

SAMSUNG

E-MANUAL

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product at

www.samsung.com

Model _____ Serial No. _____

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

"Learn Menu Screen" Link

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Guide

Learn how to use various features.

Connections

You can get access to the Internet by using a LAN cable or wireless router. Using various connectors, you can also connect external devices to your Product.

Connection Guide

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

 >  [Source](#) > [Connection Guide](#) [Try Now](#)

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

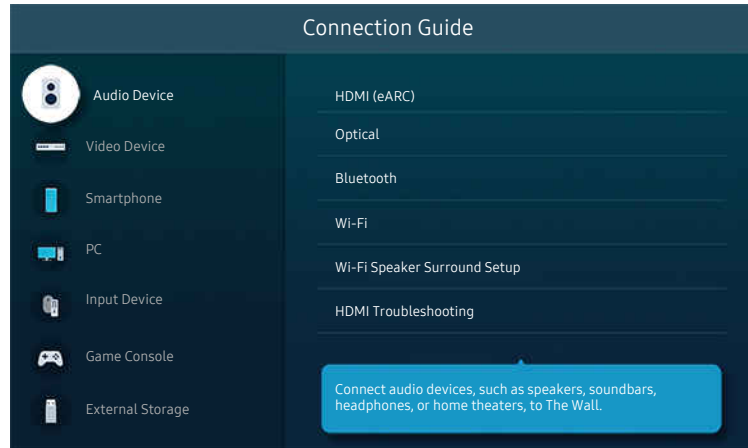
- [Audio Device: HDMI \(eARC\), Optical, Bluetooth, Wi-Fi, Wi-Fi Speaker Surround Setup](#)
- [Video Device: HDMI](#)
- [Smartphone: Screen Sharing \(Smart View\), SmartThings, Apple AirPlay, Tap View](#)
- [PC: HDMI, Screen Sharing \(Wireless\), Apple AirPlay](#)
- [Input Device: Remote Control, Keyboard, Mouse, USB Gamepad, USB Camera, Bluetooth Device](#)
- [Game Console: HDMI](#)

- **External Storage: USB Flash Drive, Hard Disk Drive (HDD)**

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

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

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



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

Connecting to the Internet

You can get access to the Internet through your Product.

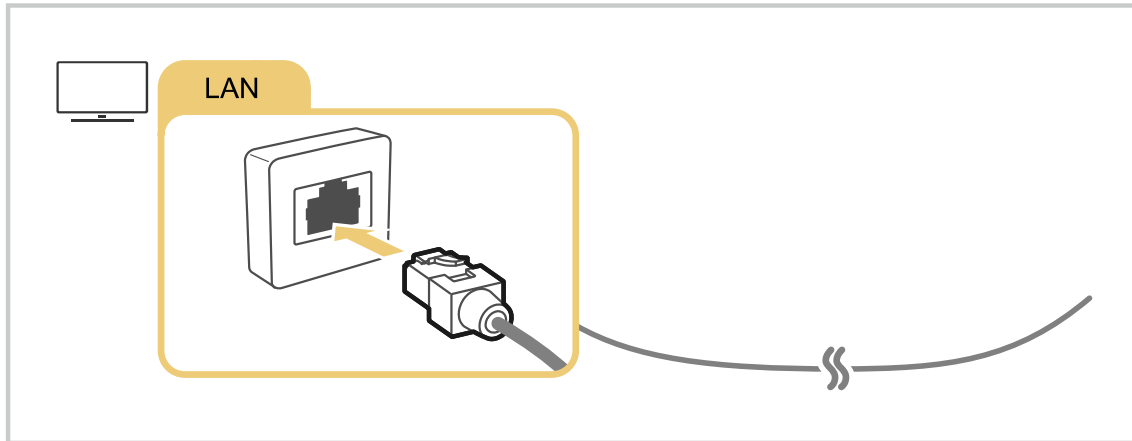
 >  **Settings** > **General** > **Network** > **Open Network Settings** [Try Now](#)

Configure network settings to connect to an available network.

Establishing a wired Internet connection

 >  **Settings** > **General** > **Network** > **Open Network Settings** > **Wired**

If you connect a LAN cable, the Product automatically accesses the Internet.

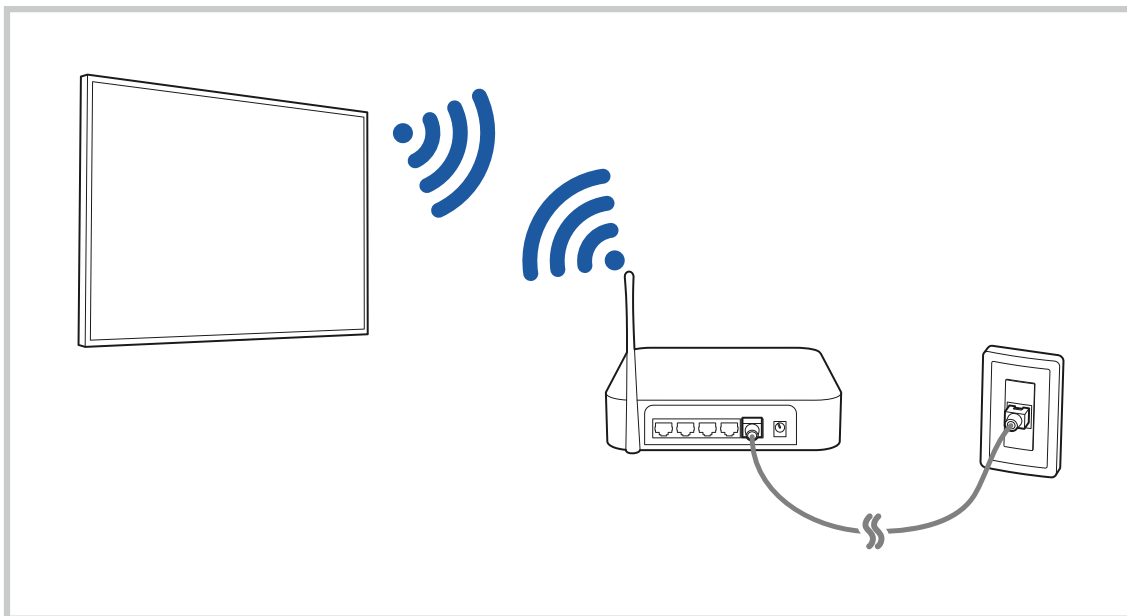


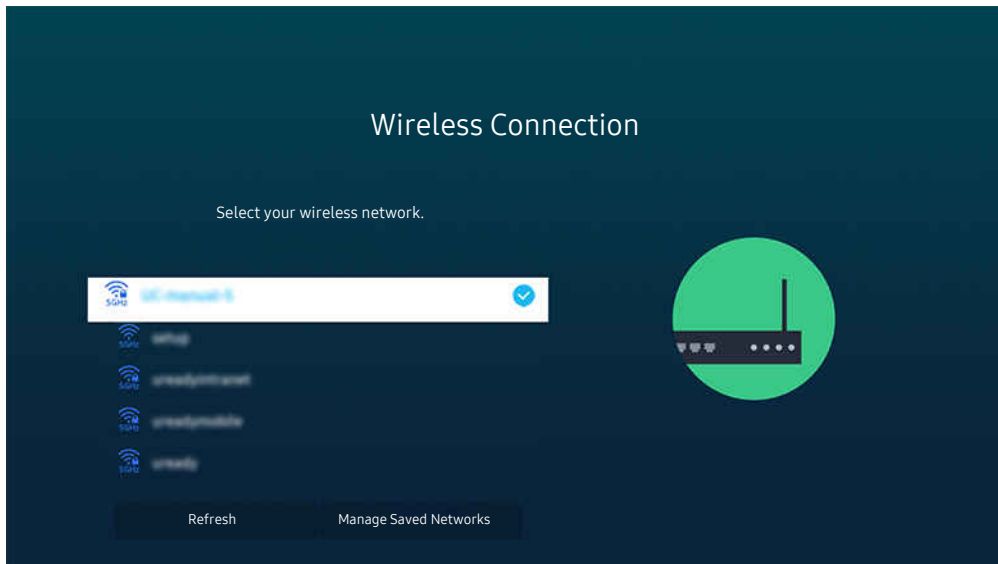
-  If the Product does not automatically connect to the network, refer to "[Network Issues](#)" in "Troubleshooting."
-  To connect a LAN cable, use a CAT 7 (*STP type) cable for the connection. (100/10 Mbps)
 - * Shielded Twisted Pair
-  The Product will not be able to connect to the Internet if your network speed is below 10 Mbps.
-  This function may not be supported depending on the model.

Establishing a wireless Internet connection

 >  [Settings](#) > [General](#) > [Network](#) > [Open Network Settings](#) > [Wireless](#)

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





-  The image on your Product may differ from the image above depending on the model and geographical area.
-  If no wireless access point is found, select [Add Network](#) at the bottom of the list and enter the network name (SSID).
-  If your wireless access point has a WPS or PBC button, select [Use WPS](#) at the bottom of the list, and then push the WPS or PBC button on your access point within 2 minutes. The Product will connect automatically.
-  To view or delete previously connected network names (SSIDs), move the focus to [Manage Saved Networks](#), and then press the Select button.
-  To disconnect Wi-Fi, select [Disconnect](#) in  > [Settings](#) > [General](#) > [Network](#) > [Network Status](#).

Checking the Internet connection status

 > [Settings](#) > [General](#) > [Network](#) > [Network Status](#) [Try Now](#)

View the current network and Internet status.

Resetting Your Network

 > [Settings](#) > [General](#) > [Network](#) > [Reset Network](#) [Try Now](#)

Restore the network settings to the factory default.

Turning on the Product with a mobile device

 >  [Settings](#) > [General](#) > [Network](#) > [Expert Settings](#) > [Power On with Mobile](#)

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

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

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

Connecting an IP control device to the Product

 >  [Settings](#) > [General](#) > [Network](#) > [Expert Settings](#) > [IP Remote](#)

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

 To use this function, [Power On with Mobile](#) must be turned on.

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

 This function may not be supported depending on the model.

Allowing to connect a wireless network

 >  [Settings](#) > [General](#) > [Network](#) > [Expert Settings](#) > [Wi-Fi](#)

You can enable the connection to Wi-Fi.

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

Changing the name of the Product

 >  [Settings](#) > [General](#) > [System Manager](#) > [Device Name](#) [Try Now](#)

You can change the name of the Product on the network. Select [User Input](#) at the bottom of the list and change the name.

Displaying your mobile device screen on the Product

You can watch the screen of your mobile device on the Product screen through Smart View, Tap View or Multi View.

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

For information on how to share the screen with your mobile device, refer to  >  [Source](#) > [Connection Guide](#) > [Smartphone](#) > [Screen Sharing \(Smart View\)](#).

- To turn off Screen Sharing (Smart View), disconnect the mobile device or press the  button on the remote control.
- Using the Smart View menu on your mobile device, you can change the settings such as aspect ratio.
- Use AirPlay if you are an iPhone or iPad user. For more information, refer to  >  [Source](#) > [Connection Guide](#) > [Smartphone](#) > [Apple AirPlay](#).

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

- The screen sharing function ([Smart View/Apple AirPlay](#)) on your mobile device appears on [Multi View](#) of the Product (or the screen on your mobile device).

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

- If the Product is connected to a wireless router and DFS channel, radio performance of the screen share function may degrade. To prevent this, change the router settings to disable use of DFS channel. For details on how to change the settings, refer to the user manual provided by the router manufacturer.

Using Tap View

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

 This function may not be supported depending on the model.

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

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

1. Enable **Tap View** on your mobile device.

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

2. Turn on the screen of your mobile device.

3. Tap your mobile device on the Product. The Product screen switches to **Multi View**, **Music Wall**, or mobile device's screen.

 When you perform Tap View in **Ambient Mode** feature, only the mobile device's screen appears on the Product.

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

 The displayed Product screen may differ depending on the model.

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

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

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

Enabling Tap View

Enable **Tap View** in the SmartThings app.

-  This function may not be supported depending on the model.
-  Depending on the SmartThings app version, you may need to register the Product with your mobile device.

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

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

Mobile Screen Viewing in Multi View

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

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

Connection Cables for External Devices

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

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

Cable name	Image	Description
DVI to HDMI		DVI to HDMI cables can transmit only digital video signals and not audio signals. We recommend that you use HDMI to HDMI cables.
Optical		Optical cables are used to transmit audio signals to external speakers with low signal loss. Optical cables can't transmit video signals.

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

Switching between external devices connected to the Product

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

 >  **Source**

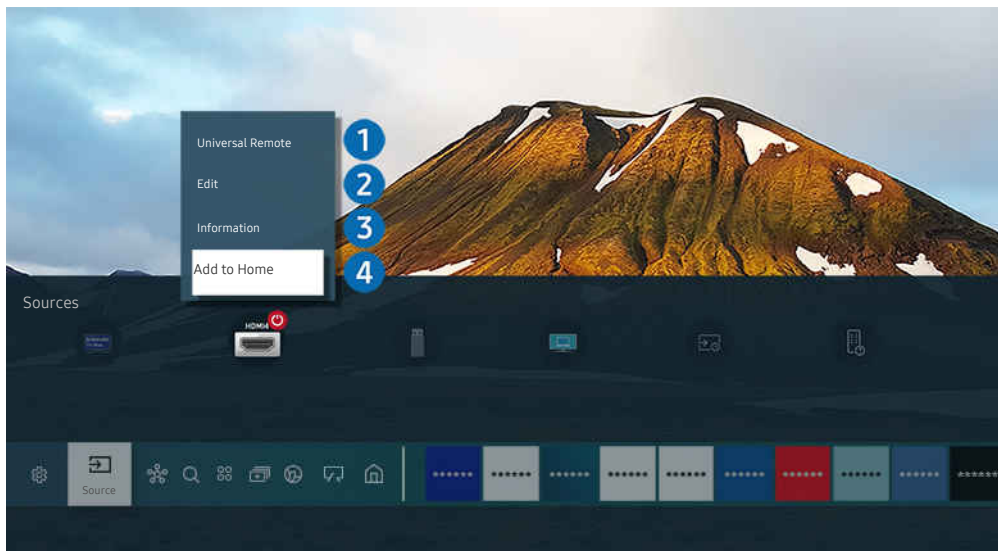
When you select a connected external device on the **Source** screen, the output of the selected device is displayed on the Product's screen.

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

Editing the name and icon of an external device

 >  **Source**

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



-  The image on your Product may differ from the image above depending on the model and geographical area.
1. Move the focus to a connected external device.
 2. Press the up directional button. The following functions become available:
 -  Available functions may differ depending on the port type.

1 Universal Remote

You can control external devices connected to the Product using a Samsung remote control. To control external devices, register them by following the instructions on the screen.

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

 For more information, refer to "[Controlling External Devices with a Samsung Remote Control - Using the Universal Remote.](#)"

2 Edit

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

3 Information

You can view detailed information about an external device.

4 Add to Home

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

Using additional functions

You can use the following features on the [Source](#) screen.

- [PC on TV](#)

Use the Product to access your PC via remote PC or Screen Sharing (Wireless).

 For more information, refer to "[Using PC on TV.](#)"

- [Connection Guide](#)

Displays device connection instructions.

 For more information, refer to "[Connection Guide.](#)"

- [Remote Key Guide](#)

You can view how to use the remote control.

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

- [Universal Remote](#)

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

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

 For more information, refer to "[Controlling External Devices with a Samsung Remote Control - Using the Universal Remote.](#)"

Connection Notes

When connecting an external device, note the following:

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

Connection notes for HDMI

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

 This function may not be supported depending on the model.

