controlling the TV with a Keyboard or Gamepad

Connecting a keyboard or gamepad makes it easier to control the TV.

Connecting a USB keyboard

Plug the keyboard cable into the USB port.

Connecting a Bluetooth keyboard and gamepad

Settings > System > Input Device Manager > Add Bluetooth Keyboard & Gamepad Try Now

If your keyboard was not detected, position the keyboard close to the TV, and then select **Refresh**. The TV scans for available devices again.

Using the keyboard

Button	Remote control functions
Directional keys	Moves the focus
Windows key	Displays the TV settings
Enter key	Selects or runs a focused item
ESC key	Returns to the previous screen
F1 / F2 / F3 / F4 key	Colour buttons - / / /
F5 key	Launches the Home Screen
F6 key	Displays the source screen
F7 key	Launches the Channel List
F8 key	Mutes the sound
F9 / F10 key	Adjusts the volume
F11 / F12 key	Changes the channel

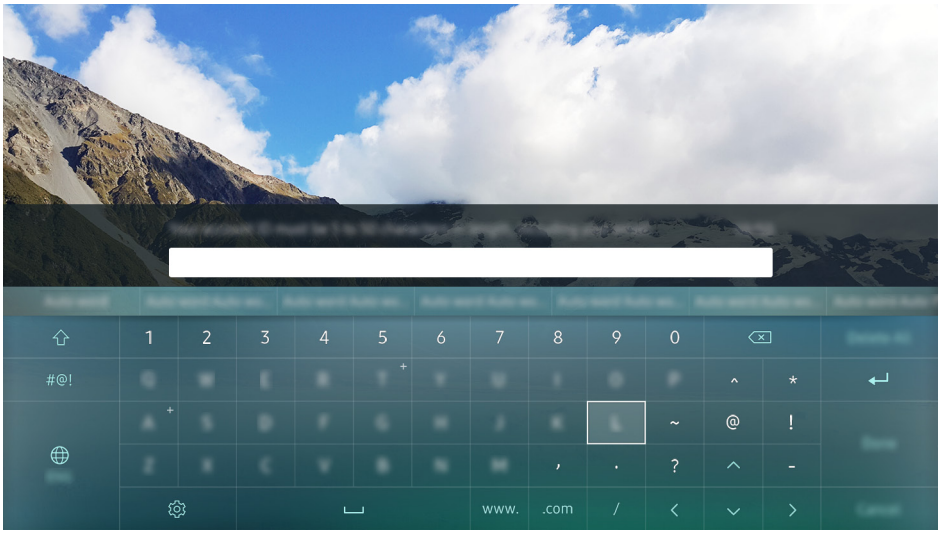
Setting up the keyboard

In ⌂ > ⚙ Settings > System > Input Device Manager, the following functions can be set. Try Now

- Keyboard Language Try Now
- Keyboard type Try Now
- Input Language Shortcut Try Now

Entering Text using the On-Screen QWERTY Keypad

Use the QWERTY keyboard to enter text on your TV.



Using additional functions

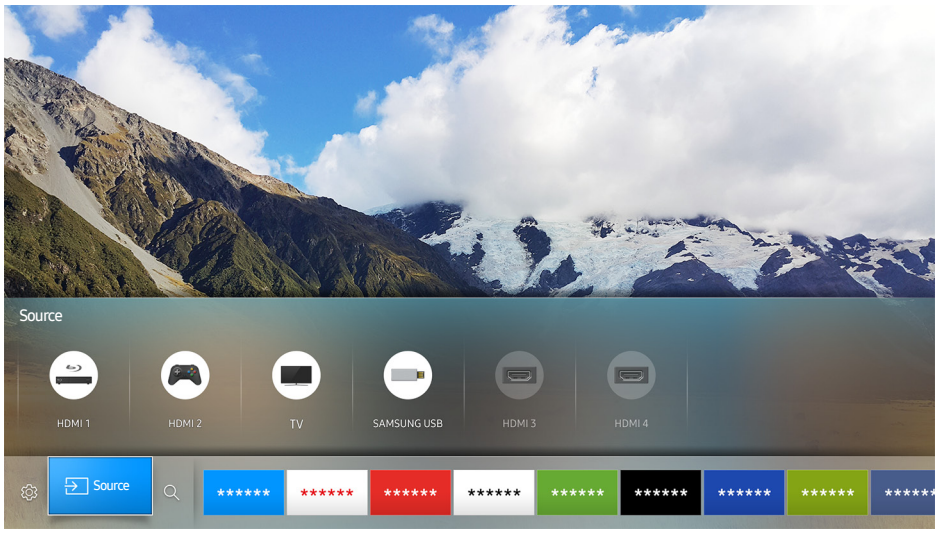
Select ⚙ on the QWERTY keyboard screen. The following options are available:

- Recommend text
- Reset recommended text data
- Predict Next Character (when using direction buttons)
- Language

  This function may not support depending on the country.

Smart Hub

View description on basic functions of Smart Hub.



The image may differ by the specific model and area.

After pressing the ⌂ button on the your remote control, you can surf the web and download apps with Smart Hub.

- Some of the **Smart Hub** services are for pay services. To use a for pay service, you must have an account with the service provider or a Samsung account. For more information, refer to "Using a Samsung account."
- To use this feature, the TV must be connected to the Internet.
- Some **Smart Hub** features may not be available depending on the service provider, language, or region.
- **Smart Hub** service outages can be caused by disruptions in your Internet service.
- You can view the entire text of the **Terms & Policy** by navigating to ⌂ > ⚙ **Settings** > **Support** > **Terms & Policy**. If you want to stop using Smart Hub, you can cancel the agreement. Try Now

Displaying Home Screen

In Home Screen, you can easily run the apps that have been used previously or frequently. The apps can also be moved or deleted in the screen.

When you press the ⌂ button on your remote control, you can use the following functions and features.

- ⚙ Settings

  When the focus is moved to Settings, a quick settings appears at the top of the menu. You can quickly set the frequently used functions.

  - Picture Mode

    You can select the picture mode that provides the best viewing experience.

  - Sound Output

    You can select which speakers the TV uses for audio output.

  - Sound Mode

    You can select a sound mode to optimise your listening experience.

  - Audio Language

    You can select a audio language.

  - Subtitle

    Turns the subtitles on or off.

  - PIP

    While using a connected external device, you can watch a TV broadcast in a small picture-in-picture (PIP) window.

  - Network

    You can view the current network and Internet status.

  - More ...

    Displays TV settings.

- Source

  You can select an external device connected to the TV.

  For more information about connecting external devices, refer to 'Switching between external devices connected to the TV.'

- Search

  You can search the apps or games in Smart Hub services.

Removing an app in Home Screen

To remove an app in Home Screen, move the focus to app you want to remove, press the down directional button, and then select Remove.

Moving an app in Home Screen

To move an app in Home Screen, move the focus to app you want to specify a new position, and press the down directional button, and then select Move.

Launching Smart Hub automatically

Settings > System > Expert Settings > Autorun Smart Hub Try Now

When you set Autorun Smart Hub to On, you can display Home Screen automatically.

Launching the last used app automatically

Settings > System > Expert Settings > Autorun Last App

If Autorun Last App is set to On, the last used app is automatically run when you turn on the TV.

Testing Smart Hub connections

Settings > Support > Self Diagnosis > Start Smart Hub Connection Test Try Now

Resetting Smart Hub

Settings > Support > Self Diagnosis > Reset Smart Hub Try Now

Using a Samsung account

Create and manage your own Samsung account.

Settings > System > Samsung Account Try Now

Creating a Samsung account

Settings > System > Samsung Account > Create Account

Some of the Smart Hub services are for paid services. To use a for paid service, you must have an account with the service provider or a Samsung account.

- You can also create a Samsung account at http://content.samsung.com. Once you have an account, you can use the same ID on both the TV and the Samsung website.
- If you want to review the Terms and Conditions, select View Details.
- If you want your account to be protected, select Profile image selection and password entry (High security) in the field below the password field.
- If you want the TV to log you in to your account automatically when you turn the TV on, tick Sign me in automatically.

Creating a Samsung account using a Facebook account

Settings > System > Samsung Account > Create with Facebook

Signing in to a Samsung account

Settings > System > Samsung Account > Sign In

- To change the sign in method, refer to "Changing and adding information to a Samsung account."

Changing and adding information to a Samsung account

Settings > System > Samsung Account > Edit Profile

- To change the account information, you must be logged in to your Samsung account.

Managing payment information saved on the TV

Settings > System > Samsung Account > Payment Info

To managing the payment information, you must be logged in to your Samsung account.

Deleting a Samsung account from the TV

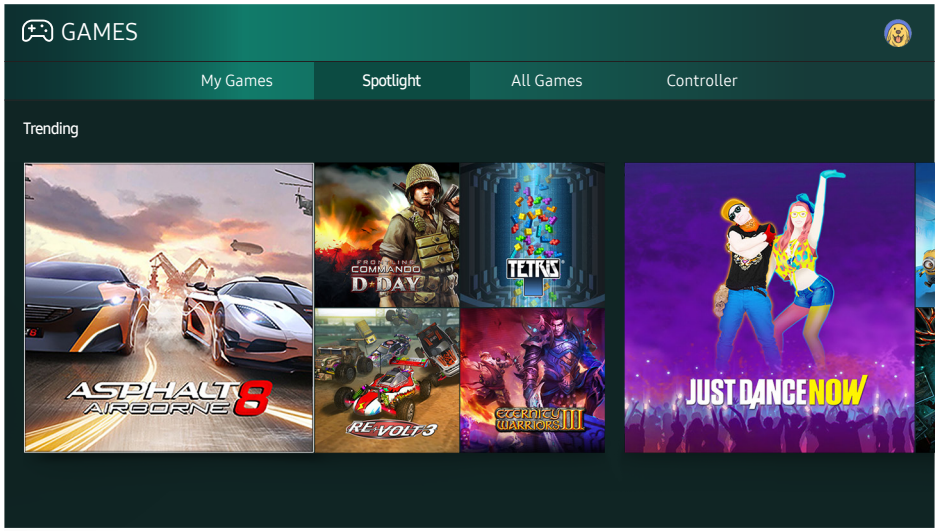
Settings > System > Samsung Account > Remove Account

To remove the account information, you must be logged in to your Samsung account.

Using the GAMES Service

Enjoy games provided with Smart Hub.

GAMES



The image may differ by the specific model and area.

You can install or run games. The installed games are stored in My Games.

To use this feature, the TV must be connected to the Internet.

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

Installing and running a game

Installing games

1. Move to the desired game to install and then press the Select button. The detailed information screen appears.
2. Select Install If the installation is complete, you can directly run it.

- You can see the installed games in My Games screen.
- To get the information about the game controllers that are compatible with the downloaded game, select GAMES > Controller.
- When the TV's internal memory is insufficient, you can install a game on a USB device.
- You can play a game installed on a USB device only when the USB device is connected to the TV. If the USB device is disconnected during game playing, the game is terminated.
- You cannot play the game installed on the USB device on a PC or another TV.

Running an installed game

To run a game, select GAMES > My Games.

Managing purchased or installed games

On the My Games screen, move the focus to the desired game and then press and hold the Select button. Also, select My Games > Options to manage installed games.

Adding to Home Screen

1. Select My Games > Options > Add to Home.
2. Select a game to add in Home Screen. The selected game is added in Home Screen.

Removing a game

1. Select My Games > Options > Delete.
2. Select a game to delete.
3. Select Delete. Then the selected game is deleted.

Through the pop-up menu, you can also delete games in Home Screen.

Updating a game

1. Select My Games > Options > Update
2. Select a game to update.
3. Press the Select button to update the game.

It can be selected only when there are games to update.

Locking or Unlocking a game

1. Select My Games > Options > Lock/Unlock. The check boxes appear for individual games.
2. Select a game to lock or unlock. To lock a game, check on it. To unlock the game, release the check.
3. Select Done to lock or unlock the game.