Connection notes for audio devices

- For better audio quality, it is good to use an AV receiver.
- You can watch the center channel of the A/V receiver through the Product. First connect the speaker cable between the center channel of the A/V receiver and the Product.
 -  Some models may not have embedded speakers.
 - When the optical cable is connected between the Product and the A/V receiver, select **MICRO LED + Optical** (🏠 > ⚙️ **Settings** > **Sound** > **Sound Output**).
 - When the HDMI (ARC, eARC) cable is connected between the Product and the A/V receiver, select **MICRO LED + AV Receiver** (🏠 > ⚙️ **Settings** > **Sound** > **Sound Output**).
 -  This function may not be supported depending on the model or geographical area.
 -  This feature may not be supported depending on the channel configuration of the sound source.
 -  Maximum wattage AV receiver that can be connected to Product is 150 W with 8-ohm.
 -  While watching the center channel of the A/V receiver through the Product, when you turn off the A/V receiver, noise may occur. Change the Sound Output to Product speaker, and then turn off the power.
- If you connect an external audio device using an optical cable, the **Sound Output** setting automatically changes to the connected device. However, to make this happen, you must turn on the external audio device before connecting the optical cable. To manually change the **Sound Output** setting, do one of the following
 -  This function may not be supported depending on the model.
 - Use the **Quick Settings** screen to change to the connected device:
Use the Select button to select **Optical** on the **Sound Output** menu. (🏠 > ⚙️ **Settings** > up directional button > **Sound Output**).
 - Use the **Settings** screen to change to the connected device:
Select **Optical** on the **Sound Output** menu. (🏠 > ⚙️ **Settings** > **Sound** > **Sound Output**).
 -  Refer to the sound bar's user manual when connecting it to the Product.
- An unusual noise coming from a connected audio device while you are using it, may indicate a problem with the audio device itself. If this occurs, ask for assistance from the audio device's manufacturer.
- Digital audio is only available with 5.1 channel broadcasts.

Connection notes for computers

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

Connection notes for mobile devices

- To use the Smart View function, the mobile device must support a mirroring function, such as Screen Mirroring or Smart View. To check whether your mobile device supports the mirroring function, refer to the mobile device's user manual.
- The Screen Sharing (Smart View) feature may not operate smoothly in a 2.4GHz environment. For better experience, 5.0GHz is recommended. 5GHz may not be available depending on the model.
- To use Wi-Fi Direct, the mobile device must support the Wi-Fi Direct function. To check whether your mobile device supports Wi-Fi Direct, refer to the mobile device's user manual.
- The mobile device and your Product must be connected to each other on the same network.
- Use AirPlay if you are an iPhone or iPad user. For more information, refer to  >  [Source](#) > [Connection Guide](#) > [Smartphone](#) > [Apple AirPlay](#).



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

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

Remote Control and Peripherals

You can control Product operations with your Samsung Smart Remote. Pair external devices for ease of use.

About the Samsung Smart Remote

Learn about the buttons on the Samsung Smart Remote.



Button	Description
 (Power)	Press to turn the Product on or off.
 (Voice Assistant)	Runs Voice Assistant. Press and hold the button, say a command, and then release the button to run Voice Assistant.
 (Color - Number button)	Each time you press this button, the colored buttons window and the virtual numeric pad are displayed alternately. - Use this button to access additional options that are specific to the feature in use. - Press to bring up the virtual numeric pad on the screen. Use the numeric keypad to enter numeric values. Select numbers and then select Done to enter a numeric value. Use to change the channel, enter a PIN, ZIP code and etc.  If the Color Button appears with a number strip on the screen, select the Color Button and then select a specific color by using the directional button (up, down, left, right). Use this to access additional options that are specific to the feature in use.
 (Multi View)	Press the button to directly enter the Multi View function.
 1 Directional button (up, down, left, right)	Use to navigate the menu or move the focus to highlight items on the Home Screen.
 2 Select	Selects or runs a focused item. When pressed while you are watching a broadcast program, detailed program information appears.
 (Return)	Press to return to the previous menu. When pressed for 1 second or more, the running function is terminated. When pressed while you are watching a program, the previous channel appears.
 (Smart Hub)	Press to return to the Home Screen.  If your Product model supports the Art mode and you press the button while in Art mode, the screen switches to the Home Screen.

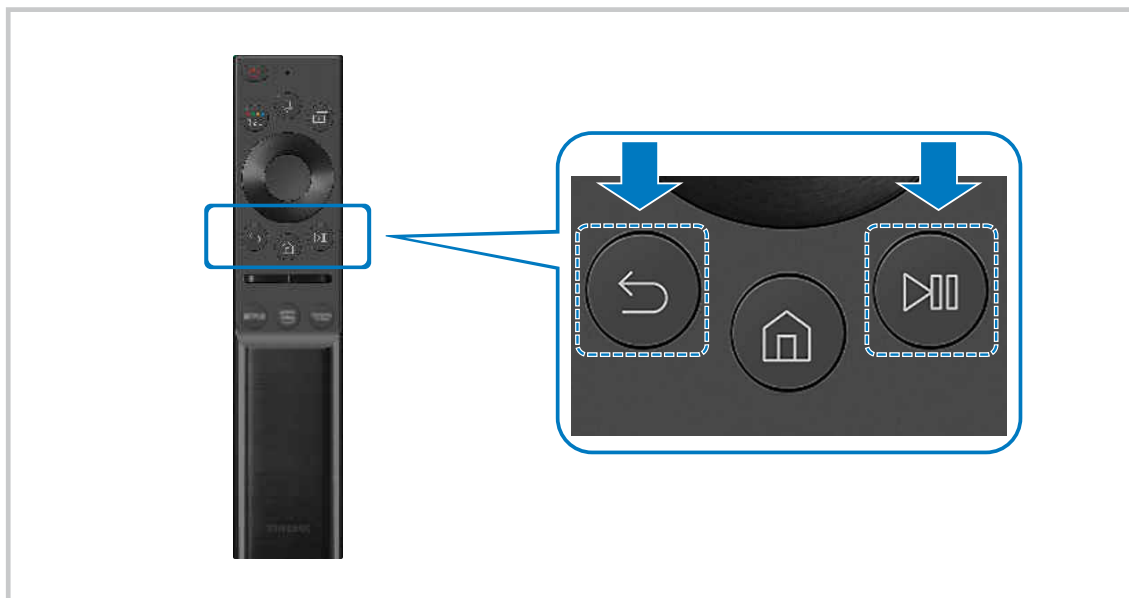
Button	Description
 (Play/pause)	When pressed, the playback controls appear. Using these controls, you can control the media content that is playing. To use Game Bar, press and hold the button in Game Mode.  Game Bar may not be supported depending on the model or geographical area.
+/- (Volume)	Move the button up or down to adjust the volume. To mute the sound, press the button. When pressed for 2 seconds or more, the Accessibility Shortcuts appears.
^/∨ (Channel)	Move the button up or down to change the channel. To see the Guide screen, press the button. Press and hold the button up or down to quickly change the channel.  The channel-related functions are supported only in some content.
 (Launch app button)	Launch the app indicated by the button.

-  Use the Samsung Smart Remote less than 20 feet (6 m) from the Product. The usable distance may vary with the wireless environmental conditions.
-  The images, buttons, and functions of the Samsung Smart Remote may differ with the model or geographical area.
-  The functions related to the broadcast and channel are available only in some apps or external devices.
-  To use the Samsung Smart Remote to control a compatible external device that does not support HDMI-CEC (Anynet+), you must configure universal remote control for the device. For more information, refer to "[Controlling External Devices with a Samsung Remote Control - Using the Universal Remote](#)."
-  To use the Samsung Smart Remote to control a compatible external device that does support HDMI-CEC (Anynet+), connect the device to an HDMI port on the Product using an HDMI cable. For more information, refer to "[Using Anynet+ \(HDMI-CEC\)](#)."

Connecting the Samsung Smart Remote to the Product

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

When you turn on the Product for the first time, the Samsung Smart Remote pairs to the Product automatically. If the Samsung Smart Remote does not pair to the Product automatically, point it at the front of the Product, and then press and hold the  and  buttons simultaneously for 3 seconds or more.



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

 For more information about the Samsung Smart Remote, refer to "[About the Samsung Smart Remote.](#)"

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

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

 >  [Source](#) > [Universal Remote](#)

You can control external devices connected to the Product using a Samsung remote control. To control external devices, register them by following the instructions on the screen.

-  This function may not be supported depending on the model or geographical area.
-  You can also use the [Anynet+ \(HDMI-CEC\)](#) function to operate external Samsung devices with your Product's remote control without any additional setup. For more information, refer to "[Using Anynet+ \(HDMI-CEC\)](#)."
-  Specific external devices connected to the Product may not support the universal remote feature.
-  Do not place any obstacles in front of an external device and Product button. It may cause improper transmitted signals from the remote control.
-  The Product memorizes both the external device and its connection port (HDMI 1, HDMI 2, etc.).
-  If you have difficulty controlling external devices with the Universal Remote, try adjusting the positions of the external devices.
-  This function may not operate properly depending on the Product installation environment and the features of external devices.

Using Anynet+ (HDMI-CEC)

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

You can use the Product's remote control to control external devices that are connected to the Product 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** > **General** > **External Device Manager** > **Anynet+ (HDMI-CEC)** [Try Now](#)

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

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

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

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

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

Controlling the Product with a Keyboard, Mouse, or Gamepad

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

 >  [Settings](#) > [General](#) > [External Device Manager](#) > [Input Device Manager](#) [Try Now](#)

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

Connecting a USB keyboard, mouse, or gamepad

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

 If you connect a mouse, it is available only in the [Internet](#) app and [PC on TV](#) function.

 XInput USB gamepads are supported.

 For more information, refer to [Input Device](#) in [Connection Guide](#) ( >  [Source](#) > [Connection Guide](#) > [Input Device](#)).

Connecting a Bluetooth keyboard, mouse, or gamepad

 >  [Settings](#) > [General](#) > [External Device Manager](#) > [Input Device Manager](#) > [Bluetooth Device List](#) [Try Now](#)

 If your device was not detected, position the keyboard close to the Product, and then select [Refresh](#). The Product scans for available devices again.

 If you connect a mouse, it is available only in the [Internet](#) app.

 A maximum of four gamepads can be connected, regardless of connection method (e.g., USB or Bluetooth).

 For more information, refer to the Bluetooth device's user manual.

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

Using the keyboard and mouse

Button	Description
Directional keys	Use to navigate the menu, or move the focus to highlight items on the Home Screen.
Windows key	Displays the Product settings
Enter key	Selects or runs a focused item
ESC key	Returns to the previous screen
F1 / F2 / F3 / F4 key	Color buttons —  /  /  / 
F5 key	Displays the Home Screen
F6 key	Displays the Source screen
F7 key	Displays the Channel List
F8 key	Mutes the sound
F9 / F10 key	Adjusts the volume
F11 / F12 key	Changes the channel
Page Up / Page Down	Scrolls a web page displayed by the Internet app.
Left-click	Available only in the Internet app. You can click a menu or link to start a function as you do on a PC.
Right-click	Available only in the Internet app. You can use the following functions:  The options displayed in the menu may differ depending on the selected item. • Open • Open Link in New Tab • Enable Scroll Mode

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

Using the Gamepad

Check the supported gamepads. [Try Now](#)

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

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

 Some keys are not available on this product depending on controller.

 Force feedback :

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

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

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

* Xbox controllers may require firmware updates.

 Controller audio output (3.5 mm port) is not available on this product.

 Other controllers may or may not work for cloud gaming.

Using the controller

Button	Description
Left joystick and dpad	4 way navigation
Right joystick	- Up / Down : Volume control (Up / Down) - Left / Right : Channel control (Up / Down) on Product screen - Select (press): Mute the sound
A button or X button (Sony Only)	Enter (OK)
B button or O button (Sony Only)	Return (Cancel)
Long pressed B button or O button (Sony Only)	Exit
Home button	Smart hub landing page
Long pressed Home button	(During cloud game play) Quick panel
Option button on the left	Game Bar (when Game Mode is turned on and an external source is connected)
X button or □ button (Sony Only)	Numeric keys (123)
Pressing and holding the left and right joysticks simultaneously	Power Off (Turning power on is not possible)

 The key operation may differ depending on some apps or the controller.

 If you connect controller to this product by Wi-Fi solution, you cannot use UI navigation function.

Setting up the input devices

 >  **Settings** > **General** > **External Device Manager** > **Input Device Manager**

- **Keyboard Settings**

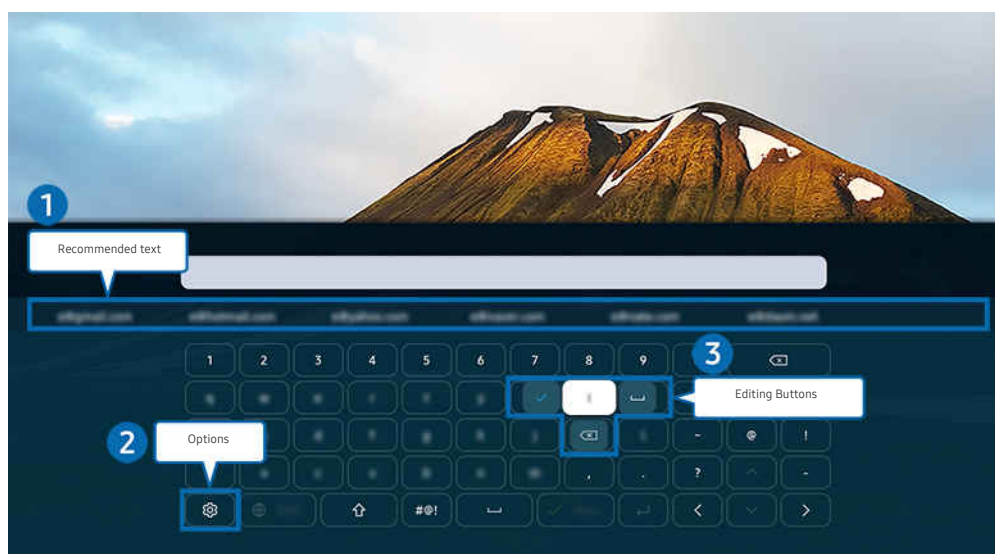
You can set up the keyboard with the **Keyboard Language** and **Keyboard Type** functions.

- **Mouse Settings**

You can set up the mouse with the **Primary Button** and **Pointer Speed** functions.

Entering Text using the On-Screen Virtual Keyboard

Use the virtual keyboard to enter text on your Product.



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

1 Recommended text

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

2 Options

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

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

- [Recommended text](#)
- [Reset Recommended Text Memory](#)
- [Show Editing Buttons](#)
- [Language](#)

3 Editing Buttons

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

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

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

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

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

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

Smart Features

You can enjoy various apps with Smart Hub.

Using Smart Hub

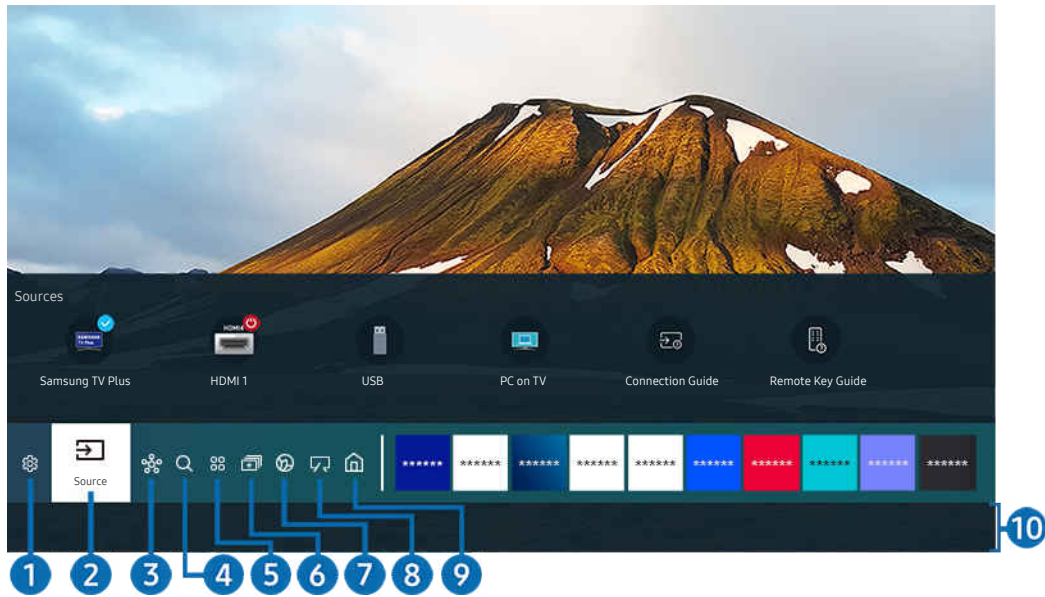
View descriptions of Smart Hub's basic functions.

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

-  Some Smart Hub services are paid services.
-  To use Smart Hub, the Product must be connected to the Internet.
-  Some Smart Hub features may not be supported depending on the service provider, language, or geographical area.
-  Smart Hub service outages can be caused by disruptions in your Internet service.
-  To use Smart Hub, you must agree to the Smart Hub service agreement and the collection and use of personal information. Without giving consent, you cannot use the additional features and services. You can view the entire text of the [Terms & Privacy](#) by navigating to  >  [Settings](#) > [Terms & Privacy](#). [Try Now](#)
-  If you want to stop using Smart Hub, you can cancel the agreement. To cancel the Smart Hub service agreement, select [Reset Smart Hub](#) ( >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Reset Smart Hub](#)).

Displaying the Home Screen

Press the  button.



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

On the Home Screen, you can easily run the apps you have used previously or frequently. The apps can also be moved or deleted from the screen.

1 Settings

When the focus is moved to [Settings](#), a list of quick settings icons appears above the top of the menu. You can quickly set frequently used functions by clicking the icons.

- [e-Manual](#)

You can open the user manual embedded in your Product.

- [Intelligent Mode](#)

In [Intelligent Mode](#), the Product recognizes and analyzes the surroundings, noise, content, and usage patterns to provide the best viewing experience. To turn [Intelligent Mode](#) on or off, press the Select button. To set detailed options, press the up directional button, and then select [Intelligent Mode Settings](#).

 For more information, refer to "[Using Intelligent Mode](#)."

 This function may not be available, depending on the installation method.

- **Picture Mode**

You can select the picture mode that provides the best viewing experience. To change the picture mode, press the Select button. To make fine adjustments, press the up directional button, and then select [Picture Setup](#).

- **Sound Mode**

You can select a sound mode to optimize your listening experience. To change the sound mode, press the Select button. To make fine adjustments, press the up directional button, and then select [Equalizer Setup](#).

- **Sound Output**

You can select which speakers the Product uses for audio output. To change the audio output, press the Select button. To connect to a Bluetooth speaker, press the up directional button, and then select [Bluetooth Speaker List](#).

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

- **Game Mode**

You can set the [Game Mode](#) to optimize the Product screen for better gaming performance. To turn [Game Mode](#) on or off, press the Select button. To set the detailed options, press the up directional button, and then select [Go to Game Mode Settings](#).

 For more information, refer to "[Setting the Viewing Environment for External Devices](#)."

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

- **Audio Language**

You can select a audio language. To set the detailed options, press the up directional button, and then select [Go to Audio Options](#).

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

- **Sleep Timer**

You can turn off the Product automatically at a specific time. To change the sleep time, press the Select button. To set the specific time at which the Product turns off automatically, press the up directional button, and then select [Set Up Off Timer](#).

- **Caption**

You can turn on or off the caption of the content.

 It may not appear depending on the content.

- **Network**

You can view the current network and Internet status. Press the up directional button, and then select **Network Status** or **Network Settings**.

- **Color Tone**

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

 It may not appear depending on the content.

- **Picture Clarity**

You can optimize pictures that contain a lot of motions. To turn this function on or off, press the Select button. To set the detailed options, press the up directional button, and then select **Picture Clarity Settings**.

 It may not appear depending on the content.

- **Digital Output Audio Format**

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

 It may not appear depending on the content.

- **Device Care**

You can run **Device Care** to diagnose and optimize your Product. **Device Care** can also check and optimize the Product's storage. If any problem is found, the Product needs technical support.

- **All Settings**

Display the **Settings** menu.

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

2 **Source**

You can select an external device connected to the Product.

 For more information, refer to "[Switching between external devices connected to the Product.](#)"

3 **SmartThings**

This function allows the Product to connect and control the detected devices in the same space.

 For more information, refer to "[Using SmartThings.](#)"

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

4 🔍 Search

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

-  To use this feature, the Product must be connected to the Internet.
-  This function may not be supported depending on the model.

5 ∞ Apps

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

-  To use this feature, the Product must be connected to the Internet.
-  For more information, refer to "[Using the Apps Service.](#)"

6 🖼️ Multi View

You can simultaneously view multiple screens that are split.

-  This function may not be supported depending on the model or geographical area.
-  For more information, refer to "[Using Multi View.](#)"

7 🌐 Ambient Mode

You can enhance your living space with decorative content that matches the surroundings or view essential realtime information, such as weather, time, and news, on the Product screen when you are not watching the main screen.

To return to the **ENTERTAINMENT** mode, press the  button in **Ambient Mode**. To shut off the Product, press the  button.

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

8 🖼️ Art

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

-  This function may not be supported depending on the model or geographical area.
-  For more information, refer to "[Using Art Mode.](#)"

9 Home

This menu appears first when you press the  button. Then you can quickly access [Samsung Account](#), [Notification](#), or [Privacy Choices](#).

 The available features may differ depending on the model or geographical area.

- [Samsung Account](#)

Go to the [Samsung Account](#) screen to create a new account or sign out of your account.

 For more information, refer to "[Using a Samsung account](#)."

- [Notification](#)

You can view a list of notifications for all events that occur on your Product. A notification appears on the screen when it is time to schedule viewing, or when an event occurs on a registered device.

If you move the focus to [Notification](#), and then press the Select button, a notification window appears on the right and the following functions are available:

- [Delete All](#)

You can delete all your notifications.

- [Settings](#)

You can select services you want to be notified about.

When you select [Allow sound](#), notifications are displayed with a notification sound.

- [Privacy Choices](#)

You can view and set the privacy policy for Smart Hub and various other services.

10 [Universal Guide](#)

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

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

 To access Universal Guide, press the down directional button on the remote control in Home Screen.

 To enjoy the content from these apps on your Product, they must be installed on the Product.

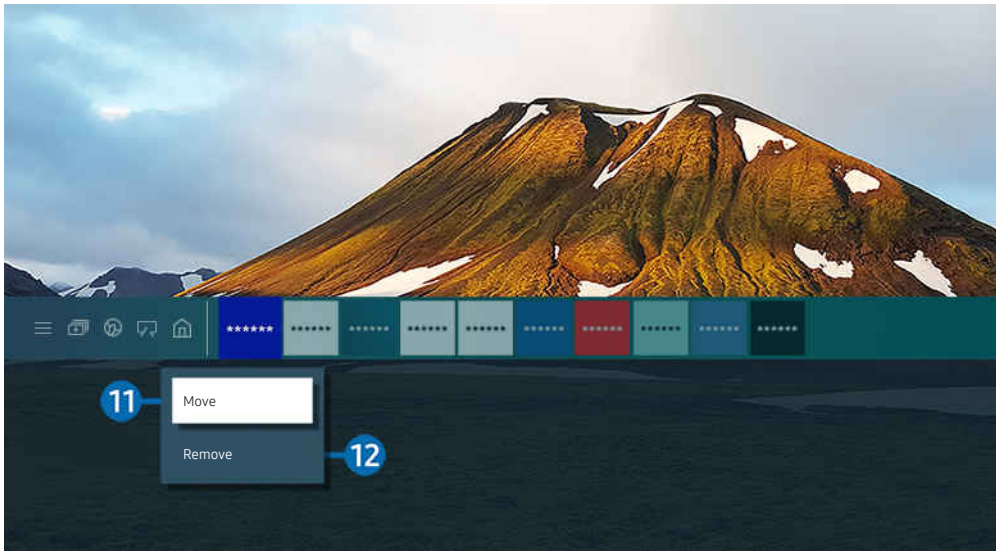
 When you watch some paid content, you may need to make a payment using their associated app.

 Some content may be restricted depending on your network conditions and your subscriptions to paid channels.

 Parental control is necessary when children use this service.

 Images may look blurry depending on the service provider's circumstances.

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



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

11 Moving an item on the Home Screen

Move the focus to the app you want to move, press and hold the Select button on the remote control, and then select **Move** in option menu. Move the app to the desired position by pressing the left or right directional button, and then press the Select button. The selected app is moved on the Home screen.

 In the region that does not support the Universal Guide, press the down directional button on the remote control.

12 Removing an item on the Home Screen

Move the focus to the app you want to delete, press and hold the Select button on the remote control, and then select **Remove** in option menu. The selected app is deleted.

 In the region that does not support the Universal Guide, press the down directional button on the remote control.

 You can add the apps you want to use often to the Home Screen using Apps. To add your favorite apps to the Home Screen, refer to "[Managing installed apps.](#)"

Launching Smart Hub automatically

 >  [Settings](#) > [General](#) > [Smart Features](#) > [Autorun Smart Hub](#) [Try Now](#)

When you set [Autorun Smart Hub](#) to on, the Product displays the Home Screen automatically when you turn the Product on. You can turn this function on or off. Press the Select button at the current menu.

Launching the last used app automatically

 >  [Settings](#) > [General](#) > [Smart Features](#) > [Autorun Last App](#) [Try Now](#)

If [Autorun Last App](#) is set to on, the last used app is automatically run when you turn on the Product. You can turn this function on or off. Press the Select button at the current menu.

 This function may not be supported depending on the app.

 This function may not be supported depending on the model.

Automatic casting in Multi View

 >  [Settings](#) > [General](#) > [Smart Features](#) > [Autorun Multi View Casting](#)

When you cast content on your mobile device by using YouTube, it automatically appears in [Multi View](#). You can turn on or off the function by pressing the Select button.

 It is available on the screen for any broadcast, external device, or app that supports Multi View.

 This function may not be supported depending on the model.

Testing Smart Hub connections

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Smart Hub Connection Test](#) [Try Now](#)

Resetting Smart Hub

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Reset Smart Hub](#) [Try Now](#)

 You can reset the Smart Hub settings. To reset Smart Hub, enter the PIN. The default PIN is "0000." You can set the PIN in

 >  [Settings](#) > [General](#) > [System Manager](#) > [Change PIN](#).

 [Change PIN](#) may not be supported depending on the model or geographical area.

Using a Samsung account

Create and manage your own Samsung account.

 >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#) [Try Now](#)

 You can view the entire text of the Terms & Policy in  >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#) > [My Account](#) > [Terms & Conditions, Privacy Policy](#) after logging in to your Samsung account.

 Follow the instructions on your Product screen to create or log in to a Samsung Account.

 Samsung Account can be used on Product, mobile device, and website with one ID.

Signing in to a Samsung account

 >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#) > [Sign In](#)

Creating a new account

 >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#) > [Create Account](#)

Managing your Samsung account

 >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#) > [My Account](#)

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

- [Sign Out](#)

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

 To sign out of your [Samsung Account](#) ( >  [Settings](#) > [General](#) > [System Manager](#) > [Samsung Account](#)), move the focus to your account's icon, and then press the Select button. When a pop-up window appears, select [Sign Out](#).

- [Edit Profile](#)

You can edit your account information.

 To protect personal information, enter [Edit Profile](#) and then [Sign-in Method](#) is set to [Select your ID and input password \(high security\)](#).

 If you want the Product to log you into your account automatically whenever you turn on the Product, click [Stay Signed In](#).

 When the Product is used by multiple people, turn off [Stay Signed In](#) to protect personal information.

- **Payment Info**

You can view or manage your payment information.

- **Back up**

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

- **Product Registration**

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

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

- **Sync Internet**

Once you sign in to your Samsung account and configure the **Sync Internet** settings, you can share the favorites and website bookmarks that you registered on other devices.

- **Remove Account**

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

 To unsubscribe from your Samsung Account, visit the Samsung Accounts website (<https://account.samsung.com>).

- **Terms & Conditions, Privacy Policy**

You can view the user agreement and privacy policy.

 For more information about the terms and conditions, privacy policy, select **View Details**.

Using Ambient Mode

Learn about the functions available in Ambient Mode.

> Ambient Mode

You can enhance your living space with decorative content that matches the surroundings or view essential realtime information, such as weather, time, and news, on the Product screen when you are not watching the main screen.

 This function may not be supported depending on the model.

 In **Ambient Mode**, some functions may not be supported.

Ambient Mode browser screen



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

When you press the  button in **Ambient Mode**, the **Ambient Mode** browser screen appears at the bottom of the screen. In the **Ambient Mode** browser screen, you can select content and change the **Ambient Mode** settings.

1 Function and content preview

When you select a category at the bottom of the screen, a preview of available functions and content appears here. To view detailed information about a content item, move the focus to it, and then press the up directional button.

2 Ambient Settings

You can configure the following **Ambient Mode** settings:

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

- **Auto Brightness**

Changes the auto brightness setting for **Ambient Mode**.

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

 This function may not be available, depending on the installation method.

- **Sleep After**

Sets the time when the **Ambient Mode** screen turns off automatically.

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

- **Screen Settings**

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

- **Brightness**

Adjusts the brightness of the content.

- **Saturation**

Adjusts the saturation of the content.

- **Color Tone**

Adjusts the colors of the content.

- **Red Tone / Green Tone / Blue Tone**

Adjusts the red, green, blue contrast.

- **Reset All Photos**

Resets the photos imported from your mobile device or Samsung Cloud.

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

3 ENTERTAINMENT

You can enter the main screen.

4 Selecting a content category

You can select your preferred content and background for the **Ambient Mode** screen.

-  This function may not be supported depending on the model.
-  You can use the SmartThings app on your mobile device to select the desired content and then change the settings.
-  Available content categories may differ depending on the model or geographical area.

- **Routine**

Enjoy a range of routines, each displaying content to suit each part of your day or create your very own routines via the SmartThings app.

- **Artificial Landscapes**

Provides design content of Refik Anadol Studio that has been implemented by using the Samsung display technology.

- **Special Edition**

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

- **Cinemagraph**

Provides eye-catching content by giving repetitive movement in part of a photo.

- **Mood**

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

- **Relaxation**

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

- **Décor**

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

- **My Album**

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

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

 For more information about how to configure the photo settings, select [View Help](#). This function is available after you select a photo in the **My Album** category.

- **Info**

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

- **Artwork**

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

- **Background Theme**

Allows you to select a background theme provided by Samsung.

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

 You can set a background theme you created as a background of a content item. To set a background theme as the background of a content item, press the down directional button while watching the **Ambient Mode** screen.

- **About Ambient Mode**

You can view information about **Ambient Mode**.

Applying effects to the content

When you are enjoying content in **Ambient Mode**, press the down directional button to change the following settings for the content:

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

- **Weather Filter**

You can add a weather effect to content.

- **Time Filter**

You can select any background time format for content.

- **Photo Filter**

You can select a photo effect for content.

- **Color & Theme**

Changes the color or theme of the content.

- **Vibes**

Selects a mood that matches the content.

- **Backgrounds**

Changes the background of the content.

 You can use the SmartThings app on your mobile device to take a picture of a wall and create a custom background. For more information, select the **How-To** icon. This function may be a delay in image transmission and optimization depending on network conditions.

- **Shadow Effects**

Applies a shadow effect that you select to the content.

- **Frame**

You can apply various frames to your content.

Viewing detailed information about the content

When you are enjoying content in **Ambient Mode**, press the up directional button to view detailed information about the content.

Entering the main screen from Ambient Mode

To enter the main screen from **Ambient Mode**, press the  button, or select  **ENTERTAINMENT** in the **Ambient Mode** browser screen.

 If you press the  button when the Product is turned off, you can enter the main screen.

Using Art Mode

Learn about the functions available in Art Mode.

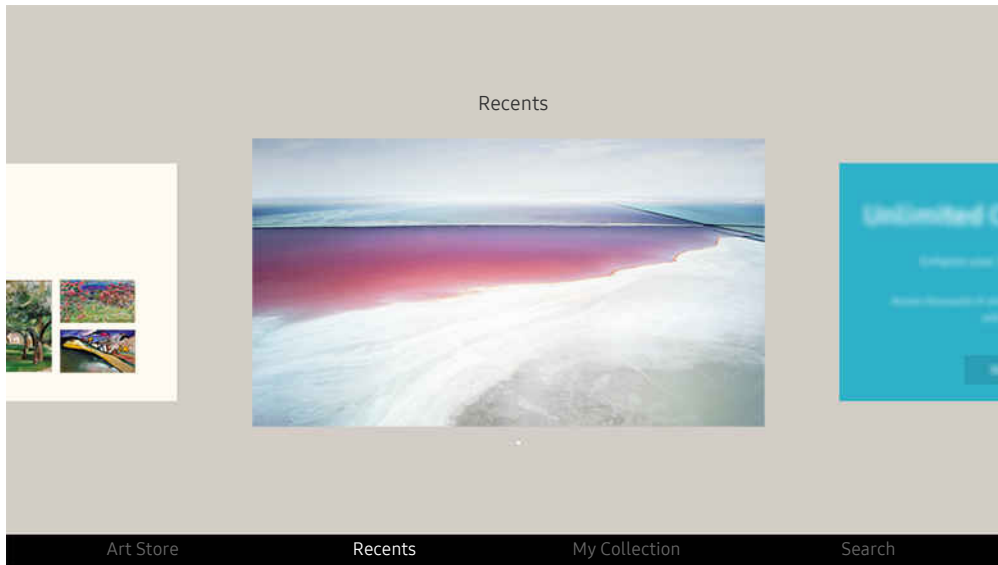
 >  **Art**

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

You can use **Art** mode function to display image content such as artworks or photos.