Automatically updating games

The installed games can be automatically updated. If you do not want automatic update, set My Games > Options > Auto Update to Off.

Only while the TV is connected to the Internet, automatic update is enabled.

Rating games

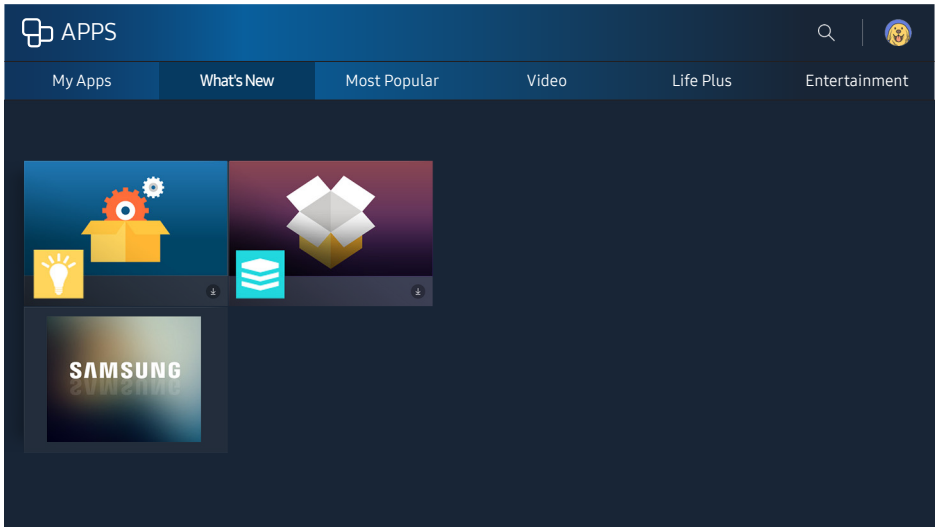
You can rate each game in the detailed information screen.

This feature is only available when the game only installed on the TV.

Using the APPS Service

Download and run various apps from Smart Hub.

> APPS



The image may differ by the specific model and area.

You can enjoy a wide range of content including news, sports, weather, and games by installing corresponding apps on your TV.

To use this feature, the TV must be connected to the Internet.

When Smart Hub is launched for the first time, the default apps are automatically installed. The default apps may differ with the region.

Installing and running an app

Installing an app

1. Move to the desired app to install and then press the Select button. The detailed information screen appears.
2. Select Install If the installation is complete, you can directly run it.

You can view installed apps on the My Apps screen.

When the TV's internal memory is insufficient, you can install an app 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 during an app is running, the app is terminated.

You cannot run the app installed on the USB device on a PC or another TV.

Launching an app

You can run the selected app on My Apps screen. The icons below appear in the selected apps and indicate the following:

- : The app is installed on a USB device.
- : The app has a password.
- : The app is installed.
- : The app is required to update.
- : The app supports Smart View.

Managing purchased or installed apps

On My Apps screen, move the focus to the desired app and then press and hold the Select button. Also, select My Apps > Options to manage installed apps.

Adding to Home Screen

1. Select My Apps > Options > Add to Home.
2. Select an app to add. The selected app is added in Home Screen.

Moving apps

1. Select My Apps > Options > Move.
2. Select an app to move.
3. Move the app to the desired direction.
4. Press the Select button.
5. Select Done. Then the movement is finished.

This function is not available on certain models in specific geographical areas.

Removing an app

1. Select My Apps > Options > Delete.
2. Select an app to delete.
3. Select Delete. Then the selected app is deleted.

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

Updating apps

1. Select My Apps > Options > Update.
2. Select an app to update.
3. Press the Select button. Then the app is updated.

This function is only available when My Apps contains an app that needs updating.

Locking and unlocking apps

1. Select My Apps > Options > Lock/Unlock.
2. Select an app to lock or unlock.
3. Select Done. Then the selected app is locked or unlocked.

Automatically updating apps

The installed apps can be automatically updated. If you do not want automatic update, set My Apps > Options > Auto update to Off.

Rating apps

You can rate each app in the detailed information screen.

Using other app features and functions

> Settings > Broadcasting > Expert Settings > Channel-Bound Apps Try Now

Through an app that handles broadcasting channels, you can receive programme information and use corresponding services.

This function is only available when an app supporting Channel-Bound Apps is installed on the TV.

Among the channels received through the antenna, this function is available only in the channels that support Channel-Bound Apps.

This function may not support depending on the country.

Using the e-Manual

Read the manual embedded on your TV.

Launching the e-Manual

Settings > Support > Open e-Manual

You can view the embedded e-Manual containing information about your TV's key features.

- Alternatively, you can download a copy of the e-Manual from Samsung's website.
- Words in blue (e.g., Picture Mode) indicate a menu item.

Using the buttons in the e-Manual

- (Search)
- A-Z (Index)
- (Recent pages)
- (Try Now): Allows you to access the corresponding menu item and try out the feature right away.
- (Link): Allows you to access the corresponding reference page.

- The e-Manual cannot be accessed from some menu screens.

Using the Web Browser

Surf the Internet on your TV.

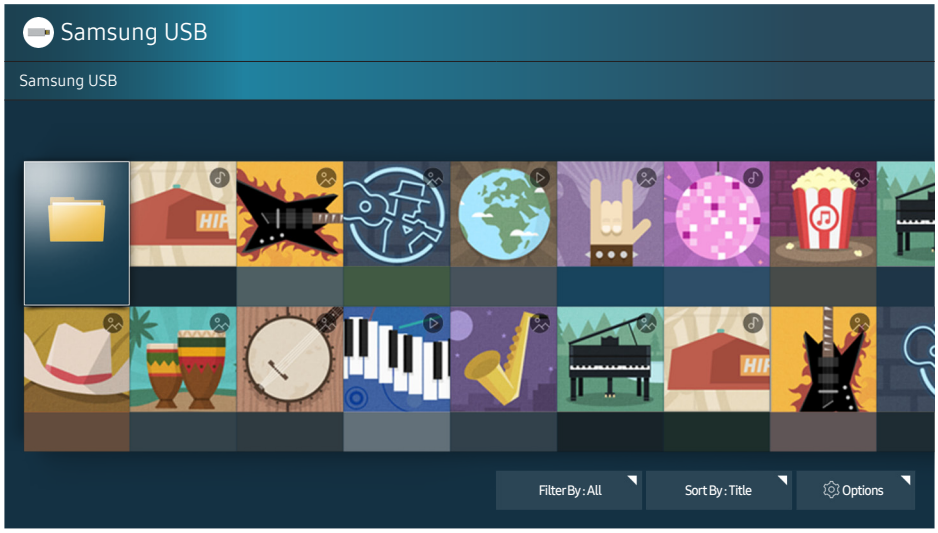
WEB BROWSER

- If you select > WEB BROWSER, you can see the recently viewed web sites or featured recommendations. By selecting a desired web site, you can directly get access to it.
- You can use the WEB BROWSER more easily after connecting a keyboard and mouse.
- You can scroll the web page with the 4 directional buttons.
- The web page may differ from that on a PC.

Playing pictures/video/music Try Now

Play media content stored on your TV, USB device, smartphone, camera, PC, etc.

Source



The image may differ by the specific model and area.

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.
- To connect the TV to a mobile device, refer to "Connecting a Mobile Device."

Playing media content

Playing multimedia content saved on a computer or mobile device

1. Select a device with media content in Source. Then the media content list in the device appears.
2. Select a media content item from the list. Then the content is played.

- For more information about buttons, refer to "Buttons and functions available while playing multimedia content."
- The content may not be played depending on the encoding method or file format. Furthermore, several functions may be restricted.

- The content may not be played smoothly due to the network communication problems. In this case, use a USB device.
- When the device is connected to a USB port, a notification appears. If you select **Browse**, the media content list of the device appears.

Playing media content saved on a USB device

When you connect a USB device to the TV, a connection message appears on the screen. Select **Browse**. The TV displays a thumbnail list of the media content saved on the USB device, and then select the media content to play from the list. The media content plays.

- To stop playing media contents, press the ⮌ button.

Functions on the media content list screen

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

- **Filter By**

  Filters the media content to display the type of media you want.

- **Sort By**

  Sorts the content list. The sorting methods change depending on the type of content you have selected.

- **Options**

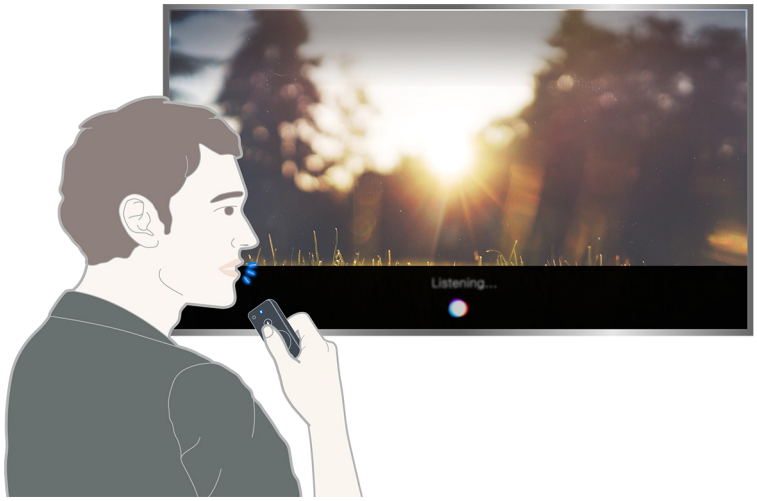
  Deletes or plays the selected media content from the media content list.

Using Voice Interaction

Access and run certain menu options and functions using voice commands.

This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.

Settings > System > Expert Settings > Voice Interaction Try Now



The Voice Interaction screen may differ from the image above, depending on the model.

When you run Voice Interaction, the Voice Interaction User Guide appears on the screen. This Guide differs by the language for which Voice Interaction is supported.

Setting up Voice Interaction

Turning the voice on/off

Settings > System > Expert Settings > Voice Interaction > Voice Feedback

You can determine whether or not to output response messages using voice against your voice commands.

Selecting the desired voice's gender

Settings > System > Expert Settings > Voice Interaction > Voice Gender

You can select the desired voice's gender for response voice messages.

Running Voice Interaction

Say a command while the button is pressed and release the button. The voice command is then identified.

If the command is not identified, try again with correct pronunciation.

Viewing Digital Broadcast Information at a Glance

See overview of each digital channel's programme lineup.

Using the guide

Live TV > Guide Try Now

You can see the daily programme schedules for each broadcaster through the Guide, in which the programme information can be seen and you can watch or schedule recording.

In the Guide, you can see only the TV programme schedule after the current time.

- The Guide also appears when you press the CH button while watching TV.
- The information in the Guide is for digital channels only. Analogue channels are not supported.
- To view the Guide, you must first set the TV's clock (> Settings > System > Time > Clock).

After moving to a desired programme, press and hold the Select button on the remote control. A pop-up window listing the following functions appears.

- Scheduled viewing

  After selecting Schedule Viewing, you can schedule viewing for a broadcast scheduled program.

- Scheduled recording

  After selecting Schedule Recording, you can schedule recording for a broadcast scheduled program.

- Detailed information

  After selecting 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.

- Displaying Record & Schedule Manager

  After selecting Schedule Manager, you can see the Recording & Schedule Manager screen.

- Recording

  After selecting Record, you can record the current broadcasting programme.

  - For more information on Schedule Recording, refer to "Recording Programmes."

Changing the broadcast signal

Live TV > Channel List

After pressing the right directional button on the your remote control, select Aerial to choose Terrestrial or Cable.

This function is not needed if your TV is connected to a cable or satellite box.

Checking digital channel signal info and strength

Settings > Support > Self Diagnosis > Signal Information

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.

Recording Programmes

Record a current or upcoming programme using a USB device instead of a video recorder.

The appears next to the recording scheduled programmes and channels.

This function is only available on certain models in specific geographical areas.