- Press the  button in **Art** mode to switch to Home Screen.
- In **Art** mode, the brightness and color tone of your Product are automatically adjusted depending on the ambient, and the Product can be automatically turned off.
 -  The Product is set by default so that the screen turns off automatically when the ambient light dims in **Art** mode.
 -  This function may not be available, depending on the installation method.
- In **Art** mode, you can connect your mobile device to the Product using the SmartThings app on the mobile device to view photos on the mobile device.
 -  This function may not be supported depending on the mobile device.
 -  Supported features may differ depending on the version of the SmartThings app.
- Depending on the **Auto Power Off** function settings, the Product may turn off when there is no user input in **Art** mode, such as inputs from the remote control ( >  **Settings** > **General** > **Power and Energy Saving** > **Auto Power Off**).
-  >  **Settings** > **General** > **System Manager** > **Time** > **Sleep Timer** and **Off Timer** function does not work in **Art** mode.
-  >  **Settings** > **General** > **Power and Energy Saving** > **Screen Saver** function does not work in **Art** mode.

Viewing images



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

To view an image in **Art** mode, select one of the menus below. To switch to the sub menu where you can select images, press the Select button, one of the four directional buttons, or  button in **Art** mode. Then, use the directional buttons on the remote control to move to desired image, and then press the Select button. ✓ **Set** appears at the bottom of the selected image, and you can view the selected image in **Art** mode.

 While viewing images in **Art** Mode, you can find the detailed information about the images by pressing the down directional button on the remote control.

- **Art Store**

You can go to **Art Store** to purchase various images.

 The **Art Store** may not appear depending on the network connection status.

 To purchase or appreciate images, first log in with your Samsung Account.

- **Recents**

You can manipulate the last selected images.

- **My Collection**

You can view a list of artworks and photos that you set as ♥ **Favorite** in **Favorites**. You can also select the desired ones among the images saved on an external storage device or a mobile device and save them in **My Photos**.

 Using the SmartThings app, you can save photos on your mobile device.

- **Search**

You can conveniently find the artworks by searching the artist, artwork name and etc.

 This function only allows you to search terms in English.

- **News & Events**

You can find the informations about the recent news or events.

Viewing images by time

1. Use the directional buttons on the remote control to move to [My Collection](#).
2. Use the directional buttons to move to [Favorites](#) or [My Photos](#).

To view the images on the mobile device connected via the USB or SmartThings app, select the desired images on the connected device and then save them into [My Photos](#).

3. Use the directional buttons on the remote control select the [Start Slideshow](#) or [Start Slideshow \(Random\)](#).
4. Use the directional buttons on the remote control to select the time interval at which images are to be switched, and then press the Select button.

Import images from an external storage device

1. Connect an external storage device that contains images to the Product.
2. Use the directional buttons on the remote control to move to [My Collection](#), and then move to the connected external storage device.
3. Use the directional buttons on the remote control to move to an image, and then press the Select button.

 You can select multiple images.

4. Use the directional buttons on the remote control to move to [Save to My Photos](#) at the bottom of the screen, and then press the Select button.
5. The selected image or images are saved in [My Photos](#).

 Recommended resolutions: 3840 x 2160 (16:9)

Remove images from My Collection

You can remove the saved images from [My Collection](#).

1. Use the directional buttons on the remote control to move to [My Collection](#).
2. Use the directional buttons on the remote control to move to [Favorites](#) or [My Photos](#).
3. Use the directional buttons on the remote control to move to [Remove](#), and then press the Select button.
4. Use the directional buttons on the remote control to move to an image, and then press the Select button.

 You can select multiple images.

5. Use the directional buttons on the remote control to move to [Remove Selected](#) at the bottom of the screen, and then press the Select button.

Buying images from Art Store

1. Use the directional buttons on the remote control to move to [Art Store](#).
2. Use the directional buttons on the remote control to move to a topic, and press the Select button. You can select any subtopics or images on the screen.

 The entry path may differ by each topic.

3. Use the directional buttons on the remote control to move to an image, and press the Select button.
4. Use the directional buttons on the remote control to move to [Details](#) at the bottom of the screen, and then select [Acquire Artwork](#).

 Displays [Get Trial Membership](#) or [Free Trial](#) if you have not joined [The Art Store Membership](#).

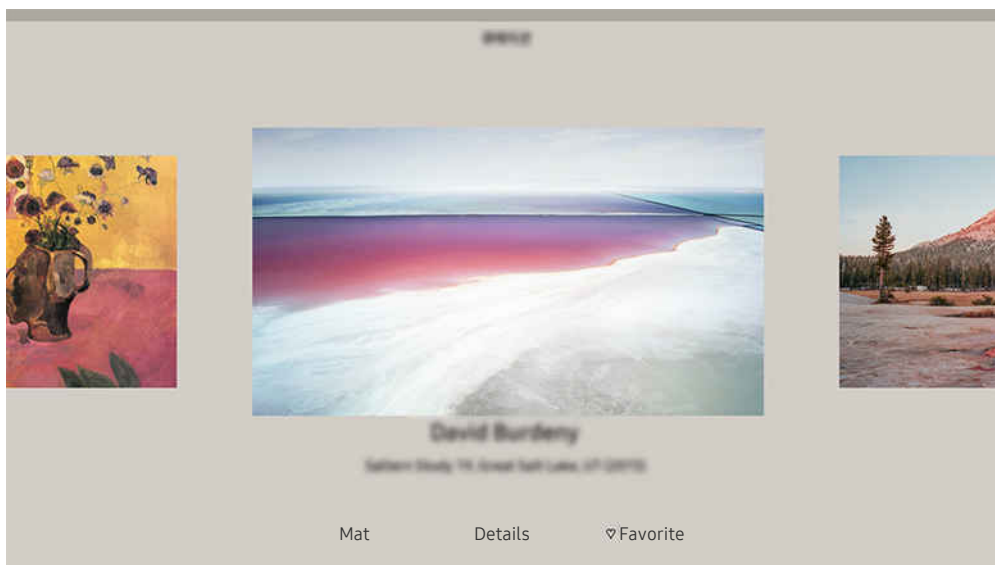
5. Use the directional buttons on the remote control to select payment methods, and then press the Select button.
6. Follow the on-screen instructions to procedure payment.

Subscribing to The Art Store Membership

When you subscribe to [The Art Store Membership](#), you can use [Art Store](#) unlimitedly and enjoy various art works by replacing them with new ones according to your preferences.

1. Use the directional buttons on the remote control to move to [Art Store](#).
2. Use the directional buttons on the remote control to move to [Membership](#).
3. Follow the on-screen instructions to enter your membership information.

Setting the style of the selected image



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

Use the directional buttons on the remote control to move to an image you want. You can use the following menus:

- **Details**

You can find more information about the image.

- **Photo Filter**

You can apply the selected filter's effect to the image according to your preferences.

 This function is only available for saved images on [My Photos](#).

- **Mat**

You can apply various border styles and colors to the image according to your preferences.

- **Favorite**

You can set (or not set) an image that you prefer as a favorite item by pressing the Select button on the remote control. You can view a list of items set as your favorites in [My Collection](#) > [Favorites](#).

–  **Favorite**: Not set as a favorite.

–  **Favorite**: Set as a favorite.

Apply a border style and a color to an image

1. Using the directional buttons on the remote control to move to the image whose border style and color you want to change, move to **Mat** at the bottom of the screen, and then press the Select button.

 Depending on whether the image ratio is 16:9 or not, the border styles may differ.

2. Use the directional buttons on the remote control to select the border style and color that you want.
3. Change the border style and color, and then press the Select button to move the focus to the image.

 If you want to change only either the border style or the color, change it, and then press the Select button to save the changes.

4. To save the selected border style and color, press the Select button again.

 If you press the  button to exit, the border style and color you changed are not saved.

Setting up Art mode

In **Art** mode, use the directional buttons on the remote control to move to the **Settings** menu item at the bottom of the screen. You can adjust the following functions:

- **Brightness**

Use the directional buttons on the remote control to move to **Modify** at the bottom of the screen, and then press the Select button. In the next screen, adjust the picture brightness. After selecting the desired settings, press the Select button on the remote control.

- **Color Tone**

Use the directional buttons on the remote control to move to **Modify** at the bottom of the screen, and then press the Select button. In the next screen, adjust the color of your displayed artwork. After selecting the desired settings, press the Select button on the remote control.

Using Art mode with the SmartThings app

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

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

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

 On tablet devices, [Art](#) mode features may not be supported by the SmartThings app.

- Selecting images.
- Saving photos from a mobile device to the Product: Save photos from your mobile device to the Product by adding photos or creating a photo collage.
- Subscribing to [The Art Store Membership](#).
- Creating Collage: Combine multiple images into one image.
- Applying border styles and colors to images.
- Setting the brightness for [Art](#) mode.

Using PC on TV

Use the Product to access your PC via Screen Sharing (Windows PC), AirPlay (Mac), Remote PC or Easy Connection to Screen.

 >  [Source](#) > [PC on TV](#) > [Windows PC](#)

 >  [Source](#) > [PC on TV](#) > [Mac](#)

You can use the Product to access your PC via Screen Sharing (Windows PC), AirPlay (Mac), Remote PC or Easy Connection to Screen.

 For easy computer use, connect a keyboard and a mouse to your Product in advance.

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

 >  [Source](#) > [PC on TV](#) > [Windows PC](#) > [Screen Sharing](#)

 >  [Source](#) > [PC on TV](#) > [Mac](#) > [Apple AirPlay](#)

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

 This function is only available for PCs that support wireless screen sharing.

- Connection via Windows OS is available in Windows 10.
- Connection via Mac OS is available in AirPlay.

Using Easy Connection to Screen

 >  [Source](#) > [PC on TV](#) > [Windows PC](#) > [Easy Connection to Screen](#)

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

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

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

 The Easy Connection to Screen PC app is available in Windows 10.

 Depending on the network environment including the firewall configuration, router type, and wireless signal strength, connection problems may occur, such as low speed, disconnection, or limited connection.

Connecting a Remote PC

 >  [Source](#) > [PC on TV](#) > [Windows PC](#) > [Remote PC \(RDP\)](#) [Try Now](#)

 >  [Source](#) > [PC on TV](#) > [Mac](#) > [Remote Login](#) [Try Now](#)

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

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

1. Configure your computer's settings to use the PC on TV function.

-  Connection to Windows via the RDP protocol is available in Windows 10 Professional or higher.
 -  Remote connection to a PC running on Mac via the VNC protocol is only supported for Mac OS X 10.5 or later.
 - Windows OS:
 - 1) Right-click the **My Computer** icon on Desktop or Windows Explorer and then click **Properties**.
 - 2) Click **Advanced System Settings**. The **System Properties** window appears.
 - 3) Click the **Remote** tab and then select the **Allow Remote Assistance connections to this computer**.
 - Mac OS:
 - 1) **Select Menu > System > Preferences** and then click **Sharing**.
 - 2) Select the **Screen Sharing** and **Remote Login** check box.
 - 3) Run the resolution changing app downloaded from App Store and then change the resolution to 1440 x 900 or lower.
-  If you do not change the resolution in Mac OS, the previous image may appear while connecting a remote computer.

2. Enter the required settings for connecting the computer remotely.

Manage User Profiles

- 1 PC/Profile IP address or profile
- 2 Username Enter a username.
- 3 Password Enter a password.

☐ Remember my credentials and add to the PC on TV Home screen. You can connect directly from the Home screen via shortcuts.

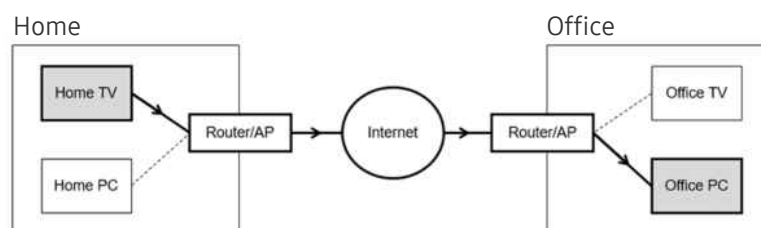
Help Connect Cancel

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

1 PC/Profile

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

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



2 Username

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

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

3 Password

Enter the password for the login account.

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

Playing Multimedia Content on a Remote PC

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

 For more information, refer to "[Playing pictures/video/music.](#)"

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

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

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

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

Using Samsung DeX

[Samsung DeX](#) can be connected from the Product via wireless network.

When the mobile device does not appear on the screen, select [Mobile Connection Guide](#) and then follow the screen instructions. Some models may not be searched when connecting the Product from a mobile device through [Samsung DeX](#). In this case, access the DeX Guide on the screen in which you can perform connection by following the screen instructions.

 This function is available only on mobile devices that support the wireless Samsung DeX. You can see the mobile devices that can support the [Samsung DeX](#) at samsungdex.com.

Using Microsoft 365

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

 Run the browser in full-screen mode.

 URL modification is impossible in the Microsoft 365 page.

Adding the Web Service

Select the [Add Web Service](#) icon. Use the bookmarking function of the browser, you can add or delete the Web Service link to or from [PC on TV](#).

 To add the Web Service, you must be signed in to your Samsung account.

 The number of cloud services that can be added to [PC on TV](#) is limited.

Using Web Service

You can access the Web Service by selecting the Web Service icon added to [PC on TV](#).

-  The screen on the web page may differ from that of a computer.
-  You can copy or paste any text. Some image formats are supported.
-  For easy and secured login in Web Service, [PC on TV Pass](#) is additionally supported as well as [Samsung Pass](#).

Setting [Samsung Pass](#) or [PC on TV Pass](#).

Set [Samsung Pass](#) or [PC on TV Pass](#) to Use in  >  [Source](#) > [PC on TV](#) > Run the [PC on TV](#) browser (Additionally select [Microsoft 365](#) or [Add Web Service](#)) > [Internet Menu](#) > [Settings](#).

[PC on TV Pass](#) allows you to easily manage the Web Service ID and password without biometric authentication on mobile devices. For this purpose, you must be signed in to your Samsung account. The password is encrypted to be safely stored on your Product.

However, the log in to [PC on TV Pass](#) may not work depending on the site policy.

-  To securely access the Web Service, you can use the browser's automatic shutdown or clear the history logs.
-  Before accessing the Web Service, refer to "[Read Before Using the Internet Function](#)."

The Web Service supports the following keyboard shortcuts:

- F1: Returns to [PC on TV](#)'s Home screen.
- F5: Refresh.
- F8: Mutes the sound.
- F9/F10: Adjusts the volume.
- F11: Switches between full screen or default screen.

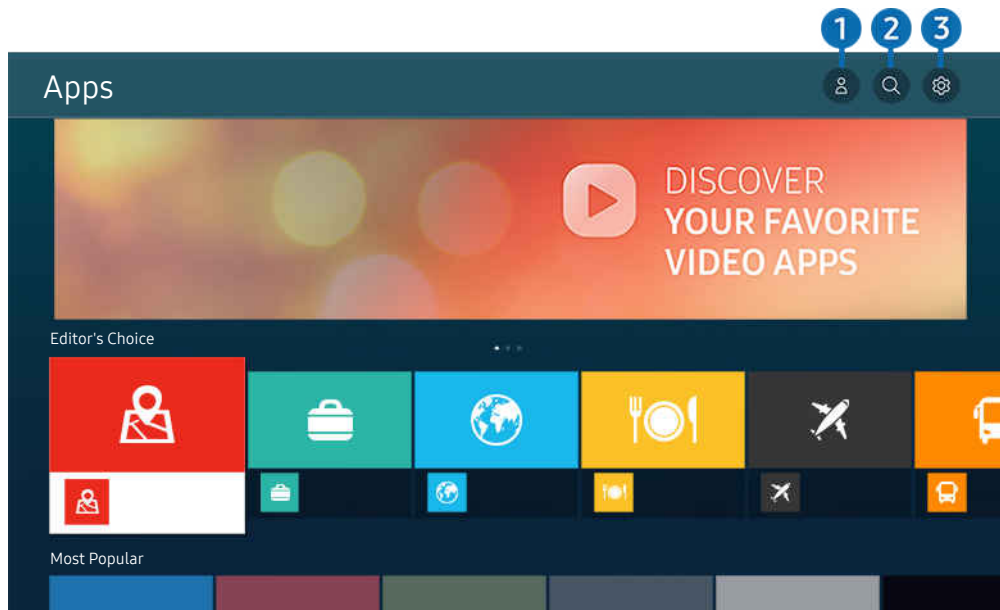
Using the Apps Service

Download and run various apps from Smart Hub.

> Apps

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

-  To use this feature, the Product 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 depending on the model or geographical area.



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

1 Samsung Account

Go to the [Samsung Account](#) screen to create a new account or sign out of your account.

-  If you are signed out of your Samsung account, select  [Sign In](#) to sign in.
-  If you want to download new apps using [Apps](#), first sign in to your Samsung account.

2 App Search

You can search for available apps.

3 Settings

You can manage the installed apps.

Installing an app

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

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

Launching an app

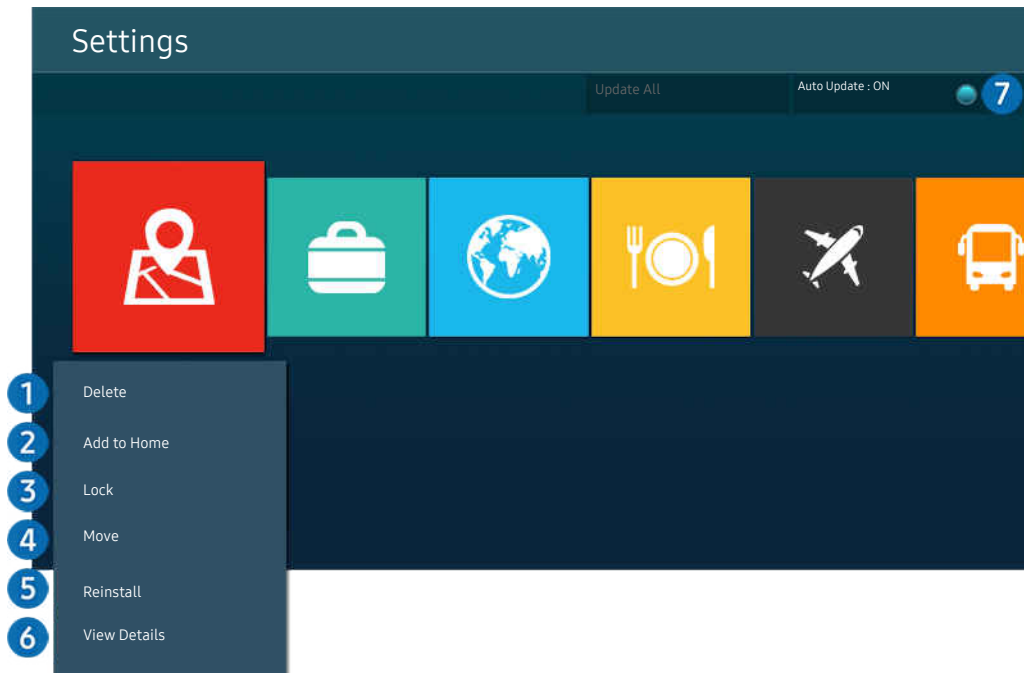
You can run the app desired from **Downloaded App**.

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

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

Managing installed apps

Select  [Settings](#) on [Apps](#). You can manage installed apps.



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

1 Removing an app

1. Select an app to delete.
2. Select [Delete](#).

The selected app is deleted.

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

 Standard apps cannot be uninstalled.

2 Adding apps to the Home Screen

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

The selected app is added to the Home Screen.

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

3 Locking and unlocking apps

1. Select an app to lock or unlock.
2. Select [Lock/Unlock](#).

The selected app is locked or unlocked.

 To lock or unlock an app, enter the PIN. The default PIN is "0000." You can set the PIN in  >  [Settings](#) > [General](#) > [System Manager](#) > [Change PIN](#).

 [Change PIN](#) may not be supported depending on the model or geographical area.

4 Moving apps

1. Select an app to move.
2. Select [Move](#).
3. Move the app to the desired location.
4. Press the Select button.

The selected app is moved.

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

5 Reinstalling an app

1. Select the app to install again.
2. Select [Reinstall](#).

Reinstallation starts.

6 Checking the app information details

1. Select the app to check.
2. Select [View Details](#).

The app information screen appears.

 You can rate an app on the [View Details](#) screen.

7 Automatically updating apps

To automatically update the installed apps, set [Auto Update](#) to **ON**.

 Automatic update is enabled only when the Product is connected to the Internet.

Using the e-Manual

Control and read the manual embedded in your Product.

Launching the e-Manual

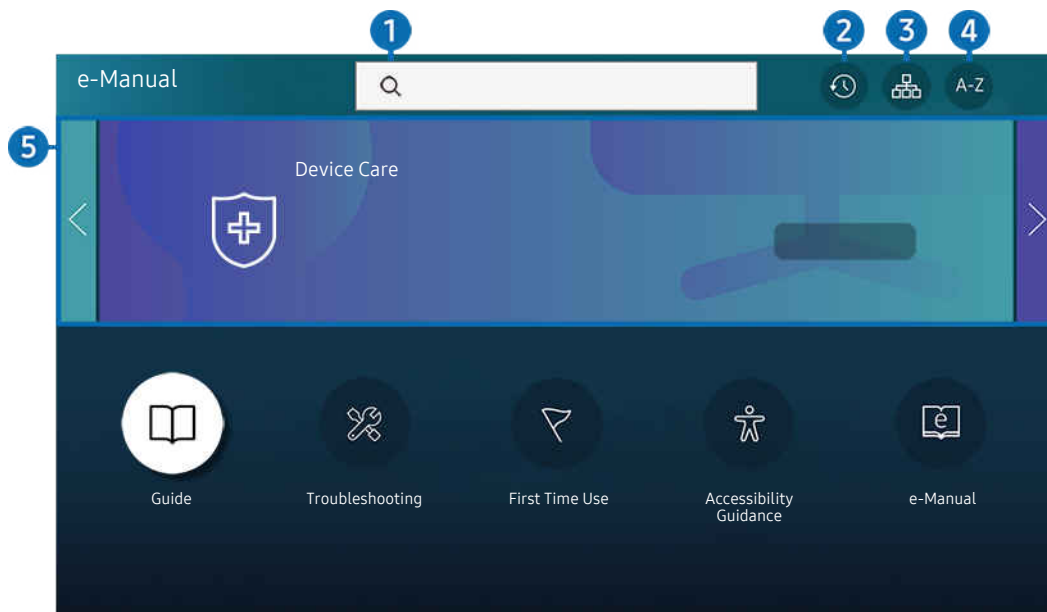
 >  **Settings** > **Support** > **Open e-Manual**

You can view the embedded e-Manual that contains information about your Product's key features.

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

 Some menu screens cannot be accessed from the e-Manual.

Using the buttons in the e-Manual



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

1 (Search)

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

2 (Recently Viewed Topics)

Select a topic from the list of recently viewed topics.

3 (Sitemap)

It displays the lists for each item in e-Manual.

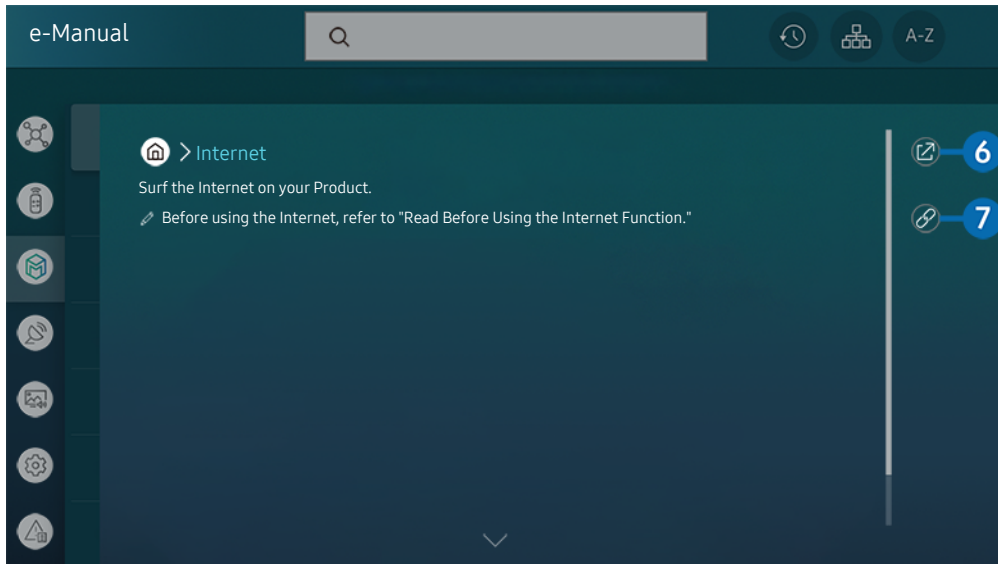
4 A-Z (Index)

Select a keyword to navigate to the relevant page.

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

5 Device Care

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



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

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

6 (Try Now)

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

7 (Link)

Access an underlined topic referred to on an e-Manual page immediately.

Using the Internet

Surf the Internet on your Product.

> Internet

When you run [Internet](#), you can see recently viewed web sites or featured recommendations. When you select a desired web site, you can get immediate access to it.

-  You can use the [Internet](#) function more easily after connecting a keyboard and mouse.
-  You can scroll web pages with the directional button on the Samsung Smart Remote.
-  The web pages may differ from those on a PC.
-  Before using the [Internet](#), refer to "[Read Before Using the Internet Function](#)."
-  The [Internet](#) app has an embedded [Samsung Pass Settings](#) ( > [Internet](#) > [Internet Menu](#) > [Settings](#) > [Samsung Pass](#)).

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

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

Using SmartThings

It allows the Product to connect and control the detected various devices in the same space.

> SmartThings

Using the Product, you can control devices connected via Bluetooth, BLE(Bluetooth Low Energy), or Wi-Fi by using the remote control.

-  Depending on the Product or device position, you may not operate functions with the remote control. In this case, move the device.
-  This function may not be supported depending on the model.
-  This function may not be supported depending on the device type.

Registering a device

1. When there is any device detected near the Product, a registration pop-up appears on the Product screen.

 When there is no device detected, the pop-up may not appear.

2. Select **Register** to register the device.

 Select **Close**. Then the device registration pop-up does not appear.

You can register a device in  >  SmartThings > **Add Device**.

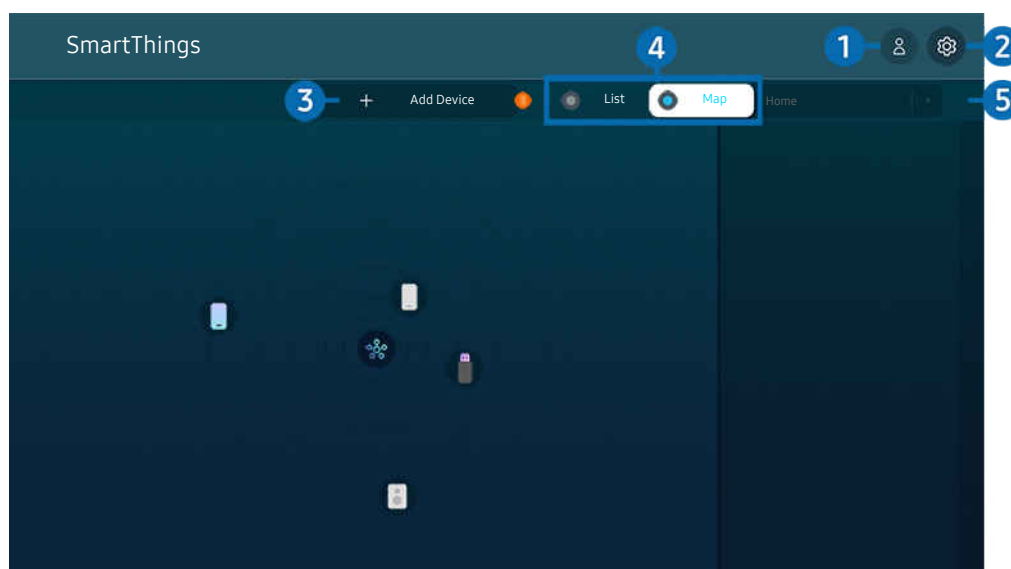
 Any device connected via a USB device or HDMI cable is automatically registered.

  >  SmartThings, you can see available options for each device.

Supportable options may differ depending on the device.

SmartThings screen layout

 >  **SmartThings**



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

1 **Samsung Account**

Go to the [Samsung Account](#) screen to create a new account or sign out of your account.

 If you are signed out of your Samsung Account, select  [Sign In](#) to sign in.

2 **Settings**

You can configure the [SmartThings](#) settings.

3 Add Device

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

4 List / Map

Displays the detected devices in a map or list.

5 Device list category

 Available options may differ depending on the device.

- Place

Displays all places connected via the SmartThings app.

Available devices

Type	Description Detail
Mobile devices	Galaxy Series (S6, Android 7.0 or later) iPhone Series (iOS 7.1 or later)  SmartThings app must have been installed in case of Android devices.
Devices for IR remote control (IR Sniffing)	Air conditioner, air purifier, robot vacuum cleaner, electric fan, humidifier
Bluetooth devices	Bluetooth speaker, headset, Soundbar, keyboard, mouse, game pad
SmartThings devices	For details on SmartThings devices, access https://www.smartthings.com/products .
External devices	DVD player, Blu-ray player, home theater system, game console, OTT box, set-top box, USB device  The devices must be connected to the HDMI or USB port.

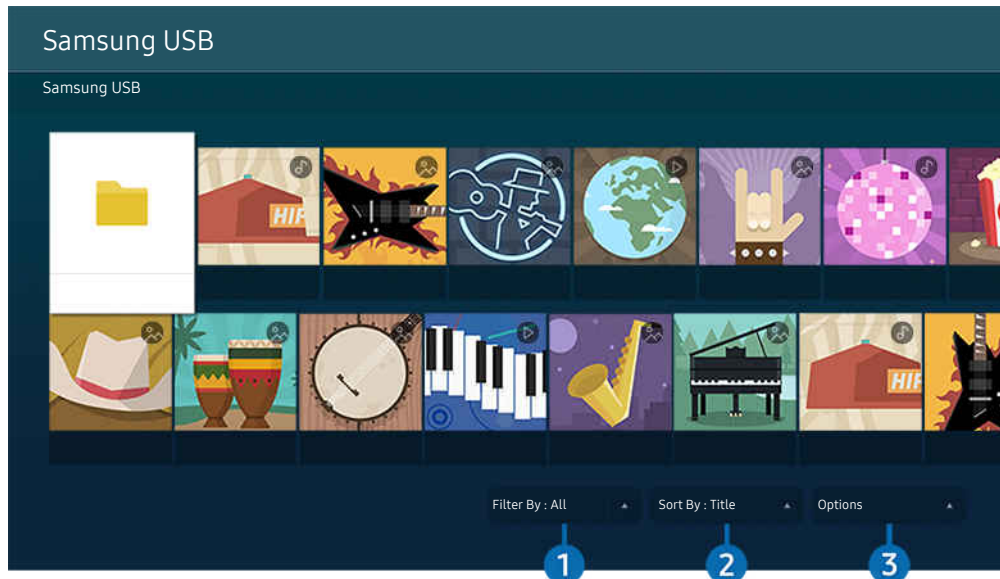
 For a detailed list of supported devices, visit www.samsung.com.

 This function may not be available depending on the external device.

Playing pictures/video/music

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

 >  **Source** > Connected Device [Try Now](#)



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

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

 You cannot play media content if the content or the storage device is not supported by the Product. For more information, refer to "[Read Before Playing Photo, Video, or Music Files.](#)"

 Backup important files before connecting a USB device. Samsung is not responsible for damaged or lost files.

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

1 Filter By

Filters the media content by type of media.

2 Sort By

Sorts the content list.

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

3 Options

Plays the selected media content in the media content list. When you select **Refresh**, the content list is reloaded.

Playing multimedia content on a PC or mobile device

1. Select a device with media content in  >  **Source**. The media content list in the device appears.
2. Select a media content item from the list.

The selected content is played.

 The content may not be played depending on the encoding method or file format. Furthermore, several functions may be restricted.