Read all precautions before using the recording feature. For more information, refer to "Before Using the Recording and Timeshift Functions".

Recording programmes

Using the instant and schedule recording options from the guide screen

Select a live programme from the Guide and then press and hold the Select button. You can select Record to start recording. In addition, select a broadcast scheduled programme and then press and hold the Select button. You can select Schedule Recording to schedule its recording.

Using the Instant and Schedule Recording options from programme info window

Press the Select button while watching to display the programme info window. When you press and hold the Select button in the programme info window and then select Record, you can record the programme. Use the left or right directional button to select a broadcast scheduled programme. Then press and hold the Select button. By selecting Timeshift, you can Schedule Recording the programme.

Using schedule recording to record on a specified date and time

Live TV > Schedule Manager or Recordings > Scheduled > Schedule Recording

Managing the schedule recording list

Live TV > Schedule Manager or Recordings > Scheduled > Edit

Canceling a schedule recording

Live TV > Schedule Manager or Recordings > Scheduled > Remove

Viewing recorded programmes

Live TV > Schedule Manager or Recordings > Recorded

Select the file containing the recording from the list. The file is played back.

- This function is only available on certain models in specific geographical areas.
- Buttons that appear are different depending on the file being played. For more information about buttons, refer to "Buttons and functions available while recording a programme or Timeshift."
- Highlights Player is only available if you have saved highlights of a programme which was recorded in Sports Mode.

Setting Up a Schedule Viewing

Configure the TV to show a specific channel or programme at a specific time and date.

The appears next to programmes that have been configured for a schedule viewing.

To set up a schedule viewing, you must first set the TV's clock (> Settings > System > Time > Clock).

Setting up a schedule viewing for a channel

Setting up a schedule viewing for digital channel

- The Guide Screen

  On the Guide screen, select a programme you would like to view, and then press and hold the Select button. Select Schedule Viewing on the pop-up menu that appears.

- The Programme Info Screen

  Press the Select button while watching the TV. Then the Programme Info window appears. Select a broadcast scheduled programme by using the left or right directional buttons and then press and hold the Select button. You can schedule watching the programme by selecting Schedule Viewing.

Setting up a schedule viewing for analogue channel

> Live TV > Schedule Manager or Recordings > Scheduled > Schedule Viewing

Editing a schedule viewing

> Live TV > Schedule Manager or Recordings > Scheduled

You can set up a maximum total of 30 Schedule Viewing and Schedule Recording entries.

Cancelling a schedule viewing

> Live TV > Schedule Manager or Recordings > Scheduled > Remove

Using Timeshift

Play, pause, or rewind live TV.

You can pause and rewind live TV by using Timeshift. Activating this function disables the Broadcasting function. Try Now

- To use Timeshift, the USB device must have been connected for recording.
- Read all precautions before using the Timeshift function. For more information, refer to "Before Using the Recording and Timeshift Functions."
- This function is only available on certain models in specific geographical areas.

To activate the Timeshift function while watching TV, press and hold the Select button, and then select on the programme Info window.

- For more information about buttons, refer to "Buttons and functions available while recording a programme or Timeshift."

Using the Channel List

Change the channel or checks programmes on other digital channels.

> Live TV > Channel List Try Now

By using the Channel List, you can change the channel or check programmes on other digital channels while watching TV. On standard remote control, press the CH LIST button.

The All screen contains the following icons:

- : A favourite channel
- : A locked channel
- : Channel that is being watched

If you press the right directional button on Channel List screen, you can use the following functions:

- All

  Displays the channels that have been automatically searched.

- Favourites

  Displays favourites list 1 to 5.

- Category

  Sorts the list so that it includes channels of a selected genre only. However, Category can only be used channels contain the genre information.

- Sort

  Sorts the list by Channel Number or by Name.

  This option is only available on digital channels.

- Aerial

  Allows you to choose between Terrestrial, Cable, and Satellite.

  This option is only available on certain models in specific geographical areas.

Editing channels

Eidt the channels stored on your TV.

Live TV > Channel List > Right directional button > Edit

The Edit Channel screen icons indicate the following:

- : A favourite channel
- : A locked channel

Removing registered channels

To remove a channel, select it, and then select Delete. To remove all channels, select Select All, and then select Delete.

This function is only available on certain models in specific geographical areas.

Editing registered channels

You can access the following options by selecting All > Edit:

- Lock or Unlock channels Try Now

  If you want to set the password, set > Settings > Broadcasting > Channel Lock to On.

- Rename channel

  This option is only available on analogue channels.

- Change Number

  This function is only available on certain models in specific geographical areas.

  When a channel number is changed, its channel information is not updated automatically.

Creating a Personal Favourites List

Designate frequently watched channels as favourite channels.

Favourite channels are highlighted in the Edit Channel and All screens with the ♥ symbol.

Registering channels as favourites

> Live TV > Channel List

1. Press the right directional button on your remote control.
2. Select Favourites.
3. Select a desired one of five favorites lists.
4. Move to Edit Favourites.
5. Select a channel to add in the favorites list
6. Select . Then the selected channel is registered in the favorites list.

Viewing and selecting channels on favourites lists only

Live TV > Channel List

1. Press the right directional button on your remote control.
2. Select Favourites.
3. Select the desired list among five favourites lists on the screen. Then the channels in the selected favourites list appear.

Only if the favorites list has been registered, the channels of the list can be displayed.

Editing a Favourites List

Edit a favourites channel list.

Live TV > Channel List

After pressing the right directional button on the your remote control, select Favourites > Favourites 1 ~ Favourites 5 > Edit. Edit Favourites screen appears.

Removing channels from a favourites list

Select channels in favourite list, and then select button.

Rearranging a favourites list

Select the channels, and then select Change order. The Change order highlight appears. Press the up/down arrow buttons to indicate the new location for the channels. Press the Select button to set the channels into their new location.

Renaming a favourites list

Select favourite list you want to rename, and then select Rename Favourites. Enter a new name using the on-screen keyboard that appears, and then select Done.

Making Sports programmes More Realistic with Sports Mode

Make sporting events appear and sound more realistic as if you are actually there.

Settings > Picture > Special Viewing Mode > Sports Mode Try Now

You can use Sports Mode to get optimal picture and sound settings for sports events, making them appear and sound as if you are there. In addition, if a recording device is connected to the TV when you are using Sports Mode, you can view highlights extracted from the recorded sporting event automatically or manually.

- This function is only available on certain models in specific geographical areas.
- Enabling Sports Mode changes Picture Mode to Stadium and Sound Mode to Stadium, and disables some Picture and Sound menus.

Extracting highlights automatically

Settings > Picture > Special Viewing Mode > Sports Mode > Auto Highlights Try Now

However, Auto Highlights is not available:

- When you are switching the input signal
- When Audio Description is On
- When 2 Tuner models record 2 channels simultaneously
- When you are viewing the content in MY CONTENT
- When the Screen Mirroring function is running
- When you are viewing highlights of the current football game in the UHD resolution by using the Highlights Player function
- While watching an analogue programme

- This function is only available on certain models in specific geographical areas.
- The performance of Auto Highlights depends on the characteristics of the transmitted signal.
- It is advisable to use Auto Highlights only while watching a football game. If you use this function for other sporting events, it may display irrelevant picture frames.

Viewing a game recorded in sports mode

You can view a recorded game on the MY CONTENT screen.

- For more information about the functions, refer to "Buttons and functions available while using sports mode" and "Buttons and functions available while recording a programme or Timeshift."
- This function is only available on certain models in specific geographical areas.
- For more information, refer to "Viewing recorded programmes."

TV-Viewing Support Functions

Use the functions that are supported from digital or analogue channels.

Scanning for available channels

Settings > Broadcasting > Auto Tuning Try Now

- This function is only available on certain models in specific geographical areas.
- If the TV is connected to a cable box or satellite receiver, you do not need to do this.
- DVB-T2 system may not be available in specific geographical areas.

Configuring advanced broadcasting settings

Settings > Broadcasting > Expert Settings Try Now

Reading digital text

Settings > Broadcasting > Expert Settings > Digital Text Try Now

You can use this function when you watch a broadcast that includes both text and multimedia content.

- This function is only available in UK.
- Multimedia and Hypermedia Information Coding Experts Group (MHEG) is an International standard for data encoding systems used in multimedia and hypermedia. This is at a higher level than the MPEG system which includes data-linking hypermedia such as still images, character service, animation, graphic and video files as well as multimedia data. MHEG is user runtime interaction technology and is being applied to various fields including Video-On-Demand (VOD), Interactive TV (ITV), Electronic Commerce (EC), tele education, teleconferencing, digital libraries and network games.

Selecting the broadcast audio language

Settings > Broadcasting > Expert Settings > Audio Options Try Now

This is the language you will hear while watching TV if the language is included in the broadcast signal. Audio Options functions differently for analogue and digital channels.

Selecting a Language

Settings > Broadcasting > Expert Settings > Audio Options > Audio Language

The available language may differ with the broadcast.

Selecting a Audio Format

Settings > Broadcasting > Expert Settings > Audio Options > Audio Format

The supported audio format may differ with the broadcast programme.

This option is only available on digital channels.

Setting the country (area)

Settings > Broadcasting > Expert Settings > Country (Area) Try Now

You can select your country so that the TV can correctly auto-tune the broadcasting channels.

1. Enter your PIN number.
2. Change your area. To change the country for digital channels, select Digital Channel. To change the country of analogue channels, select Analogue Channel.

This function is not available in all geographical areas.

The list of countries (areas) displayed on the TV's screen may differ with the geographical area.

Tuning broadcast signals manually

Settings > Broadcasting > Expert Settings > Manual Tuning Try Now

You can scan for all the channels manually and store the scanned channels in the TV. To stop scanning, select Stop.

This function is only available on certain models in specific geographical areas.

Tuning digital channels

Settings > Broadcasting > Expert Settings > Manual Tuning > Digital Channel Tuning

Select New > Search to scan for digital channels automatically and store the scanned channel list in the TV.

Tuning analogue channels

Settings > Broadcasting > Expert Settings > Manual Tuning > Analogue Channel Tuning

Select New and configure Programme, Colour System, Sound System, Channel, and Search to scan for analogue channels. Then, select Store to store the scanned channels in the TV.

This function is only available for analogue broadcasts.

Fine-tuning analog broadcasts

Settings > Broadcasting > Expert Settings > Fine Tune

This function is only available for analogue broadcasts.

Transferring channel list

Settings > Broadcasting > Expert Settings > Transfer Channel List Try Now

You can import or export the channel list to a USB storage. To use this function, the PIN number is required.

- Import from USB: Imports channel list from a USB storage.
- Export to USB: Exports channel list saved in the TV to a USB storage.

This function is available when USB is connected.

Deleting CAM operator profile

Settings > Broadcasting > Expert Settings > Delete CAM Operator Profile

This function is only available on certain models in specific geographical areas.

Setting satellite system

Settings > Broadcasting > Expert Settings > Satellite System

You can configure a set of satellite dish settings before performing a channel scan.

This function is only available on certain models in specific geographical areas.

Changing teletext language

Settings > Broadcasting > Expert Settings > Teletext Language Try Now

You can set or change the teletext language. To watch the teletext broadcast in your preferred language, select a language to use in Primary Teletext. If this language is not supported, you can watch the teletext broadcast in your secondary preferred language set in Secondary Teletext.

This function is only available on certain models in specific geographical areas.

Showing common interface menu

Settings > Broadcasting > Common Interface Try Now

You can view information about common interfaces.

- CI Menu

  Enables the user to select from the CAM-provided menu. Select the CI menu based on the menu PC Card.

- Application Info

  Displays information about the CAM inserted into the CI slot and about the “CI or CI+ CARD” inserted into the CAM. You can install the CAM any time, with or without the TV turned on.

- CICAM PIN Manager

  Manages Common Interface Common Access Module (CICAM) PIN. Save PIN or change stored PIN and then set other PIN options.