 Content on devices connected to the Product via your network may not play smoothly due to network communication problems. If this occurs, use a USB device.

Playing multimedia content on a USB device

1. Connect a USB device to the USB port.
2. When a pop-up message appears on the screen, select **Browse** to easily move to the list of multimedia content stored on the device.

 If a USB device that contains the content you want to play is already connected to the Product, select the USB device in the  >  **Source** screen.

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

The selected content is played.

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

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

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

The selected media is played through the Product speaker.

-  This function may not be supported depending on the model.
-  In some models, the image of the played content may differ depending on the mode.
-  If the Product and the sound bar are connected wirelessly, the operation may be restricted.

Buttons and functions available while playing multimedia content

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

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

- **Pause, Play**

Pauses or plays the multimedia content.

- **Jump Backward, Jump Forward**

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

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

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

- **Stop**

Stop the contents being played.

- **Previous / Next**

Displays the previous or the next multimedia content file.

- **Rewind / Fast Forward**

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

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

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

- **360 Mode**

Provides a 360-degree view for videos and photos.

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

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

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

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

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

 This function may not be supported for some resolutions.

 This function may not be supported depending on the model.

- **360 Auto Rotation**

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

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

-  General
-  Dynamic
-  Natural

 This function is only available when **360 Mode** is selected.

 When **360 Auto Rotation** is activated, automatic adjustment is followed. The adjustment position may differ depending on the image.

 The video's viewing angle is manually adjusted in General mode.

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

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

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

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

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

 This function may not be supported for some resolutions.

 This function may not be supported depending on the model.

- **Repeat**

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

- **Shuffle**

Plays music files in random order.

- **Picture Off**

Plays music files with the screen off.

- **Screen Fit**

Fits a photo to the screen.

- **Rotate left / Rotate right**

Rotates a photo left or right.

- **Zoom**

Zooms in a photo.

- **Background Music**

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

 This function is available after enabling the **Background Music** option.

- **Options**

 The available options may differ with the model and content.

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

Using Multi View

You can view multiple content items through Multi View.

 >  **Multi View**

 This function may not be supported depending on the model.

You can watch screens from multiple devices after connecting them via HDMI 1 to HDMI 4.

To start the **Multi View**, select  >  **Multi View**, and then select the content to add in **Select content**, or select **Multi HDMI**, **Preset**, or add screen at the top of  >  **Multi View**. Or run screen sharing (**Smart View**/**Apple AirPlay**) for your mobile device.

 While using this function, you can press the  button on the Samsung Smart Remote to run or stop the Multi View using a voice command, or you can also press the  button to directly access the function.

 When the  button is available on the Samsung Smart Remote, You can enter the **Multi View** function by pressing its button.

 When you press the  button in **Multi View** mode, the **Multi View** preview screen appears above the bottom of the screen. By selecting the content in the **Multi View** preview screen, 2-5 contents can be displayed in **Multi View** mode.

 **Multi HDMI** is available only when two or more devices are connected to HDMI ports (1 to 4). It is unavailable on the BD player or Soundbar.

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

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

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

 Q-Symphony is not supported by **Multi View**.

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

 The operation and sound output specifications may differ depending on the Soundbar model. If that is the case, configure the speaker settings again or refer to the Soundbar user manual.

 **Multi HDMI** does not support HDR.

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

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

- Select content from this app/source.

You can select from the content list displayed above.

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

-  Change app/source.

You can change the content for the selected window.

-  Change screen size. (Screen Switch)

Selects the desired size of **Multi View**.

-  (Set Picture-in-Picture.)

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

 This function may not be supported depending on the model.

-  (Listen to the sound from two screens.)

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

 This function may not be supported depending on the model.

-  (Delete screen.)

You can delete the selected screen.

 This function may not be supported depending on the model.

-  (Connect Bluetooth Speaker.)

You can hear the sound by connecting the Bluetooth speaker.

 This function may not be supported depending on the model.

-  (Exit to full screen.)

Multi View is ended and then the full screen appears.

To stop **Multi View**, press and hold the  button on the Samsung Smart Remote. A short press of the Samsung Smart Remote's  button allows you to choose whether to save exit the current layout.

- **Save & Exit**

You can save the layout of the current **Multi View** before closing the function. The saved layout can be used after selecting it at the top of the **Multi View** ( >  **Multi View** > up directional button)

 If the current layout is not required to be saved, select **Exit Only** to end the **Multi View**.

Using Bixby

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

-  This function is available only if Voice Assistant is set to Bixby. (🏠 > ⚙️ [Settings](#) > [General](#) > [Voice](#) > [Voice Assistant](#))
-  Bixby is available only when the Product is connected to the Internet.
-  To use Bixby, you must register and sign in to your Samsung account. Some functions may not be supported if you are not signed in to your Samsung account.
-  Bixby only supports some languages, and the supported functions may differ depending on the geographical area.
-  Bixby may not be supported depending on the model or geographical area.

Starting Bixby with voice

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

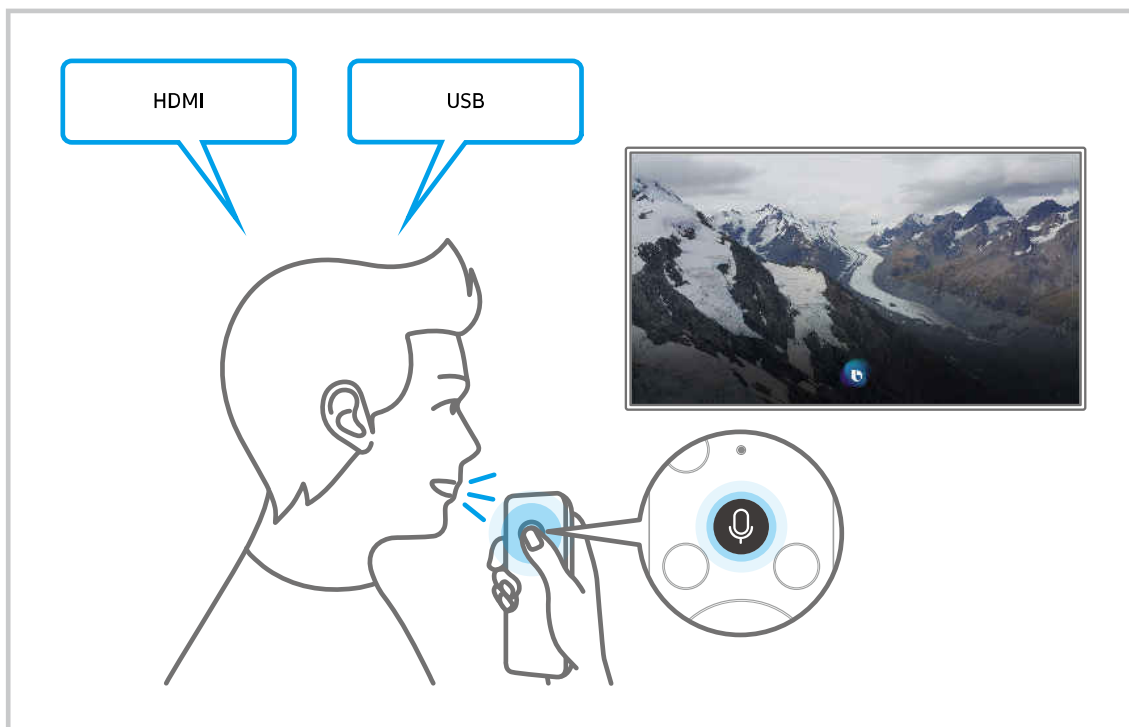
-  For best results, you need to be within 10 feet (3-4 m) of your Product. For more information, refer to "[Voice Assistant Issues](#)".
-  These functions may not be supported depending on the model or geographical area.

Starting Bixby using buttons on the Samsung Smart Remote

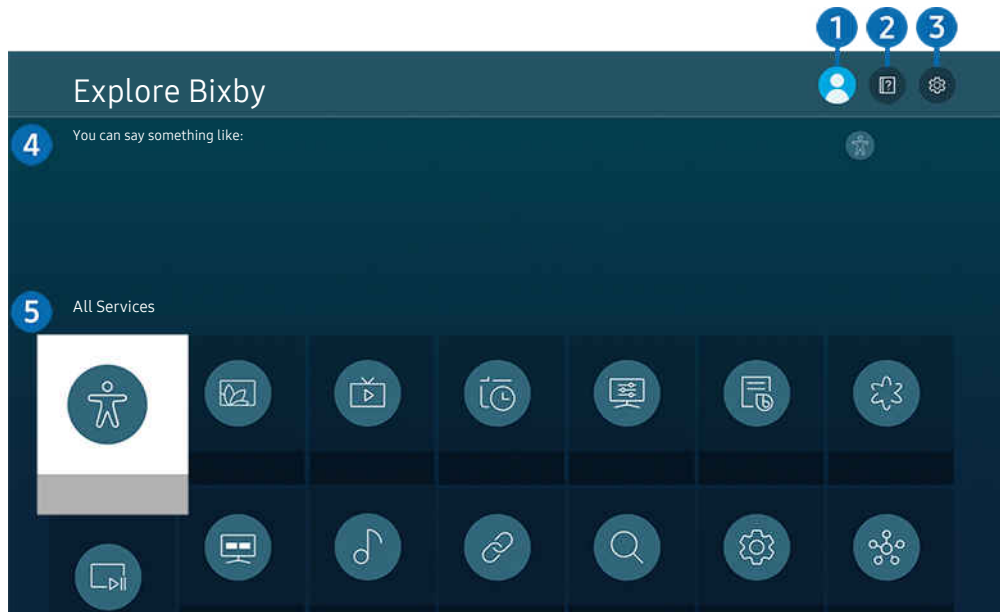
You can have conversation with Bixby using the Samsung Smart Remote buttons. Press and hold the  button on your Samsung Smart Remote, say a command, and then release the  button.

To view the Bixby guide, press the  button once:

- When you press the  button, the [Explore Now](#) button appears at the bottom of the screen. Press the Select button to go to the [Explore Bixby](#) screen.



Learning about the Explore Bixby Screen



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

1 My Profile

Log out after going to the [My Profile](#) screen.

 If you are signed out of your Samsung account, select  [My Profile](#) to sign in.

2 Tutorials

The pop-up window on using Bixby appears.

3 Settings

You can change the settings for using Bixby.

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

 These functions can be set in [Bixby Voice Settings](#) ( >  [Settings](#) > [General](#) > [Voice](#) > [Bixby Voice Settings](#)).

- [Language](#)

You can change Bixby's language.

 The languages of the Product and other apps will not change.

 Bixby only supports some languages.

- **Voice response**

You can change or turn off Bixby's voice.

 This function may not be supported depending on the language selected for Bixby.

- **Voice Wake-up**

You can set to call Bixby to respond to your voice. If Bixby does not respond to your voice, turn on the **Voice Wake-up** function, and then try again ( > **Explore Now** >  **Settings** > **Voice Wake-up**).

 This function can be used only when the sound sensor at the bottom of the Product is active.

 For best results, you need to be within 10 feet (3-4 m) of your Product. For more information, refer to "[Voice Assistant Issues](#)"

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

- **Sound feedback**

Play a sound when Bixby starts and stops listening.

 This function may not be supported depending on the model.

- **Privacy**

You can permit or prohibit Bixby from utilizing your personal information when you are using Bixby services.

- **About Bixby Voice**

Displays the detailed terms and conditions.

4 Recommended commands

Displays recommended commands you can use to control the Product with Bixby given the current context.

If you do not want to see the recommended commands, set **Voice Hint** to **Off** ( >  **Settings** > **General** > **Voice** > **Voice Hint**).

5 All Services

You can learn the voice commands that let you use Bixby in various situations. Use the directional buttons to move to the desired command, and then press the Select button. You can operate the Product with various voice commands.

Read Before Using Bixby

- The supported voice interaction languages and features may differ depending on the geographical area.
- If the language set differs from the language of your country, some features are not available.
- Bixby is available only when the Product is connected to the Internet.
- Even if the Product is connected to the Internet, there may be no response due to a Bixby server error.
- The existing functional specifications may be changed if Bixby is updated.
- Bixby is available only on Product that support it and come with remote controls that have a microphone.
- Symbols including "-" and special characters are not supported. Consequently, if a word or sentence contains numeric values or symbols, the function may not operate properly.
- Searched results may not provide complete results.
- You may be required to pay for some apps. Consequently, you may encounter a service application or contract.
- To change the current channel by saying channel names as voice commands, you must finish [Service Provider Settings](#). [Service Provider Settings](#) can be set in  > [Settings](#) > [Broadcasting](#) > [Service Provider Settings](#).

If the settings for the service provider are not configured yet, configure them in  > [Settings](#) > [General](#) > [Reset](#). [Try Now](#)

 Service provider settings in initial setup may not be supported on geographical area.

- To use the voice text input function and the search function, you must consent to provisions allowing third parties to collect and use your voice data.
- To use the Bixby function, you must:
 - Agree to Smart Hub's Terms of Use.
 - Agree to a guidance regarding the collection and use of personal information for the Smart Hub service.
 - Consent to the collection and use of personal information for the voice interaction-based service.

Provisions for using Bixby

- The voice interaction rate differs with the volume/tone, pronunciation, and ambient sound environment (Product sound and ambient noise).

Using the Game Bar

Control the Game Settings Monitoring and Game Enhancer Settings easily by using the Game Bar.

 This function may not be supported depending on the model.

Starting the Game Bar

When **Game Mode** (🏠 > ⚙️ **Settings** > **General** > **External Device Manager** > (**Game Mode Settings**) > **Game Mode**) is **On** or **Auto**, press and hold the  button on your Samsung Smart Remote to start the **Game Bar**.

Learning about the Game Bar



 The image on your Product may differ from the image above depending on the model.

1 Input Lag

Shows the **Input Lag** of the game. When **Game Motion Plus** is **Off**, the game operates with the minimum input lag.

 When you increase the values for **Blur Reduction** and **Judder Reduction** in **Game Motion Plus Settings** (🏠 > ⚙️ **Settings** > **General** > **External Device Manager** > **Game Mode Settings** > **Game Motion Plus Settings**), the input lag increases.

2 FPS (Frames Per Second)

Shows the frame rate per second in real time. The frame rate changes when **VRR** is active.

3 HDR

Shown as **On** when HDR Game is being played.

4 VRR (Variable Refresh Rate)

Shows the corresponding value when **FreeSync** or **VRR** function is active.

- **ON, OFF, FreeSync Premium, FreeSync Premium pro**

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

5 Sound Output

Shows the audio device in which sound is being output. (e.g. Sound bar, Bluetooth headset, etc.)

6 Screen Ratio

You can change the screen ratio from **16:9** (previous setting) to Ultra wide (**21:9** or **32:9**).

 You have to set the resolution from your PC only once at first time.

 The **Game Bar**'s Screen Ratio can be changed only when the Ultra Wide resolution is supported in a game or PC. Whether or not to support the screen ratio of **21:9** and **32:9** depends on the title of the game so be sure to consult the game company.

7 Screen Position

When setting the screen ratio to Ultra wide (**21:9** or **32:9**), you can use the Up/Down directional button on the remote control to move the screen up or down from the middle.

 You can change the screen position immediately by moving the **^/∨** (Channel) button on the remote control upward or downward.

8 Game Mode Settings

Moves the menu to **Game Mode Settings**.

9 Troubleshooting

When any problem occurs while operating the **Game Bar**, see the troubleshooting guide here.

Setting the Super Ultra Wide Game View

Set your PC Screen resolution to match the selected Screen Ratio in the Game Bar before activating the **Super Ultra Wide Game**.

- ✎ Check if the game supports Ultra Wide resolution (**21:9** or **32:9**).
- ✎ If you set the resolution on your PC for the first time, you can change the Screen Ratio through the **Game Bar** on your Product.

Game Bar Screen Ratio	Resolution set in PC
21:9	3840 x 1600 (60 Hz)
	2560 x 1080 (60 Hz)
	2560 x 1080 (120 Hz)
32:9	3840 x 1080 (60 Hz)
	3840 x 1080 (120 Hz)

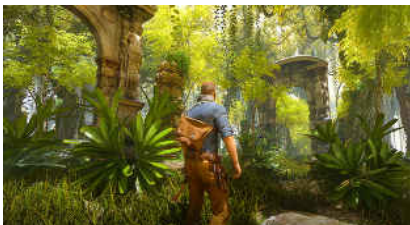
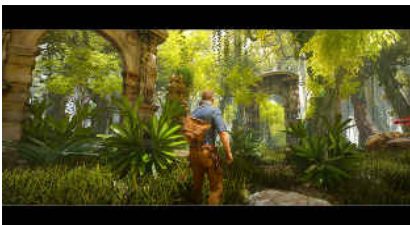
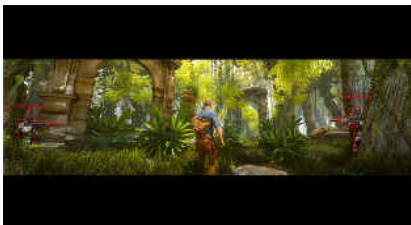
- ✎ The supportable resolutions may differ depending on the model or HDMI port connected to the PC.
- ✎ After setting the resolution, check if the PC's Window or Mac screen changes when you change the Screen Ratio on the **Game Bar** of your Product.
- ✎ This function may not be supported depending on the OS or device.

⚠ While you are playing a game, the screen ratio cannot be changed. Before running a game, first select the desired screen ratio on the Game Bar.

Troubleshooting of the game screen and audio problems

After changing the Screen Ratio on the **Game Bar**, if the game screen and sound are not output properly, try to solve the problems as shown below.

- Check to see if the game supports Ultra Wide or your PC supports the Ultra Wide resolution.
- Restart the game after exiting it.
- Select the same resolution as that of the **Game Bar**.
- When the Screen Ratio changes properly, the screen appears as shown below.

16:9	21:9	32:9
		

Viewing the broadcast

You can use convenient features while watching the broadcast.

Supported Functions for Viewing the broadcast

Use the functions that are available while watching the broadcast.

 The functions related to the broadcast and channel are available only in some apps or external devices.

Using Program Rating Lock

 >  [Settings](#) > [Broadcasting](#) > [Program Rating Lock Settings](#) or [Program Rating Lock](#)

This function is useful for controlling what programs children can watch on the Product based on their ratings. [Program Rating Lock Settings](#) does not, however, block programs originating from external sources, such as Blu-ray players, DVD players, or USB files.

Every time you access [Program Rating Lock Settings](#), you must enter the security PIN. You must also enter this PIN to watch a blocked program. The default PIN is "0000." To change the PIN, go to  >  [Settings](#) > [General](#) > [System Manager](#) > [Change PIN](#).

 [Program Rating Lock Settings](#) may not be supported depending on your input signal.

 For more information about how to set your password, refer to "[Setting up a password](#)."

 [Change PIN](#) may not be supported depending on the model or geographical area.

 For more information about the rating system of different countries, refer to "[Blocking programs based on their TV Rating](#)."

Watching blocked / restricted programs

To watch a blocked program, enter the PIN when requested.

When initially showing a restricted program or movie, the screen is blank because the [Program Rating Lock Settings](#) blocks it. Enter the PIN to unblock the program when a message appears requesting the code.

Restricting Viewing to Specific Channels

 >  [Settings](#) > [Broadcasting](#) > [Apply Channel Lock](#) [Try Now](#)

By selecting the menu, you can turn on or off the [Apply Channel Lock](#) function.

Lock specific channels to prevent children from watching adult content.

 To use this function, the PIN number is required.

Configuring advanced broadcasting settings

 >  [Settings](#) > [Broadcasting](#) > [Expert Settings](#) [Try Now](#)

Fine-tuning analog broadcasts

 >  [Settings](#) > [Broadcasting](#) > [Expert Settings](#) > [Fine Tune](#) [Try Now](#)

 This function is only available for analog broadcasts.

Choosing an appropriate video input color

 >  [Settings](#) > [Broadcasting](#) > [Expert Settings](#) > [Color System](#)

 This function is only available for analog broadcasts.

Configuring advanced broadcasting audio settings

 >  [Settings](#) > [Broadcasting](#) > [\(Expert Settings\)](#) > [Audio Options](#)

 The [Expert Settings](#) may not appear depending on the model or geographical area.

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

Configure your preferred audio options for viewing broadcasted content. [Audio Options](#) functions differently for analog and digital channels.

- [Preferred Language](#) or [Audio Language](#) or [Audio Language Settings](#)

This is the language you will hear while watching the broadcast if the language is included in the broadcast signal.

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

- [Audio Format](#)

You can change the audio format you want to hear.

 The supported audio format may differ with the broadcast program.

Setting the functions for the service provider

 >  [Settings](#) > [Broadcasting](#) > [Service Provider Settings](#)

You can configure the service provider-related settings.

- [Service Provider](#)

Turns on or off the service provider function.

- [About Service Provider](#)

Displays the current service provider and its information detail.

- [Open Service Provider Settings](#)

You can set available service providers.

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

Showing TVkey Interface menu

 >  [Settings](#) > [Broadcasting](#) > [Expert Settings](#) > [TVkey Interface](#)

You can use the following functions:

- [TVkey Menu](#): Show TVkey Interface menu.
- [Delete TV Service](#): Show the TVkey operator list to delete.

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

Checking digital channel signal info and strength

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Signal Information](#) [Try Now](#)

 This function is only available for digital channels.

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

Picture and Sound

You can change the settings for the picture and the sound according to your preference.

Using Intelligent Mode

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

 >  **Settings** > **General** > **Intelligent Mode Settings**

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

 Some models may not have embedded speakers.

- **Intelligent Mode**

 This function may not be available, depending on the installation method.

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

- **Adaptive Picture**

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

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

- **Active Voice Amplifier**

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

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

 This function is available only when the sound sensor of the Product is active and the sound output is set to **MICRO LED Speaker**, or the Samsung Soundbar interlinked with **Adaptive Picture** function is connected. The location of the sound sensor may vary depending on the model or geographical area.

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

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

– Adaptive Sound+

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

-  This function may not be supported depending on the model or geographical area.
-  This function can be used only when the sound sensor at the bottom of the Product is active and the sound output is set to [MICRO LED Speaker](#).
-  This function may not be supported by some modes or apps (e.g., [Ambient Mode](#), [Game Mode](#), and apps that control the Product sound).
-  While using this function, the Product does not save the data.

– Adaptive Volume

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

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

Adjusting the Picture Quality

Change the Picture Mode and adjust Expert Settings.

Choosing a picture mode

 >  **Settings** > **Picture** > **Picture Mode** 

You can select the **Picture Mode** that provides the best viewing experience.

 **Entertain** and **Graphic** are supported only when you change the external device name to PC in PC mode.

- **Dynamic**

Makes the picture brighter and clearer in bright viewing environments.

- **Standard**

Is the default mode suitable for general viewing environments.

- **Natural**

Reduces eye strain for a comfortable viewing experience.

- **Movie**

Is suitable for watching the broadcast or movies in a dark room.

- **FILMMAKER MODE**

You can watch the source content (e.g., movie) as it is. The image defined as **FILMMAKER MODE** automatically switches to **FILMMAKER MODE** while watching.

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

 **FILMMAKER MODE** may look darker than other picture modes.

 You can change **FILMMAKER MODE** to a different **Picture Mode**. However, the changed **Picture Mode** will be maintained even after watching the picture defined by **FILMMAKER MODE**.

 FILMMAKER MODE™ logo is a trademark of UHD Alliance, Inc.

Configuring advanced picture settings

 >  [Settings](#) > [Picture](#) > [Expert Settings](#) [Try Now](#)

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

- [Brightness](#) [Try Now](#)
- [Contrast](#) [Try Now](#)
- [Sharpness](#) [Try Now](#)
- [Color](#) [Try Now](#)
- [Tint \(G/R\)](#) [Try Now](#)
- [Apply Picture Settings](#) [Try Now](#)
- [Picture Clarity Settings](#) [Try Now](#)

 When [LED Clear Motion](#) is set to **On**, the screen appears darker than when it is **Off**. The [LED Clear Motion](#) function may not be supported depending on the model.

- [LED HDR](#)
- [Contrast Enhancer](#) [Try Now](#)
- [Film Mode](#) [Try Now](#)

 This function is only available when the input signal is Product or HDMI (1080i). The terminals and inputable signals may differ depending on the model.

- [Color Tone](#) [Try Now](#)
- [White Balance](#) [Try Now](#)
- [Gamma](#) [Try Now](#)
- [Shadow Detail](#) [Try Now](#)
- [RGB Only Mode](#) [Try Now](#)
- [Color Space Settings](#) [Try Now](#)
- [Reset Picture](#) [Try Now](#)

Setting the Viewing Environment for External Devices

You can optimize the Product for viewing specific video formats.

Playing games on an optimized screen

 >  **Settings** > **General** > **External Device Manager** > (**Game Mode Settings**) > **Game Mode**

You can set the **Game Mode** to optimize the Product screen for better gaming performance.

When you connect a video game console such as PlayStation and Xbox, **Game Mode** is set to **Auto**. When you connect the other game source such as PC, set the **Game Mode** to **On** through the above path. You can also set the **Game Mode** quickly from Home Screen ( >  **Settings** > up directional button > **Game Mode** .

-  The game mode is not available for normal broadcast viewing.
-  The screen may shake somewhat.
-  When you press and hold the  button on the Samsung Smart Remote for 1 second or more in **Game Mode**, the **Game Bar** appears. This function may not be supported depending on the model.
-  When **Game Mode** is enabled, **Picture Mode** and **Sound Mode** are switched to **Game** automatically. **Sound Mode** may not be automatically switched depending on the selected audio device on the **Sound Output** menu.
-  When **Game Mode** is set to **On**, some functions are not available.
-  To use a different external device on the same port, remove the game console connection, set **Game Mode** to **Off**, and then connect the external device to the port.
-  The **Game Mode** functions used for Nintendo Switch™ are subject to change without prior notice.

Setting the Game Mode details

 >  [Settings](#) > [General](#) > [External Device Manager](#) > [Game Mode Settings](#)

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

- [Surround Sound](#)

You can make your games more immersive by using intense, three-dimensional sound optimized for games.

- [Dynamic Black Equalizer](#)

You can easily detect items or hidden enemies lurking in dark corners by improving visibility and object details in dark scenes without washing out colors and contrast in brighter scenes.

- [Game Motion Plus Settings](#)

You can configure the Game Motion Plus settings.

 This function may not be supported depending on the model.

- [Game HDR](#)

In accordance with the HGiG (HDR Gaming Interest Group) standard, it sets the optimal image quality for HDR games according to the brightness information of the contents.

 When HDR sources are input in Game Mode, this menu is activated.

Using Cable Box IP Remote

 >  [Settings](#) > [General](#) > [External Device Manager](#) > [Cable Box IP Remote](#)

Set the cable box that supports IP control to be controlled with Samsung remote control.

 This function may not be supported depending on the model.

Using Input Signal Plus

 >  **Settings** > **General** > **External Device Manager** > **Input Signal Plus** [Try Now](#)

Expands the input signal range for HDMI connections.

-  When you select the HDMI connector you want to use for **Input Signal Plus**, and then press the Select button to set the **Input Signal Plus** function to **On**, the Product screen may flicker.
-  When you connect the Product to an external device that supports only the UHD 24 Hz or UHD 30 Hz frequency, or any FHD frequency, the **Input Signal Plus** function may not be available. In this case, turn off the **Input Signal Plus** function.
-  For more information about the supported Product resolutions, refer to "[Resolutions for Input Signals supported by Product \(except for MBOXACE\)](#)."
-  For more information about the supported MBOXACE resolutions, refer to "[Resolutions for Input Signals supported by MBOXACE](#)."

Using HDMI Black Level

 >  **Settings** > **General** > **External Device Manager** > **HDMI Black Level** [Try Now](#)

Use HDMI Black Level to adjust the black level to compensate for low black levels, low contrast, or dull colors generated by external devices connected to the Product via an HDMI cable.

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

Changing the Picture Size and Position

Change the picture size and position for your Product.

Changing the picture size settings

 >  **Settings** > **Picture** > **Picture Size Settings**

 These functions may not be available on **Samsung TV Plus** and some applications.

- **Picture Size** [Try Now](#)

You can change the size of the picture displayed on the Product screen to **16:9 Standard**, **Custom**, or **4:3**.

 Supported picture sizes differ with the input signal. For more information, refer to "[Picture sizes and input signals](#)."

- **Fit to Screen** [Try Now](#)

Fitting the picture to the screen.

 This function may not be supported depending on the **Picture Size** setting.

 This function may not be supported depending on the broadcast signals.

- **Zoom and Position** [Try Now](#)

Adjusting the picture size and/or position.

 This function is available only if **Picture Size** is set to **Custom**.

Configuring a Sound Mode and Expert Settings

Change the Sound Mode and adjust Expert Settings.

Choosing a sound mode

 >  **Settings** > **Sound** > **Sound Mode** [Try Now](#)

You can select the available sound mode that you prefer for a content type or your listening environment.

 When an external device is connected, **Sound Mode** may change accordingly.

 This function may not be supported depending on the model.

Configuring advanced sound settings

 >  **Settings** > **Sound** > **Expert Settings** [Try Now](#)

You can personalize the sound quality by adjusting the following settings.

- **Balance** [Try Now](#)

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

- **Equalizer** [Try Now](#)

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

 This function is not available when the **Adaptive Sound+** function is turned on.

 This function is not available when the **Sound Mode** function is set to **Adaptive Sound**, **Game**, or **Amplify**.

 The name and properties of this function may appear differently depending on the connected external device.

- **HDMI-eARC Mode**

You can connect an audio device that supports eARC via HDMI-eARC. Muting occurs temporarily during device connection.

- **Digital Output Audio Format** [Try Now](#)

Select the digital audio output format. If you select the Auto option, the audio device outputs automatically in a supported format.

If you select the **Pass-Through** option, audio data is output with no processing.

- **Digital Output Audio Delay** [Try Now](#)

 This feature is only available when the external device is connected via HDMI (eARC) and SPDIF (Sony Philips Digital Interface).

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

- **Dolby Atmos Compatibility** [Try Now](#)

You can set the Product to allow Dolby Digital+ with Atmos streams that are input from external devices.

Set to **On** if the audio device connected via HDMI (eARC) supports Dolby Atmos. The Product screen may flicker when this function is turned on or off.

 If this function is on, set **Digital Output Audio Format** to **Auto**.

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

- **Dolby Atmos**

Enable use of Dolby Digital+ with Atmos stream sent from an external device. Set surround sound effects of Dolby Atmos through the Product speakers.

Set to **On** if the audio device connected via HDMI (eARC) supports Dolby Atmos. The Product screen may flicker when this function is turned on or off.

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

- **Auto Volume** [Try Now](#)

Automatically adjusts the sound to a certain level when changing channels or switching to another external input.

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

- **Sound Feedback** [Try Now](#)

Plays the notification sound when manipulating a menu or selecting an option.

- **Reset Sound** [Try Now](#)

Using the Sound Support Functions

Configure the sound settings for your Product.

Selecting speakers

 >  **Settings** > **Sound** > **Sound Output** [Try Now](#)

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

-  External speakers may not be controlled with the Samsung Smart Remote. When an external speaker is enabled, some sound menus are not supported.
-  Some models may not have embedded speakers.
- Samsung Product supports the Q-Symphony function.
 -  This function may not be supported depending on the model or geographical area.
 - This function works synchronized with the Samsung Soundbar that supports Q-Symphony so that your Product speaker and Soundbar simultaneously output the sound for best surround effects.
 - When a Samsung Soundbar that supports Q-Symphony is connected, the menu name such as "Product + Soundbar" appears under **Sound Output** ( >  **Settings** > **Sound** > **Sound Output**). Select the menu.
Example) Product + [AV] Soundbar series name (HDMI) or Product + Optical
 -  It works based on the Codec supported by your Product. For more information about Codec information, refer to "[Read Before Playing Photo, Video, or Music Files.](#)"
 -  This function is supported only when connected via HDMI or optical cable.
 -  This function is available only in some Samsung Product and Soundbars released in 2021.
 -  Refer to the sound bar's user manual when connecting it to the Product.
- You can watch the center channel of the A/V receiver through the Product. First connect the speaker cable between the center channel of the A/V receiver and the Product.
 - When the optical cable is connected between the Product and the A/V receiver, select **MICRO LED + Optical** ( >  **Settings** > **Sound** > **Sound Output**).
 - When the HDMI (ARC, eARC) cable is connected between the Product and the A/V receiver, select **MICRO LED + AV Receiver** ( >  **Settings** > **Sound** > **Sound Output**).
 -  This function may not be supported depending on the model or geographical area.
 -  This feature may not be supported depending on the channel configuration of the sound source.
 -  Maximum wattage AV receiver that can be connected to Product is 150 W with 8-ohm.
 -  While watching the center channel of the A/V receiver through the Product, when you turn off the A/V receiver, noise may occur. Change the Sound Output to Product speaker, and then turn off the power.