- Descramble Mode

- CAM Video Transcording

  Configures the setting to transcode the video codec from the CAM automatically. Turn it Off if you do not want to use it.

  You must use a CAM that supports video codec transcoding.

Adjusting the Picture Quality

Change the Picture Mode and adjust Expert Settings.

Choosing a picture mode

Settings > Picture > Picture Mode Try Now

You can select the picture mode that provides the best viewing experience.

- Dynamic

  Makes the picture brighter and clearer in bright viewing environments.

- Standard

  Is the default mode suitable for general viewing environments.

- Natural

  Reduces eye strain for comfortable viewing experience.

- Movie

  Is suitable for watching TV or movies in dark environments.

Configuring advanced picture settings

Settings > Picture > Expert Settings Try Now

Configure the screen settings to your taste by using the following functions:

- Backlight Try Now
- Brightness Try Now
- Contrast Try Now
- Sharpness Try Now
- Colour Try Now
- Tint (G/R) Try Now
- Apply Picture Settings Try Now

- Digital Clean View

  This function is available for analogue channels only.

- Analogue Clean View

  This function is available for analogue channels only.

- Auto Motion Plus

  When LED Clear Motion is set to On, the screen appears darker than when it is Off.

- Smart LED

  Controls the brightness of individual areas on the screen to maximise contrast automatically.

  This function is not available on certain models in specific geographical areas.

- Film Mode Try Now

  This function is only available when the input signal is TV, AV, Component (480i, 1080i), or HDMI (1080i).

- HDMI UHD Color Try Now

  If you set the HDMI connector to On, the TV turns off and then on automatically.

  For the SUHD models, each HDMI connection can be individually optimized for HDMI UHD Color. For the UHD models, make sure to connect to the HDMI IN 1 port of the TV.

  When you connect the TV to the external device that supports only UHD 24 or 30 Hz frequency or any FHD frequency, the HDMI UHD Color function may not be available. In this case, set HDMI UHD Color to Off.

  The HDMI connector with HDMI UHD Color set to Off supports up to UHD 50P/60P 4:2:0 input signals, while the HDMI connector with HDMI UHD Color set to On supports up to UHD 50P/60P 4:4:4 and 4:2:2 input signals. For more information, refer to "Supported Resolutions for each of UHD Input Signals".

- HDMI Black Level Try Now

  This function is only available when the input signal, connected to the TV via an HDMI connector, is set to RGB444.

- Dynamic Contrast Try Now

- Colour Tone Try Now

  Cool and Standard are only available when Picture Mode is set to Dynamic.

  Colour Tone is only available when the TV is connected to a computer via an HDMI-to-DVI cable.
- White Balance Try Now
- Gamma Try Now
- RGB Only Mode Try Now
- Colour Space Try Now
- Cinema Black

  This function is not available on certain models in specific geographical areas.
- Reset Picture Try Now

Picture Support Functions

Configure the picture settings for your TV.

Viewing a picture-in-picture (PIP)

Settings > Picture > PIP Try Now

While using the TV, you can watch a broadcast in a picture-in-picture (PIP) window simultaneously.

This function is not available on certain models in specific geographical areas.

Changing the picture size

Settings > Picture > Picture Size > Picture Size Try Now

You can change the size of the picture displayed on the TV screen.

- 16:9 Standard
- Custom
- 4:3

⚠ Do not watch TV in 4:3 mode for an extended period of time. This action may cause black bars to appear and rest for a while at the top, bottom, left, and right sides of the screen. Note that this information is not presented on the Warranty.

Supported picture sizes differ with the input signal. For more information about supported picture sizes, refer to "Picture sizes and input signals."

Changing the picture size automatically

Settings > Picture > Picture Size > Auto Wide

This function is not available on certain models in specific geographical areas.

Changing the picture size in 4:3 or Screen Fit mode

Settings > Picture > Picture Size > 4:3 Screen Size Try Now

You can select a picture size suitable for your geographical area while you are watching TV in the 4:3 or Fit to screen mode. The supported screen sizes differ with the country and this function allows you to adjust the picture size in this case.

The 4:3 mode is not available when an external device is connected to the TV via a Component connector or an HDMI connector.

This function is not available on certain models in specific geographical areas.

Fitting the picture to the screen

Settings > Picture > Picture Size > Fit to screen

This function is not available depending on the Picture Size.

Adjusting the picture size and/or position

Settings > Picture > Picture Size > Zoom/Position

The availability of this function depends on the Picture Size.

Adjusting the Sound Quality

Change the Sound Mode and adjust Expert Settings.

Choosing a sound mode

Settings > Sound > Sound Mode Try Now

You can select a sound mode to optimise your listening experience.

Configuring advanced sound settings

Settings > Sound > Expert Settings Try Now

You can personalize the sound quaility, by adjusting the following settings.

- Balance Try Now
- Equaliser Try Now
- TV Installation Type Try Now
- Wireless Speaker Manager Try Now

For more information, refer to "Listening to the TV with a Samsung audio device."

- HDMI Audio Format Try Now
- Audio Format Try Now
- DTV Audio Level Try Now
- Audio Delay Try Now
- Auto Volume Try Now

  If you want to use the volume control of a connected source device to control the sound, deactivate **Auto Volume**. When you use **Auto Volume** with a source device, the device's volume control may not function properly.

- Sound Feedback
- Reset Sound Try Now

Standard audio signals are sampled at 48 kHz while HD audio signals are sampled at 96 kHz.

Some S/PDIF receivers may not be compatible with HD audio format.

If you want to use the volume control of a connected source device to control the sound, deactivate **Auto Volume**. When you use **Auto Volume** with a source device, the device's volume control may not function properly.

Using the Sound Support Functions

Configure the sound settings for your TV.

Selecting speakers

Settings > Sound > Sound Output Try Now

You can select which speakers the TV uses for audio output.

When **Sound Output** is set so that sound comes from external speakers only, Volume and Mute buttons and some Sound functions are disabled.

Listening to the TV with a Samsung audio device

Connecting a Samsung audio device

Settings > Sound > Expert Settings > Wireless Speaker Manager > Add TV SoundConnect Try Now

You can connect Samsung audio device to the TV. They must be paired using the TV's Bluetooth function. For more information on pairing, refer to the Samsung audio device's operating manual.

- This function is only available for Samsung audio devices that support Add TV SoundConnect.
- Add TV SoundConnect, Surround, and Bluetooth devices can't be used simultaneously.
- The sound quality may be affected by the condition of the wireless network.
- Before using a Bluetooth audio device, refer to "Read Before Using Bluetooth Devices."

Listening to the TV audio sound with connection to a Samsung audio device

Settings > Sound > Expert Settings > Wireless Speaker Manager > Samsung Audio Devices

You can hear TV sound by selecting a Samsung audio device.

- To use a Bluetooth speaker, set Sound > Sound Output to TV Sound Output.

Listening to the TV through Bluetooth devices

Settings > Sound > Expert Settings > Wireless Speaker Manager > Bluetooth Audio Devices

You can connect Bluetooth audio devices to the TV. They must be paired using the TV's Bluetooth function. For more information on pairing, refer to the Bluetooth audio device's operating manual.

- If the TV fails to find a Bluetooth audio device, place the device closer to the TV, and then select Refresh.
- 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/deactivate the Bluetooth audio device.
- Before using a Bluetooth audio device, refer to "Read Before Using Bluetooth Devices."
- This function may not be supported depending on the model or geographical region.

Listening to the TV through a Multiroom speaker

This function is not available on certain models in specific geographical areas.

Creating surround effect through Multiroom speaker

Settings > Sound > Expert Settings > Wireless Speaker Manager > Multiroom Link Type

Select the desired speaker's output type out of the connected Multiroom speakers. You can hear the optimized sound for the selected output type.

Configuring the surround effect settings through Multiroom speaker

Settings > Sound > Expert Settings > Wireless Speaker Manager > Multiroom Link Settings

You can connect a Samsung Multiroom Link compatible speaker to the TV to enjoy a richer sound.

- This function is not available on certain models in specific geographical areas.
- The Multiroom Link function is only available when at least one Samsung Multiroom Link compatible speaker is connected to the TV.
- The Multiroom Link function is deactivated when you activate Screen Mirroring.
- The audio from the secondary device(s) may lag behind the audio and video of the main device which is playing the source content.
- For more information, refer to the Multiroom Link manual on the Samsung web site. (www.samsung.com)

Setting the Time and Using the Timer

Set the current time and use the timer function.

Setting the current time

Settings > System > Time Try Now

You can set the Clock manually or automatically. Once the Clock is set, you can view the current time on the TV anytime.

The clock must be reset every time the power is disconnected.

Setting the clock using digital broadcast info

Settings > System > Time > Clock > Clock Mode > Auto

This function works only when the TV's antenna jack is connected to either an antenna or a cable output and is receiving digital broadcasts.

Depending on the broadcast signal, the displayed time may differ.

The accuracy of the time information received may differ with the channel and signal.

Changing the current time

Settings > System > Time > Clock > Time Offset

Time Offset adjusts the time through a network connection. This function is only available if Clock Mode is set to Auto and the TV is connected to the Internet though a local area network.

Time Offset adjusts the time if the TV fails to receive time information through normal digital broadcast signals.

Setting the clock manually

Settings > System > Time > Clock > Clock Mode > Manual > Clock Set

Setting the clock automatically

Settings > System > Time > Clock > Time Zone

Sets the right time by setting Daylight Savings Time (DST) and your local time zone.

This function is only available when the Clock Mode is set to Auto.

- DST

  Switches the Daylight Saving Time (DST) function on or off.

  This function is only available when the Clock Mode is set to Auto.

- GMT

  Selects your time zone.

  When Country (Area) is set to others, you can use this function.

Using the timers

Using the sleep timer

Settings > System > Time > Sleep Timer Try Now

You can use this function to automatically shut off the TV after a pre-configured period of time. You can set the timer for 30 minute increments, for up to 3 hours.

Turning on the TV using the on timer

Settings > System > Time > On Timer Try Now

When you set Source to USB, Music or Photo options are available. However, there are some requirements, as listed in the below:

- If the folder that you choose has sub-folders, you can select a sub-folder in the same fashion.
- This function does not work properly if the selected USB device does not contain media contents or a folder has not been specified.
- No slideshow starts if there is only one image file on the USB device.
- Folders with long names cannot be selected.
- Make sure to use different folder names for multiple USB devices.
- Use a USB memory stick or multi-card reader. On Timer may not work with certain battery-powered USB devices, MP3 players, or PMPs because the TV may take too long to recognise the device.

Turning off the TV using the off timer

Settings > System > Time > Off Timer Try Now

Using the Screen Burn Protection and Energy Saving Functions

Protect the screen from screen burn-in and reduce the TV's energy consumption.

Preventing screen burn

Settings > System > Expert Settings > Auto Protection Time

Still images can leave burned-in after-images if left on the screen for a long period of time. Select a time setting from the list. If a still image is shown on the screen for longer than the time that you selected, the TV automatically activates the Screen Burn Protection function.

Reducing the energy consumption of the TV

Settings > System > Eco Solution Try Now

You can adjust the brightness level of the TV and prevent overheating to reduce overall power consumption.

- Eco Sensor Try Now

  Automatically adjusts the brightness level of the TV, according to the ambient light level, to reduce power consumption. If the Eco Sensor has adjusted the screen's brightness level, you can select the Min. Backlight to manually adjust the minimum screen brightness. While the Eco Sensor is active when the value changes in Picture > Backlight, the Eco Sensor function is deactivated.

- Energy Saving Mode Try Now

  Allows you to select a brightness setting from the list to reduce the TV's power consumption.

- Motion Lighting Try Now

  Adjusts the brightness in response to on-screen movements to reduce power consumption.

  This function is only available when Picture Mode is set to Standard.

- Auto Power Off Try Now

  Automatically turns off the TV to prevent overheating if there is no operation for the length of time you specify (4, 6, or 8 hours).

Using Anynet+ (HDMI-CEC)

Control the external devices 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

Settings > System > Expert Settings > 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. Then the device is automatically connected to the TV. After connection is finished, you can use the menus of the connected device by using your remote control.

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

Read before connecting an Anynet+ (HDMI-CEC)

- You can configure the TV's universal remote control to control third-party cable boxes, Blu-ray players, and home theatres that do not support HDMI-CEC.
- Anynet+ cannot be used to control external devices that do not support HDMI-CEC.
- Anynet+ devices must be connected to the TV with an HDMI cable. Note that some HDMI cables may not support Anynet+ (HDMI-CEC).
- The TV remote control may not work under certain circumstances. If this occurs, select the Anynet+ device again.
- Anynet+ (HDMI-CEC) works only with external devices that support HDMI-CEC and only when those devices are either in standby mode or turned on.
- Anynet+ (HDMI-CEC) can control up to 12 compatible external devices (up to 3 of the same type). With home theatre systems, however, the only one system can be controlled.
- To listen to 5.1-channel audio from an external device, connect the device to the TV via an HDMI cable and connect the home theatre system directly to the external device's digital audio output connector.

- A home theatre system that has been connected to the TV with an HDMI cable and an optical cable only supports 2-channel audio. 5.1-channel audio is, however, available for digital broadcasts with 5.1-channel audio.
- If an external device has been set by both Anynet+ and a universal remote control, the device can be controlled only with the universal remote control.

Updating the TV's Software

View your TV's software version and update it if necessary.

Settings > Support > Software Update Try Now

Updating the TV's software to the latest version

Settings > Support > Software Update > Update now

- This function requires an Internet connection.
- Save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.

⚠ DO NOT turn off the TV's power until the update is complete. The TV turns off and on automatically after completing the software update. Video and audio settings may be reset to their defaults after a software update.

Updating through the Internet

Settings > Support > Software Update > Update now

- This function requires an Internet connection.

Updating through the USB device

Settings > Support > Software Update > Update now

After downloading the update file from the website and storing it on a USB device, connect the USB device to the TV for update.

- 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

Settings > Support > Software Update > Auto update

- This function may take a longer time if a different networking function is running concurrently.
- This function requires an Internet connection.
- If you agree to the Smart Hub terms and conditions, Auto update is set to On automatically. If you do not want the TV's software to update itself automatically, set Auto update to Off.

Protecting the TV from Hacking and Malicious Code

Protect your TV from hacking attempts and malicious code.

Settings > System > Expert Settings > Smart Security Try Now

You can use Smart Security to protect the TV from hacking and malicious code when connected to the Internet.

Checking the TV and connected storage for malicious code

Settings > System > Expert Settings > Smart Security > Scan

If malicious code is found, the results of the scan will appear on the screen. This result window displays all malicious code found. You can quarantine (isolate) the code from executing.

1. Select all the malicious code to quarantine.
2. Select Isolate. These options relocate the selected malicious code to the Isolated List.
   - The Isolated List displays all quarantined malicious codes.

Scanning viruses in real time

Settings > System > Expert Settings > Smart Security > Real-Time Monitoring

Checking a scanned list

Settings > System > Expert Settings > Smart Security > Monitoring Results

Using Other Functions

View other setup functions.

Running the accessibility functions

Settings > System > Accessibility Try Now

Enabling voice guides for the visually impaired

Settings > System > Accessibility > Voice Guide Try Now

You can activate Voice Guide that describe the menu options aloud to aid the visually impaired. To activate this function, set Voice Guide to On. Then the TV provides Voice Guide for focus movement, channel change, volume change, programme information, schedule viewing, programme recording, other TV functions, and various content on the Web Browser, Search or MY CONTENT.

The Voice Guide is provided in the language that is specified on the Language screen. However, some languages are not supported by Voice Guide even though they are listed in the Language screen. English is always supported.

Changing the volume, pitch, and speed of the voice guide

You can configure the volume, pitch, speed, and level of the Voice Guide.

Watching TV broadcasts with subtitles

Settings > System > Accessibility > Subtitle Try Now

Set Subtitle to On. Then you can watch the programme with the caption displayed.

This function is only available on certain models in specific geographical areas.

The TV cannot control or modify DVD or Blu-ray subtitles. To control DVD or Blu-ray subtitles, use the sub-title feature of the DVD or Blu-ray player and the player's remote control.

- Subtitle

  Turns on or off the subtitle.

- Subtitle Mode

  Sets the subtitle mode.

- Subtitle Language

  Sets the subtitle language.

  > The TV cannot control or modify DVD or Blu-ray subtitles. To control DVD or Blu-ray subtitles, use the subtitle feature of the DVD or Blu-ray player and the player's remote control.

Selecting the broadcasting subtitle language

You can select the default subtitle language. The list of modes may vary depending on the broadcast.

- Primary Subtitle Language

  Sets the primary subtitle language.

- Secondary Subtitle Language

  Sets the secondary subtitle language.

Audio Description

Settings > System > Accessibility > Audio Description Try Now

You can use the Audio Stream for the Audio Description (AD) which is sent along with the Main audio from the broadcaster. Adjust the audio description volume using Volume.

> This function is only available on digital channels.

- Audio Description

  Turns the audio description function on or off.

- Volume

  Adjusts the audio description volume.

Adjusting the menu transparency

Settings > System > Accessibility > Settings Menu Transparency Try Now

You can adjust the menu's transparency.

Setting High Contrast to On automatically switches the menu display mode to opaque. You cannot manually change the Settings Menu Transparency settings.

White text on black background (high contrast)

Settings > System > Accessibility > High Contrast Try Now

You can change major service screens to white text on a black background or change the transparent TV menus to opaque so that text can be more easily read. To activate this function, set High Contrast to On.

Enlarging font (for the visually impaired)

Settings > System > Accessibility > Enlarge Try Now

You can zoom in the font on the screen. To activate this function, set Enlarge to On.

Learning about the remote control (for the visually impaired)

Settings > System > Accessibility > Learn About your Remote Control 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, press a button on the remote control and then the TV displays its name.

To return to the previous screen, press the ↩ button twice. To exit, press and hold the ↩ button.

Listening to the TV through Bluetooth devices (for the hearing impaired)

Settings > System > Accessibility > Multi-output Audio Try Now

You can turn on both the TV speaker and Bluetooth devices at the same time. When this function is active, you can set the volume of the Bluetooth devices to be louder than that of the TV speaker.

When you connect the Bluetooth devices to the TV, **Multi-output Audio** menu is activated. For more information about connecting Bluetooth devices to the TV, refer to "Listening to the TV through Bluetooth devices."

Configuring advanced system settings

Settings > System > Expert Settings Try Now

Changing the menu language

Settings > System > Expert Settings > Language Try Now

Setting up a password

Settings > System > Expert Settings > Change PIN Try Now

The PIN input window appears. Enter a PIN. Enter it again to confirm it. The default PIN is 0000. (for France, Italy: 1111)

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 to reset the PIN to 0000 (for France, Italy: 1111): VOL → Volume Up → ⮌ → Volume Down → ⮌ → Volume Up → ⮌. On the standard remote control: MUTE → (+) (Volume Up) → RETURN → (—) (Volume Down) → RETURN → + → RETURN.

Checking Notifications

Settings > System > Expert Settings > View Notifications Try Now

You can view the list of event messages generated by the TV. View Notifications appear on the screen when events such as an update release for an app or Samsung Account login/logout occurs.

- To delete all notifications, select Delete All.
- To check the SMART TV's service notifications in a WEB BROWSER, select Service Notice.

Program Rating Lock

Settings > Broadcasting > Programme Rating Lock Try Now

- This function is dependent on the specific model and area.

The Programme Rating Lock blocks programmes with ratings higher than those desired. This is useful for controlling what children watch on TV. This will not function for programmes originating from external sources, such as DVD players or USB files.

This PIN is required to watch a blocked programme.

- The Broadcasting is not available in HDMI or Component mode.
- Programme Rating Lock may not be supported depending on your input signal.

Locking/Unlocking the TV Control Button or Control Stick

Settings > System > Expert Settings > TV Control Button Lock or Control Stick Lock Try Now

- The actual name of this function may differ depending on the model.

Enabling/Disabling the front indicators

Settings > System > Expert Settings > Light Effect

- This function is only available on certain models in specific geographical areas.
- The colour of the TV's light may differ with the model.

Registering the TV as a DivX-certified device (watching for pay DivX movies)

Settings > System > Expert Settings > DivX® Video On Demand Try Now

- Digital Rights Management (DRM) functions as a technical security mechanism to protect the content provider's copyright.
- You can watch recorded movies or free DivX movies without registration.
- Visit the DivX website (http://www.divx.com) and log in to your user account before registering the TV as a DivX-certified device. If you do not have an account, create one.

Using the TV as a display model (for retail stores)

Settings > System > Expert Settings > Usage Mode Try Now

- For all other uses, select Home Mode.
- With Retail Mode, some functions are disabled, and the TV automatically resets itself after a preset amount of time.

Restoring the TV to the factory settings

Settings > Support > Self Diagnosis > Reset Try Now

- For more information on Start Setup, refer to the user manual that came with the TV.

Enabling game mode

Settings > Picture > Special Viewing Mode > Game Mode Try Now

You can enable the game mode to optimise the TV's settings for playing video games with a gaming console, such as a PlayStation™ or Xbox™.

- The game mode is not available for normal TV viewing.
- The screen may shake somewhat.
- When the Game Mode is enabled, Picture Mode and Sound Mode are switched to Game automatically.
- To use a different external device, first disconnect the game console and disable the Game Mode.

Running Data Service Automatically

Allows the user to use information (text, still images, graphics, documents, software, etc.) transmitted via broadcast media.

- This function is only available on certain models in specific geographical areas.

Settings > Broadcasting > Expert Settings > Auto Run Data Service Try Now

You can set whether or not to automatically run data service. If the channel you are currently watching provides data service, you can enjoy a variety of data services by selecting the red colour button.

- This function is not available when any other secondary function is under way.
- Provided data service information may vary depending on the broadcast.
- Changing the channel with the numeric keys while using data service may not be available, depending on the service.
- If Auto Run Data Service is On, the loading screen is displayed and the function is not available temporarily.

HbbTV

Access services from entertainment providers, online providers and CE manufactures through HbbTV.

- This function is only available on certain models in specific geographical areas.
- Some channels may not include the HbbTV service.

In some countries, HbbTV is disabled by default. In this case, HbbTV can be used by installing the HbbTV widget (the HbbTV Activation Widget) from Samsung APPS.

To set the HbbTV automatic start to on or off, access > Settings > Broadcasting > Expert Settings > HbbTV and set HbbTV to on or off. (Depending on the country)

- HbbTV is not available when Timeshift is running or when a recorded video is being played back.
- An application on HbbTV may malfunction temporarily depending on the circumstances of the broadcast station or application provider.
- An application is only available for use on HbbTV when the TV network is connected to an external network. The application may malfunction depending on the network conditions.
- It is possible to use both Digital Teletext and Traditional Teletext in several limited channels by pressing the TTX/MIX button in a toggling manner.

Using HbbTV:

- When the screen indicates (with the red colour button etc.) that HbbTV is being accessed.
- Select TTX using the remote once to enter the HbbTV text-input mode.
- Select TTX using the remote twice to enter the non-HbbTV text-input mode.

Using a TV Viewing Card (“CI or CI+ Card”)

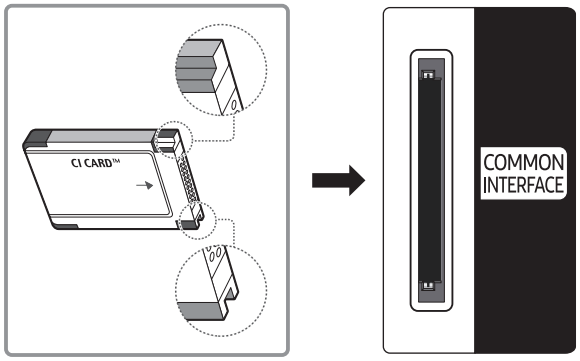
Watches paid channels by inserting your TV viewing card slot into the COMMON INTERFACE slot.

2 CI card slots are available, depending on the model.

Turn the TV off to connect or disconnect a “CI or CI+ Card”.

Connecting the “CI or CI+ Card” via COMMON INTERFACE slot

Connect the “CI or CI+ Card” to the COMMON INTERFACE slot as shown in the image below.



Using the “CI or CI+ Card”

To watch paid channels, the “CI or CI+ CARD” must be inserted.

- Samsung TV follow up CI+ 1.3 standard. When TV product display the "Scrambled Signal", it may happen due to CI+ 1.3 Version inconsistency. If you have a problem, please contact Samsung Call Centre.
- If you don’t insert the “CI or CI+ CARD”, some channels will display the “Scrambled Signal” message.
- The pairing information containing a telephone number, the “CI or CI+ CARD” ID, the Host ID, and other information will be displayed in about 2~3 minutes. If an error message is displayed, please contact your service provider.
- When the configuration of channel information has finished, the message “Updating Completed” is displayed, indicating the channel list is updated.

- You must obtain a “CI or CI+ CARD” from a local cable service provider.
- When removing the “CI or CI+ CARD”, carefully pull it out with your hands since dropping the “CI or CI+ CARD” may cause damage to it.
- Insert the “CI or CI+ CARD” in the direction marked on the card.
- The location of the COMMON INTERFACE slot may be different depending on the model.
- “CI or CI+ CARD” is not supported in some countries and regions; check with your authorised dealer.
- If you have any problems, please contact a service provider.
- Insert the “CI or CI+ CARD” that supports the current aerial settings. The screen will be distorted or will not be seen.

Teletext Feature

Learn how to use Teletext and run the functions provided by Teletext Service.

- This function is only available on certain models in specific geographical areas.

The index page of the Teletext service gives you information on how to use the Service. For Teletext information to be displayed correctly, channel reception must be stable. Otherwise, information may be missing or some pages may not be displayed.

- You can change Teletext pages by select numeric using your remote control.

Teletext on / **mix** / **off**: Activates the Teletext mode for the current channel. Press twice to overlap the Teletext mode with the current broadcasting screen. Press it one more time to exit teletext.

Store: Stores the Teletext pages.

Size: Displays the teletext on the upper half of the screen in double-size. To move the text to the lower half of the screen, press it again. For normal display, press it once again.

Hold: Holds the display at the current page, in the case that there are several secondary pages that follow automatically. To undo, press it again.

Colour buttons (**red**, **green**, **yellow**, **blue**): If the FASTEXT system is used by the broadcasting company, the different topics on a Teletext page are colour-coded and can be selected by coloured buttons. Press the colour corresponding to the topic of your choice. A new colour coded page appears. Items can be selected in the same way. To display the previous or next page, select corresponding coloured button.

Mode: Selects the Teletext mode (LIST / FLOF). If pressed during LIST mode, switches the mode to List save mode. In List save mode, you can save a Teletext page into a list using the (store) button.

Sub-page: Displays the available sub-page.

Page up: Displays the next Teletext page.

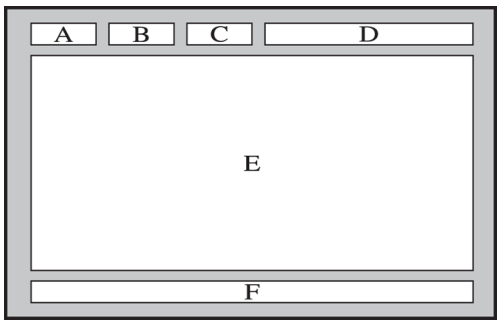
Page down: Displays the previous Teletext page.

Index: Displays the index (contents) page at any time while you are viewing Teletext.

Reveal: Displays the hidden text (answers to quiz games, for example). To display the normal screen, press it again.

Cancel: Shrinks the Teletext display to overlap with the current broadcast.

Typical Teletext page



Part	Contents
A	Selected page number.
B	Broadcasting channel identity.
C	Current page number or search indications.
D	Date and time.
E	Text.
F	Status information. FASTEXT information.

Getting Support

Get help directly from Samsung if you have a problem with your TV.

Getting support through Remote Management

> Settings > Support > Remote Management Try Now

You can use this feature to let Samsung Electronics diagnose your TV remotely when you need assistance with your TV. Set it to On. You will need to read and agree to the service agreement before using this feature.

This option requires an Internet connection.

What Does Remote Service Do?

Samsung Remote Support service offers you one-on-one support with a Samsung Technician who can remotely.

- **Diagnose** your TV
- **Adjust the TV settings** for you
- Perform a factory reset your TV
- Install recommended **firmware updates**

How does Remote Support Work?

You can easily have a Samsung Tech service your TV remotely:

1. Call the Samsung Contact Centre and ask for remote support.
2. Open the menu on your TV and go to the Support section.
3. Select Remote Management, and then read and agree to the service agreements. When the PIN screen appears, provide the PIN number to the agent.
4. The agent will then access your TV.

Finding the contact information for service

Settings > Support > Contact Samsung Try Now

You can view the address of the Samsung website, the call centre phone number, your TV's model number, your TV's software version, the Smart Hub info, and other information you may need to get service support from a Samsung call agent or the Samsung website.

You can also find information by reading the QR code of the product.

Requesting service

Settings > Support > Request Support Try Now

This function is not available in specific geographical areas.

You can request service when you encounter a problem with the TV. Select the item matching the problem that you encountered, and then select Request Now or Schedule Appointment. Your service request will be registered.

You should agree to the terms and conditions for the service request.

Diagnosing the TV operation

You can see the output status for video and audio data. In addition, you can configure the settings for broadcasting signal strength and Smart Hub & TV factory resets.

Settings > Support > Self Diagnosis Try Now

You can check whether the display and sound of the TV are normally output. In addition, you can configure the settings for Smart Hub and TV factory reset.

There Is a Problem with the Picture

When the TV has trouble with the picture, these steps may help resolve the problem.

Testing the picture

Settings > Support > Self Diagnosis > Start Picture Test Try Now

Before you review the list of problems and solutions below, use Start Picture Test to determine if the problem is caused by the TV. The Start Picture Test displays a high definition picture you can examine for flaws or faults.

The problem	Try this!
Flickering and Dimming	If your Samsung Television is flickering or dimming sporadically, you may need to disable some of the energy efficiency features. Disable Energy Saving Mode (⌂ > ⚙ Settings > System > Eco Solution > Energy Saving Mode) or Eco Sensor (⌂ > ⚙ Settings > System > Eco Solution > Eco Sensor) or Motion Lighting (⌂ > ⚙ Settings > System > Eco Solution > Motion Lighting).
Component Connections/ Screen Colour	If the colour on your Samsung television screen is not correct or the black and white colours are off, run Start Picture Test (⌂ > ⚙ Settings > Support > Self Diagnosis > Start Picture Test). If the test results indicate that the problem is not caused by the TV, do the following: • Confirm that the video input connectors are connected to the correct external device video output connectors. • Check the other connections as well. If the TV is connected to an external device via a component cable, confirm that the Pb, Pr, and Y jacks are plugged into their proper connectors.
Screen Brightness	If the colours on your Samsung TV are correct but just a little too dark or bright, try adjusting the following settings first. • Select ⌂ > ⚙ Settings > Picture > Expert Settings menu and adjust the Backlight, Contrast, Brightness, Sharpness, Colour, and Tint (G/R) settings.
Ghosting, Blurring, or Juddering	If you notice ghosting or blurring on the screen, use the Auto Motion Plus function (⌂ > ⚙ Settings > Picture > Expert Settings > Auto Motion Plus) to resolve the issue.
Unwanted Powering Off	If your Samsung TV appears to turn off by itself, try disabling some of the TV's energy efficiency functions. See if Sleep Timer (⌂ > ⚙ Settings > System > Time > Sleep Timer) has been enabled. The Sleep Timer automatically turns the TV off after a specified period of time. If the Sleep Timer has not been enabled, see if Auto Power Off (⌂ > ⚙ Settings > System > Eco Solution > Auto Power Off) has been enabled and disable them.
Problems Powering On	If you are having problems powering on your Samsung television, 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 or satellite box confirm that it is plugged in and turned on.
Unable to find a Channel	If your TV is not connected to a cable box or satellite box, run Auto Tuning (Broadcasting > Auto Tuning).
The TV image does not look as good as it did in the store.	Store displays are all tuned to digital, HD (high definition) channels. If you have an analogue cable or satellite box, upgrade to a digital satellite box. Use HDMI or Component cables to deliver HD (high definition) picture quality. Many HD channels are upscaled from SD (Standard Definition) content. Look for a channel that is broadcasting HD content. • Cable/Satellite Subscribers: Try HD channels from the channel lineup. • Terrestrial/Cable Antenna Connection: Try HD channels after running the Auto Tuning function. Adjust the cable or satellite box's video output resolution to 1080i or 720p.

The problem	Try this!
The picture is distorted.	The compression of video content may cause picture distortions, especially in fast moving pictures from sports programmes and action movies. If the signal reception is weak or poor, screen distortion may be accompanied but it is not a malfunction. Mobile phones used close to the TV (within 1m) may cause noise in analogue and digital channels.
The colour is wrong or missing.	If you're using a Component connection, make sure that the Component cables are connected to the correct jacks. Incorrect or loose connections may cause colour problems or a blank screen.
The colour is poor or the picture is not bright enough.	Go to the Picture menu and then adjust the Picture Mode, Brightness, Sharpness, and Colour settings. See if Energy Saving Mode (⌂ > ⚙ Settings > System > Eco Solution > Energy Saving Mode) has been enabled. Try resetting the picture. (⌂ > ⚙ Settings > Picture > Expert Settings > Reset Picture)
There is a dotted line on the edge of the screen.	Change Picture Size to 16:9 Standard. Change the cable or satellite box resolution.
The picture is black and white.	If you are using AV composite input, connect the video cable (yellow) to the One Connect's green component jack.

- If the test picture does not appear or there is noise or distortion, the TV may have a problem. Contact Samsung's Call Centre for assistance.
- If the test picture is displayed properly, there may be a problem with an external device. Please check the connections.
- If the problem persists, check the signal strength or refer to the external device's user manual.

I Can't Hear the Sound Clearly

When the TV has difficulties with sound, these steps may help resolve the problem.

Testing the sound

Settings > Support > Self Diagnosis > Start Sound Test Try Now

If the TV plays the Start Sound Test melody without distortion, there may be a problem with an external device or the broadcast signal's strength.

The problem	Try this!
There is no sound or the sound is too low at maximum volume.	Check the volume control of the device (cable or satellite box, DVD, Blu-ray, etc.) connected to your TV.
The picture is good but there is no sound.	Set Settings > Sound > Sound Output to TV Speaker. 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 the computer sound, connect the 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 cable.
The speakers are making an odd sound.	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 signal information. A low signal level may cause sound distortions. Run Start Sound Test (Settings > Support > Self Diagnosis > Start Sound Test).

There Is a Problem with the Broadcast

When the TV has difficulties receiving broadcasts, these steps may help resolve the problem.

The problem	Try this!
“Weak or No Signal” displayed in TV mode/cannot find channel.	Select Source to confirm that the correct input source has been selected. If the TV is not connected to a cable or satellite box, run Auto Tuning to search for channels (Settings > Broadcasting > Auto Tuning).
The TV is not receiving all channels.	Confirm that the coaxial cable is securely connected to the TV. Run Start Setup (Settings > System > Start Setup) or Auto Tuning (Settings > Broadcasting > Auto Tuning).
There are no subtitles with digital channels.	Go to Subtitle (Settings > System > Accessibility > Subtitle) and change the Subtitle Mode. Some channels may not have subtitle data.
The picture is distorted.	The compression of the video content may cause picture distortions. This is especially true with fast moving pictures from sports programmes and action movies. A weak signal can cause picture distortions. This is not a problem with the TV.
The picture quality is low.	Select high definition (HD) channels or programs.

My Computer Won't Connect

When the TV has difficulties connecting to a PC, these steps may help resolve the problem.

The problem	Try this!
The "Mode Not Supported" message appears.	Set your PC’s output resolution so it matches 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 an HDMI-to-DVI cable, a separate audio cable is required. Note that the HDMI-to-DVI connection is only supported by the HDMI (DVI) port and does not transmit audio. To listen to the computer sound, connect external speakers to the audio output connection of the computer.

I Can't Connect to the Internet

When the TV has difficulties connecting to the Internet, these steps may help resolve the problem.

The problem	Try this!
The TV cannot connect to your network or apps (for Internet compatible models only).	Make sure the TV has a network connection (Home > Settings > Network > Network Status). Contact your Internet service provider.
The wireless network signal is too weak.	Position your wireless router, modem router, or access point in a central location. Avoid putting it in a corner. Use a wireless repeater to get an instant boost in your wireless signal strength. Place the repeater halfway between your wireless router and your TV. The most common wireless technology, 802.11g (wireless-G), operates at a frequency of 2.4 GHz. This frequency is widely used by many cordless phones, microwave ovens, baby monitors, garage doors, and other wireless devices. Reduce interference by not using or turning off wireless devices that use the 2.4 GHz frequency. Instead, use devices that communicate via the 5.0 GHz frequency.
The wireless network connection failed.	Confirm your wireless modem/router is on and connected to the Internet.
The software update over the Internet has failed.	Check the network connection status (Home > Settings > Network > Network Status). If the TV is not connected to a network, connect to a network. The upgrade stops if you already have the latest software version.

Data Service

When the TV has difficulties using Data Service, these steps may help resolve the problem.

The Problem	Try this!
Why am I getting on-screen messages when I haven't selected the Data Service option?	If Auto Run Data Service is set to On, messages will automatically appear on the screen when you watch a broadcast that supports the Data Service. If the broadcast doesn't support the Data Service, no messages will appear on the screen. If you do not wish to receive Data Service messages, disable Auto Run Data Service.
How do I hide Data Service messages?	Press and hold the RETURN(↩) button. If you do not wish to receive Data Service messages, disable Auto Run Data Service.
How do I use the Data Service?	Enabling the Auto Run Data Service option automatically displays messages on the screen whenever you watch a broadcast that supports the Data Service. You can press the corresponding buttons shown on the screen to access additional features and functions offered by that broadcast.
What is an interactive service and how does it work?	Interactive services include viewer surveys, quizzes, ticket requests, product purchases, and other interactions between the viewer and the TV station. Generally, you will need to set up an account with the broadcaster and log in to the account in order to enjoy the interactive services they offer. Note that interactive services are only available when your TV is connected to the Internet. In addition, T-Commerce requires that you have a certificate. Copy your certificate from the computer to a USB device and connect that device to the TV. (Interactive services are not being offered yet. The actual service launch date varies depending on the broadcaster.)
A message displays "Receiving" but no change happens.	This indicates an error has occurred while receiving data. An execution error message will also appear on the screen. If this happens, try again.
Nothing appears on the screen after the Data Service is launched.	The Data Service may be initialising or the signal may have been severed by the broadcaster.

The Schedule Recording/Timeshift Function Isn't Working

When Timeshift or Schedule Recording aren't working, these steps may help resolve the problem.

The problem	Try this!
Schedule Recording cannot be used.	Check if there is a USB device connected to the TV. Recording will automatically stop if the signal becomes too weak. The Timeshift function will not work if there isn't enough storage space on the USB device.

Anynet+ (HDMI-CEC) Isn't Working

When Anynet+ (HDMI-CEC) isn't working, these steps may help resolve the problem.

The problem	Try this!
Anynet+ does not work.	Confirm that the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only. Check if the power cord of the Anynet+ device is properly connected. Check the cable connections of the Anynet+ device. Go to Anynet+ (HDMI-CEC) (Home > Settings > System > Expert Settings > Anynet+ (HDMI-CEC)) and see if Anynet+ (HDMI-CEC) has been set to On. Check whether the TV remote control is in TV mode. Check whether the remote control is Anynet+ compatible. Anynet+ may not function when some other functions are active, including Channel Search, Smart Hub, Plug & Play, etc. If you have disconnected and then reconnected the HDMI cable, scan for devices again or turn your TV off and on.
I want to start Anynet+.	Check if the Anynet+ device is properly connected to the TV, and then select the Anynet+ (HDMI-CEC) (Home > Settings > System > Expert Settings > Anynet+ (HDMI-CEC)) menu to see if Anynet+ (HDMI-CEC) is set to On.
I want to exit Anynet+.	Set Anynet+ (HDMI-CEC) (Home > Settings > System > Expert Settings > Anynet+ (HDMI-CEC)) to Off.
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 a viewing mode. Use the remote control after the TV has completed the Anynet+ configuration or has switched to a viewing mode.
The Anynet+ device won't play.	You cannot use the play function when Start Setup is in progress.
The connected device is not displayed.	Check whether the device supports Anynet+. Check whether the HDMI cable is properly connected. Go to Anynet+ (HDMI-CEC) (Home > Settings > System > Expert Settings > Anynet+ (HDMI-CEC)) and see if Anynet+ (HDMI-CEC) has been set to On. Scan for Anynet+ devices again. Anynet+ devices must be connected to the TV using an HDMI cable. Make sure the device is connected to your TV with an HDMI cable. Some HDMI cables may not support Anynet+. If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please scan for the device again.

The problem	Try this!
The TV audio is not being played through the receiver.	Connect an optical cable to the TV and the receiver. ARC enables the TV to output digital sound via the HDMI (ARC) port. However, ARC is only available when the TV is connected to an audio receiver that supports ARC.

I Have Trouble Launching/Using Apps

When apps aren't working, these steps may help resolve the problem.

The problem	Try this!
I launched an app, but it's in English. How can I change the language?	Languages supported by the app may be different from the user interface language. The ability to change the language depends on the service provider.
My application is not working.	Check with the service provider. Refer to the Help section on the application service provider's website.

My File Won't Play

When apps aren't playing, these steps may help resolve the problem.

The problem	Try this!
Some files can't be played.	This problem may occur with high-bitrate files. Most files can be played back, but you might experience problems with high-bitrate files.

I Want to Reset the TV

Initialize the settings to factory defaults.

Reset	Path	Description
Reset Settings	> Settings > Support > Self Diagnosis > Reset	Reset Picture, Sound, Broadcasting, and all other settings, except for the network settings, default settings.
Reset Smart Hub	> Settings > Support > Self Diagnosis > 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.

Other Issues

Use these procedures to resolve other issues which may occur.

The problem	Try this!
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 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.
The "Mode Not Supported" message appears.	The output resolution of the attached device is not supported by the TV. Check the TV's supported resolutions and adjust the external device's output resolution accordingly.
The Subtitles item in the TV menu is greyed out.	When an external device is connected with an HDMI or Component cable, the Subtitle is unavailable. Adjust the subtitle setting on the external device.
The TV smells of plastic.	This smell is normal and will dissipate over time.
The Signal Information option under Self Diagnosis isn't activated.	Verify that the current channel is a digital channel. The Signal Information is only available for digital channels.
The TV is tilted to the side.	Remove the base stand from the TV and reassemble it.
The stand is wobbly or crooked.	Make sure the indicator arrows on the stand and stand holder are properly aligned.
The remote control, and/or voice does not work.	The TV ships with protective stickers covering some of the sensors. Make sure all of the stickers have been removed.
The Broadcasting option has been deactivated.	Broadcasting is only available when the Source is set to TV. The Broadcasting menu cannot be accessed while you watch TV using a cable or satellite box. The Broadcasting menu cannot be accessed while a recording is in progress or the timeshift function is running.
The settings are lost after 5 minutes or every time the TV is turned off.	If the Usage Mode is set to Retail Mode, the TV's audio and video settings are automatically reset every 5 minutes. Change the Usage Mode (⌂ > ⚙ Settings > System > Expert Settings > Usage Mode) to Home Mode.
There is an intermittent loss of audio or video.	Check the cable connections and reconnect them. Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If you are mounting the TV to a wall, we recommend using cables with 90-degree connectors.

The problem	Try this!
There are small particles on the TV's bezel.	This is part of the product’s design and is not a defect.
The PIP is not available.	PIP is available only when an external device is connected with an HDMI or Component cable. Note that the function is unavailable when the Smart Hub is active or the Sports Mode is On.
A POP (TV’s internal banner ad) appears on the screen.	Change the Usage Mode (⌂ > ⚙ Settings > System > Expert Settings > Usage Mode) to Home Mode.
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 utilises 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.

Before Using the Recording and Timeshift Functions

Read these instructions before using Recording and Timeshift.

This function is only available on certain models in specific geographical areas.

Before using the recording and schedule recording functions

- To set up a Schedule Recording, you must first set the TV's clock. Set the Clock (Home > Settings > System > Time > Clock).
- 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.
- A USB hard drive with a speed of 5,400 rpm or above is recommended. However, RAID-type USB hard drives are not supported.
- USB memory sticks are 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 100MB of free space on the USB storage device. Recording will stop if the available storage space falls below 50MB while recording is in progress.
- If the available storage space falls below 500MB 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 ● 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 recording files.
- If the Off 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.

Before using the timeshift function

- A USB hard drive with a speed of 5,400 rpm or above is recommended. However, RAID-type USB hard drives are not supported.
- USB memory sticks 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 500MB 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 1.5GB of free space available on the USB storage device.

Supported Resolutions for each of UHD Input Signals

Check the supported resolution for UHD input signals.

- Resolution: 3840 x 2160p, 4096 x 2160p

  The HDMI connector with **HDMI UHD Color** set to **Off** supports up to UHD 50P/60P 4:2:0 input signals, while the HDMI connector with **HDMI UHD Color** set to **On** supports up to UHD 50P/60P 4:4:4 and 4:2:2 input signals.

If HDMI UHD Color is set to Off

Frame rate (fps)	Colour 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 HDMI UHD Color is set to On

Frame rate (fps)	Colour 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
	12 bit	-	-	O	O

Read Before Using Voice Interaction

Read this information before using Voice Interaction.

This function may not be supported depending on the model or geographical region. This function is available for the remote control with a microphone.

Precautions for voice interaction

- Voice Interaction is not available in all languages, dialects, or regions. The performance differs with the language chosen, voice volume, and ambient noise levels in the surrounding area.
- Voice Text Input requires that you agree to any third-party app's voice privacy policy.
- You must agree to the following privacy notices before using Interactive Voice Interaction:
  - Voice Interaction Privacy Notice, Nuance Privacy Notice

Requirements for using voice interaction

- The voice interaction rate differs with the volume/tone, pronunciation, and ambient sound environment (TV sound and ambient noise).
- The optimal volume for voice commands is between 75 dB and 80 dB.

Read Before Using Apps

Read this information before using Apps.

- Due to the product characteristics featured on the 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. Some Smart Hub features may also require additional peripheral devices or membership fees. Visit http://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 area.

- For more information about applications, visit the applicable service provider's website.
- An unstable Internet connection may cause delays or interruptions. In addition, applications may terminate automatically depending on the network environment. If this occurs, check your Internet 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.

Read Before Using the Web Browser

Read this information before using the WEB BROWSER.

- The WEB BROWSER is not compatible with Java applications.
- You cannot download files. If you attempt to download a file, you will receive an error message instead.
- The web browser may not be able to access certain websites.
- Playing Flash videos may be restricted.

- E-commerce for online purchases is not supported.
- With websites that have scrollable windows, scrolling a window can result in corrupted characters.
- ActiveX is not supported.
- Certain options are not accessible in Link Browsing mode. (Switch to Pointer Browsing to activate those options.)
- 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 web page is loading.
- The copy and paste operations are not supported.
- When composing an email or a simple message, certain functions such as the font size and colour 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 differs with the search conditions and the TV model.
- The web browsing speed will differs with the network environment.
- Embedded videos in a web page cannot be played at the same time while the PIP (picture-in-picture) function is operating.
- If the Clock (⌂ > ⚙ Settings > System > Time > Clock) has not been set, the browsing history will not be saved.
- The browsing history is saved from latest to oldest, with the oldest entries being overwritten first.
- Depending on the types of video/audio codecs supported, it might not be possible to play certain video and audio files while playing HTML5 Video/Audio.
- Video sources from PC-optimised streaming service providers may not play properly on our proprietary WEB BROWSER.

Read Before Playing Photo, Video, or Music Files

Read this information before playing media content.

Limitations on use of photo, video, and music files Try Now

- The TV supports MSC (Mass Storage Class) 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 One Connect's or TV's USB port. The TV may not be able to recognise the USB device or read the files on the device if it is connected to the TV via a USB extension cable. Do not disconnect the USB device while transferring files.
- When connecting an external hard drive, use the USB (HDD) port. We recommend that you use an external hard drive with its own power adapter.
- 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 recognise some or all the devices. USB devices that use high-power input should be connect the USB [5V, 1A] port.
- The TV supports the FAT, exFAT, and NTFS file systems.
- After sorting files in the Folder view mode, the TV can display up to 1000 files per folder. If the USB device contains more than 8,000 files and folders, however, some files and folders might not be accessible.
- The PTP (Picture Transfer Protocol) connection mode is available only for digital cameras. If you connect a smartphone or tablet to the TV using PTP mode, the TV will not recognise it.
- Certain files, depending on how they were encoded, may not play on the TV.
- Certain files are not available depending on the model.

Supported external subtitles

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
Powerdivx	.psb
SMPTE-TT Text	.xml

Supported internal 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	15360x8640
*.png	PNG	4096x4096
*.bmp	BMP	4096x4096
*.mpo	MPO	15360x8640

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 2 channels
*.ogg	OGG	Vorbis	Supports up to 2 channels
*.wma	WMA	WMA	Supports up to 10 Pro 5.1 channels. WMA lossless audio is not supported. Supports up to the M2 profile.
*.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

<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
*.mov
*.flv
*.vob
*.svi
*.m2ts
*.mts
*.divx</td><td rowspan="14">AVI
MKV
ASF
MP4
3GP
MOV
FLV
VRO
VOB
PS
TS
SVAF</td><td>H.264 BP/MP/HP</td><td rowspan="2">4096x2160</td><td>4096X2160: 30
3840X2160: 60</td><td>60</td><td rowspan="14">Dolby Digital
LPCM
ADPCM(IMA, MS)
AAC
HE-AAC
WMA
Dolby Digital Plus
MPEG(MP3)
DTS(Core, LBR)
G.711(A-Law, µ-Law)</td></tr>
<tr><td>HEVC (H.265 - Main, Main10, Main4:2:2 10)</td><td>60</td><td>80</td></tr>
<tr><td>Motion JPEG</td><td>3584x2160</td><td>30</td><td>80</td></tr>
<tr><td>MVC</td><td rowspan="8">1920x1080</td><td rowspan="5">60</td><td rowspan="8">20</td></tr>
<tr><td>DivX 3.11 / 4 / 5 / 6</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 Sorrenson</td></tr>
<tr><td>VP6</td></tr>
<tr><td rowspan="2">*.webm</td><td rowspan="2">WebM</td><td>VP8</td><td>1920x1080</td><td>60</td><td>20</td><td rowspan="2">Vorbis</td></tr>
<tr><td>VP9</td><td>4096x2160</td><td>60</td><td>40</td></tr>
<tr><td>*.rmvb</td><td>RMVB</td><td>RV8/9/10 (RV30/40)</td><td>1920x1080</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.

Video decoders

- H.264 FHD is supported up to Level 4.1. (does not support FMO/ASO/RS)
- H.264 UHD is supported up to Level 5.1.
- HEVC FHD is supported up to Level 4.1, and HEVC UHD is supported up to Level 5.1.
- VC1 AP L4 is not supported.
- All video codecs excluding WMV v7, v8, MSMPEG4 v3, MVC, and VP6:

  Below 1280x720: 60 frame max

  Above 1280x720: 30 frame max
- GMC 2 or above is not supported.
- Supports SVAF Top/Bottom, Side by Side, and Left/Right view sequence type (2ES) only.
- Supports BD MVC specs only.

Audio decoders

- WMA 10 Pro supports up to 5.1 channels. Supports up to the M2 profile. WMA lossless audio is not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital Plus is supported for up to 5.1 channels.
- The DTS LBR codec is only available for MKV/MP4/TS containers.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ by the codec.

Read After Installing the TV

Read this information after installing the TV.

Picture sizes and input signals

The Picture Size setting is applied to the current source. The applied Picture Size will remain in effect whenever you select that source unless you change it.

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 @ 24/30Hz)	16:9 Standard, Custom
Digital channel (3840 x 2160p @ 50/60Hz)	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
USB (720p)	16:9 Standard, Custom, 4:3
USB (1080i/p @ 60Hz)	16:9 Standard, Custom, 4:3
USB (3840 x 2160p @ 24/30Hz)	16:9 Standard, Custom
USB (3840 x 2160p @ 60Hz) USB (4096 x 2160p @ 24/30/60Hz)	16:9 Standard, Custom

Auto may not work properly depending on the input signals.

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 TV model. Refer to the lock's user manual for more information.

This function is only available on certain models in specific geographical areas.

Read before setting up a wireless Internet connection

Precautions for wireless Internet

- This TV supports the IEEE 802.11a/b/g/n/ac communication protocols. Samsung recommends using IEEE 802.11n. Video files stored on a device connected to the TV via Home Network may not play back smoothly.

  IEEE 802.11 ac communication protocol is not available on certain models.

- To use wireless Internet, the TV must be connected to a wireless router or modem. If the wireless router 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 in use for the wireless router. If the channel set for the wireless router is currently being used by another device, the result is usually interference and/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 AP.

Wireless security protocols

- The TV only supports the following wireless network security protocols.
  - Authentication Modes: WEP, WPAPSK, WPA2PSK
  - Encryption Types: WEP, TKIP, AES
- In compliance with the newest 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 router 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.
- The TV cannot connect to non-certified wireless routers.

Read Before Connecting a Computer (Supported Resolutions)

Check the supported resolution 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 or on the next page. The TV will automatically adjust to the resolution you choose. Note that the optimal and recommended resolution is 3840 x 2160 at 60 Hz.
- Choosing a resolution not included in the tables can result in a blank screen or just the power indicator turning on.
- Refer to the user manual of your graphics card for compatible resolutions.

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	+ / +
1366 x 768	60 Hz	47.712	59.790	85.500	+ / +
1440 x 900	60 Hz	55.935	59.887	106.500	- / +
1600 x 900RB	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	+ / +

Supported Resolutions for Video Signals

Check the supported resolution for video signals.

CEA-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	+ / +
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	+ / +
4096 x 2160	24 Hz	54.000	24.000	297.000	+ / +
4096 x 2160	25 Hz	56.250	25.000	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	+ / +

Read Before Using Bluetooth Devices

Read this information before using a Bluetooth device.

Restrictions on using Bluetooth

- The Samsung Bluetooth Speaker is only available for devices supporting TV SoundConnect.
- You can't use Bluetooth devices, TV SoundConnect, and the Surround feature simultaneously.
- Compatibility issues may occur, depending on the Bluetooth Devices. (A Mobile exclusive headphone may not be available, depending on the environment.)
- Lip-sync errors may occur.
- The TV and Bluetooth Devices 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, be sure to use a Digital Sound Output (Optical) port or HDMI (ARC) port.

Buttons and Functions

Use convenience features or check available buttons and their descriptions for use while in playing media content.

The available buttons and functions may differ with content.

Buttons and functions available while playing multimedia content

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

The provided buttons or functions may differ with the media content type.

- Pause / Play or Start

  Pauses or plays the multimedia content. You can use the following functions when the video is paused.

  – Use Mode or Store Demo: Allows you to play the video slowly (1/8, 1/4, 1/2) backward or forward by selecting the ◀◀ or ▶▶ button. To increase the rewind or forward speed in slow mode up to 3 times, select the button repeateldy. To return to normal speed, select the ▶ button or press the ▷II button.

- Previous / Next

  Views the previous or the next the multimedia content.

- 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 ▶ button or press the ▷II button.

- Repeat

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

- Shuffle

  Plays the music in random order.

- Picture Off

  Plays the multimedia content files only with the screen off.

- Rotate left / Rotate right

  Rotates the photo left or right direction.

- **Zoom**

  Zooms the photo in by up to a factor of 4.

- **Fit to screen**

  Fits the photo to the screen.

- **Background Music**

  Play the background music while the TV displays photos with the background music.

- **Options**

  The available options may differ by model and content.

Function	Description
Slideshow Speed	Sets the slideshow speed.
Slideshow Effect	Applies transition effects to the slide show.
Background Music	Plays background music 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 playback screen.
Subtitles	Controls video subtitles. • Subtitles: Turns the subtitles on or off. • Language: Sets the caption language. • Sync: Adjusts the synchronisation when the video and the subtitles are not synchronised. • Reset Sync: Resets the subtitle synchronisation adjustment to 0. • Size: Changes the font size of the subtitles. • Encoding: Displays a list of encoding languages. Allows you to change the encoding language when subtitles are displayed incorrectly. • Edge Type: Adjusts a position of texts and subtitles edge. • Edge Color: Changes a color of subtitles edge.
Rotate	Rotates the video.
Audio Language	This function is only available if the video supports multi-track sound.
Information	Displays detailed information about the current multimedia content.

Buttons and functions available while using sports mode

If you press the Select button, the following buttons appear.

- Zoom

  Pauses the current screen and zooms in any part of the screen by using 4 directional buttons.

  This function is not available when you browse the multimedia content saved on a USB storage device or PIP is active.

  This function is not available when Data Service is active.

- Record

  This function is only available if the TV supports the recording function.

- Timeshift

  You can pause and rewind live TV.

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

  This function is only available if the TV supports the recording function.

- Manual Highlight

  Saves a video from 10 seconds before you press the button to 10 seconds after.

  You can set the TV to automatically save highlights without user intervention. Select > Settings > Picture > Special Viewing Mode > Sports Mode, and then set Auto Highlights to On. For more information about Auto Highlights, refer to "Extracting highlights automatically."

  This function is only available while recording a programme.

- Highlights Player

  Displays the Highlights Player screen and plays the highlights saved in the recorded file automatically or manually. Highlights Player is not available when:

  – You are switching the input signal

  – Audio Description is On

  – You are viewing a football game in the UHD resolution

  This function is only available while you are watching a recorded programme.

  This function is only available while recording a programme.

- Dual Play

  Allows you to watch a current programme in a PIP window while watching a recorded programme. To exit PIP mode, select again. Dual Play is not available when:

  - You are switching the input signal
  - Audio Description is On
  - You are viewing a football game in the UHD resolution

  This function is only available while you are watching a recorded programme.

  This function is only available while recording a programme.

Buttons and functions available while recording a programme or Timeshift

The available buttons and functions may differ with the functions.

If you press the Select button, the following buttons appear.

- Recording Time
- Record

  Starts instant recording of the current programme.

- Timeshift

  You can pause and rewind live TV.

  This function is only available if the TV supports the recording function.

- Stop Recording, Stop Timeshift / Go to Live TV

Using the buttons on the remote control while recording a programme or Timeshift

- Pause / Play

  When the recording is paused, you can use the following functions. However, no audio is heard while the recording is paused.

  - Slow Motion: Plays the video in half speed by pressing the ⏭ button in pause mode.

- Rewind / Fast Forward

  This function is not available while you are watching a programme that is currently being broadcast.

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