Listening to the Product through Bluetooth devices

 >  [Settings](#) > [Sound](#) > [Sound Output](#) > [Bluetooth Speaker List](#)

You can connect Bluetooth audio devices to the Product. They must be paired using the Product's Bluetooth function. Refer to the user manual for your audio device such as Bluetooth speaker, sound bar, and headphones for detailed connection and usage.

-  If the Product fails to find a Bluetooth audio device, place the device closer to the Product, and then select [Refresh](#).
-  When you turn on a paired Bluetooth audio device, the Product detects it automatically, and then displays a pop-up window. Use this pop-up window to activate or deactivate the Bluetooth audio device.
-  The sound quality may be affected by the condition of the Bluetooth connection.
-  Before using a Bluetooth audio device, refer to "[Read Before Using Bluetooth Devices](#)."

Listening to the Product through a Samsung audio device that supports the Wi-Fi function

 >  [Settings](#) > [Sound](#) > [Wi-Fi Speaker Surround Setup](#) [Try Now](#)

If you've connected one or more Samsung wireless audio devices that support the Wi-Fi function to the Product, you can create an optimal sound set up by configuring the surround effect settings. You can select any of the surround sound configurations, with or without a sound bar.

A surround sound configuration can be used if all of the following conditions are met:

- Two or more Samsung wireless speakers of the same type must be connected to the same wireless network.
 - The Samsung audio devices that support the Wi-Fi function must be connected to the same wireless network as the Product.
-  For more information about how to connect and use a Samsung audio device that supports the Wi-Fi function, refer to its user manual.
 -  Surround sound configurations with a sound bar may not be supported depending on the product.
 -  If you activate the Screen Mirroring function while using Samsung audio devices that support the Wi-Fi function, the Wi-Fi connection is disconnected.
 -  Mismatched video and audio lip-syncing may occur depending on the device type.

System and Support

You can configure system and support settings, such as clock, timers, energy usage and software updates.

Using the Time Functions and the Timers

Set the current time and use the timer function.

 >  [Settings](#) > [General](#) > [System Manager](#) > [Time](#) [Try Now](#)

You can set the [Clock Set](#) manually. Once the [Clock Set](#) is set, you can view the current time on the Product anytime.

You must set the clock in the following cases:

- The power cable is disconnected and then connected.
- The Product is not connected to the Internet.

Adjusting the clock

 >  [Settings](#) > [General](#) > [System Manager](#) > [Time](#) > [Clock Set](#)

You can set the current date and time using your remote control.

Using the sleep timer

 >  [Settings](#) > [General](#) > [System Manager](#) > [Time](#) > [Sleep Timer](#)

You can use this function to automatically shut off the Product after a pre-set period of time. You can set the sleep timer for up to 180 minutes after which it will turn off the Product.

 This function may not be supported in some viewing modes.

Turning off the Product using the off timer

 >  [Settings](#) > [General](#) > [System Manager](#) > [Time](#) > [Off Timer](#)

You can set [Off Timer](#) to shut off the Product automatically at a specific time. [Off Timer](#) is only available if the [Clock Set](#) has been set.

 To use this function, first set the [Clock Set](#) ( >  [Settings](#) > [General](#) > [System Manager](#) > [Time](#) > [Clock Set](#)).

 This function may not be supported in some viewing modes.

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

Using the Power and Energy Saving Functions

Reduce the Product's energy consumption.

Reducing the energy consumption of the Product

 >  **Settings** > **General** > **Power and Energy Saving** [Try Now](#)

Reduce energy consumption by changing your power preferences and other energy-saving options.

- **Brightness Optimization** [Try Now](#)

Automatically adjust the picture brightness based on the ambient light level.

 This function is not available when the **Adaptive Picture** function is turned on.

 This function may not be available, depending on the installation method.

- **Minimum Brightness** [Try Now](#)

When **Brightness Optimization** is turned on, you can manually adjust the minimum brightness of the Product screen. This function acts only when the value is less than the setting in  >  **Settings** > **Picture** > **Expert Settings** > **Brightness**.

 This function is not available when the **Adaptive Picture** function is turned on.

- **Brightness Reduction** [Try Now](#)

Reduce power consumption by adjusting brightness settings.

 This function is not available when the **Adaptive Picture** function is turned on.

 This function may not be available, depending on the installation method.

- **Motion Lighting** [Try Now](#)

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

 This function is not available when the **Adaptive Picture** or **Game Mode** function is turned on.

- **Screen Saver** [Try Now](#)

Activate a screensaver when your Product displays a still image for two hours or more.

- **Auto Power Off** [Try Now](#)

Automatically turns off the Product to reduce unnecessary power consumption if the Product and the remote control are not used for the set period of time.

- **Available Remote Battery**

You can check the Samsung Smart Remote's remaining amount of the battery.

 This function may not be supported depending on the model.

Updating the Product's Software

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

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

 >  [Settings](#) > [Support](#) > [Software Update](#) [Try Now](#)

Updating through the Internet

 >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#) [Try Now](#)

 Updating from the Internet requires an active Internet connection.

Updating through a USB device

 >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#)

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

 To update using a USB device, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the Product will not be able to locate the update package.

Updating the Product automatically

 >  [Settings](#) > [Support](#) > [Software Update](#) > [Auto Update](#) [Try Now](#)

If the Product is connected to the Internet, you can have the Product's software update itself automatically while you are watching the broadcast. When the background update is completed, it is applied the next time the Product is turned on.

If you agree to the Smart Hub terms and conditions, [Auto Update](#) is set to **On** automatically. If you want this function disabled, use the Select button to turn it off.

 This function may take a longer time if another network function is running concurrently.

 This function requires an Internet connection.

Audio and Video Functions for the Visually or Hearing Impaired

You can configure the functions for the visually or hearing impaired.

Running the accessibility functions

 >  [Settings](#) > [General](#) > [Accessibility](#) [Try Now](#)

Running Accessibility Shortcuts

The [Accessibility Shortcuts](#) provide easy access to the accessibility functions. To display the [Accessibility Shortcuts](#), press and hold the $\pm$ (Volume) button for 2 seconds or more. You can easily turn on or turn off the functions, such as [Voice Guide](#), [Graphic Zoom](#), [Sign Language Zoom](#), [Learn Remote](#), [Learn Menu Screen](#), [Picture Off](#), [Graphic Zoom](#), [High Contrast](#), [Enlarge](#), [Grayscale](#), [Color Inversion](#), [Slow Button Repeat](#), etc.

 Even if the [Voice Guide](#) is set to [Off](#) or muted, the voice guide for [Accessibility Shortcuts](#) is enabled.

 The shortcut menus may not appear depending on the model or geographical area.

 The menu name may differ depending on the model.

Enabling voice guides for the visually impaired

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Voice Guide Settings](#) [Try Now](#)

You can activate voice guides that describe the menu options aloud to aid the visually impaired. To activate this function, set [Voice Guide](#) to [On](#). With [Voice Guide](#) on, the Product provides voice guides for channel change, volume adjust, information on current and upcoming programs, schedule viewing, other Product functions, and various content in the [Internet](#), and in [Search](#).

You can go to [Voice Guide](#), and then press the Select button to turn the function on or off.

 The [Voice Guide](#) is provided in the language that is specified on the Product [Language](#). However, some languages are not supported by [Voice Guide](#) even though they are listed in the Product [Language](#). [English](#) is always supported.

 For more information about the Product [Language](#) settings, refer to "[Changing the menu language](#)."

Changing the volume, speed, pitch, and the The Wall background volume of the Voice Guide

You can configure the [Volume](#), [Speed](#), [Pitch](#), and the [The Wall Background Volume](#) of the voice guide.

The Product screen is turned off but audio continues

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Picture Off](#)

Turn off the Product screen and provide only sound to reduce overall power consumption. When you press a button on the remote control other than Volume and Power while the screen is off, the Product screen turns back on.

White text on black background (high contrast)

 >  [Settings](#) > [General](#) > [Accessibility](#) > [High Contrast](#) [Try Now](#)

You can change Smart Hub and setting menu screens to white text on a black background and change the transparent Product menus to opaque automatically so that text can be more easily read.

 If [High Contrast](#) is on, some [Accessibility](#) menus are not available.

Setting the screen to black and white

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Grayscale](#) [Try Now](#)

You can change the color of the Product screen to black and white to sharpen blurred edges caused by colors.

 If [Grayscale](#) is on, some [Accessibility](#) menus are not available.

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

Magnifying the screen

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Graphic Zoom](#)

You can zoom in any image or text to magnify it. You can adjust the magnification ratio or move the enlarged screen to another position.

Inverting the screen color

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Color Inversion](#) [Try Now](#)

You can invert the colors of the text and background for the setting menus displayed on the Product screen to make it easier to read them.

 If [Color Inversion](#) is on, some [Accessibility](#) menus are not available.

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

Enlarging the font (for the visually impaired)

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Enlarge](#) [Try Now](#)

You can enlarge the size of the font on the screen. To activate, set [Enlarge](#) to [On](#).

Learning about the remote control (for the visually impaired)

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Learn Remote](#) [Try Now](#)

This function helps individuals with a visual impairment to learn the positions of the buttons on the remote control. When this function is activated, you can press a button on the remote control and the Product will tell you its name. Press the  button twice to exit [Learn Remote](#).

Learning about the Product menu

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Learn Menu Screen](#) [Try Now](#)

Learn the menus on the Product screen. Once enabled, your Product will tell you the structure and features of the menus you select.

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

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Multi-output Audio](#)

You can turn on both the Product speaker and Bluetooth headphone at the same time. When this function is active, you can set the volume of the Bluetooth headphone higher than the volume of the Product speaker.

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

 For more information, refer to "[Listening to the Product through Bluetooth devices](#)."

Enlarging the sign language screen for the hearing impaired

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Sign Language Zoom Settings](#) [Try Now](#)

You can zoom in the sign language screen when the program you are watching provides it. First, set [Sign Language Zoom](#) to [On](#), and then select [Edit Sign Language Zoom](#) to change the position and magnification of the sign language screen.

Configuring the repeat settings for remote control buttons

 >  [Settings](#) > [General](#) > [Accessibility](#) > [Remote Button Repeat Settings](#) [Try Now](#)

You can configure the operation speed of the remote control buttons so that they slow down when you continually press and hold them. First, set [Slow Button Repeat](#) to [On](#), and then adjust the operation speed in [Repeat Interval](#).

App for the Visually Impaired (SeeColors App)

You can download [SeeColors](#) app in  > [Apps](#).

This application helps color blind people feel rich colors on Product through a simple self-check. Through self-check, colors are changed to be suitable so that each person can experience a richer view of colors.

 When the [SeeColors](#) app is run, specific menus are disabled.

 This function may not be supported depending on the model.

Using Voice Assistants on the Product

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

Select the Voice Assistant

 >  **Settings** > **General** > **Voice** > **Voice Assistant**

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

-  To use this function, the Product must be connected to the Internet.
-  This function may not be supported depending on the model or geographical area.
-  **Voice Assistant** only supports some languages, and the supported functions may differ depending on the geographical area.
-  The **Voice Wake-up** function may not be supported depending on the model, **Voice Assistant** or geographical area.
- **Bixby / Amazon Alexa**
 -  To use the **Voice Assistant**, follow the instructions on the Product screen to enable the selected **Voice Assistant**.
 -  To change the settings for **Voice Assistant**, run the Settings menu under each **Voice Assistant** ( >  **Settings** > **General** > **Voice** > **Voice Assistant**).
 -  To enable the Settings menus for each **Voice Assistant**, log in each **Voice Assistant**.
 -  For an example of Voice command, see the Settings menus for each **Voice Assistant**.

Using Other Functions

You can view other functions.

Changing the menu language

 >  [Settings](#) > [General](#) > [System Manager](#) > [Language](#) [Try Now](#)

Setting up a password

 >  [Settings](#) > [General](#) > [System Manager](#) > [Change PIN](#) [Try Now](#)

The PIN input window appears. Enter a PIN. Enter it again to confirm it. The default PIN is "0000."

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

 If you forget your PIN, you can reset it with your remote control. With the Product turned on, press the following buttons on the remote control in the order shown to reset the PIN to "0000."

Press **+/-** (Volume) button. > Volume Up >  > Volume Down >  > Volume Up > .

Enabling the AV Color System

 >  [Settings](#) > [General](#) > [System Manager](#) > [AV Color System](#)

Normally the Product can receive image and sound with good quality when the [AV Color System](#) mode set to [Auto](#). This mode detects the signal color system automatically. In case of some signal reception with color unsatisfactory, select the [AV Color System](#) mode to [PAL-M](#), [PAL-N](#) or [NTSC](#).

 Available only in [AV](#) input mode.

Selecting Usage or Retail Mode

 >  [Settings](#) > [General](#) > [System Manager](#) > [Usage Mode](#) [Try Now](#)

You can set the Product for retail environments by setting [Usage Mode](#) to [Retail Mode](#).

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

 For all other uses, select [Home Mode](#).

 Use [Retail Mode](#) only in a store. With [Retail Mode](#), some functions are disabled, and the Product settings automatically reset after a preset amount of time.

Managing External Devices

 >  [Settings](#) > [General](#) > [External Device Manager](#) > [Device Connect Manager](#) [Try Now](#)

When you connect external devices, such as mobile devices or tablets connected to the same network as the Product so you can share content, you can view the list of allowed devices and connected devices.

- [Access Notification](#)

Set whether to display a notification when an external device such as a mobile device or tablet attempts to connect to the Product.

- [Device List](#)

Manage a list of external devices registered to the Product.

Using AirPlay

 >  [Settings](#) > [General](#) > [Apple AirPlay Settings](#)

You can use AirPlay to view content from your iPhone, iPad, or Mac on the Product screen.

 This function may not be supported depending on the model.

Restoring the Product to the factory settings

 >  [Settings](#) > [General](#) > [Reset](#) [Try Now](#)

Running Data Service Automatically

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

 >  [Settings](#) > [Broadcasting](#) > [Expert Settings](#) > [Auto Run Data Service](#)

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 color button.

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

 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.

Precautions and Notes

You can get instructions and information that you must read after installation.

Read Before Using Apps

Read this information before using Apps.

- If you want to download new apps using [Apps](#), first sign in to your Samsung account.
- Due to the product characteristics featured on Samsung Smart Hub, as well as limitations in available content, certain features, applications, and services may not be available on all devices or in all territories. Visit <https://www.samsung.com> for more information on specific device information and content availability. Services and content availability are subject to change without prior notice.
- Samsung Electronics takes no legal responsibility whatsoever for any interruption of app services caused by the service provider for any reason.
- Application services may be provided in English only and available content may differ with the geographical area.
- For more information about applications, visit the applicable service provider's website.
- An unstable 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 Product.
- 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 Internet Function

Read this information before using the Internet function.

- File download is not supported.
- The **Internet** function may not be able to access certain websites, including websites operated by certain companies.
- The Product does not support playback of flash videos.
- E-commerce for online purchases is not supported.
- ActiveX is not supported.
- Only a limited number of fonts are supported. Certain symbols and characters may not be displayed properly.
- The response to remote commands and the resulting on-screen display may be delayed while a web page is loading.
- Loading a web page may be delayed or suspended completely depending on the status of the participating systems.
- Copy and paste operations are not supported.
- When composing an email or a simple message, certain functions such as the font size and color selection may not be available.
- There is a limit to the number of bookmarks and the size of the log file that can be saved.
- The number of windows that can be opened concurrently is limited.
- Web browsing speed will differ with the network environment.
- Browsing history is saved from latest to oldest, with the oldest entries being overwritten first.
- Depending on the types of video/audio codecs supported, you may not be able to play certain HTML5 video and audio files.
- Video sources from PC-optimized streaming service providers may not play properly on our proprietary **Internet** browser.

Read before setting up a wireless Internet connection

Precautions for wireless Internet

- This Product supports the IEEE 802.11 a /b /g /n /ac communication protocols. Video files stored on a device connected to the Product via a Home Network may not play back smoothly.
 Some of the IEEE 802.11 communication protocols may not be supported depending on the model or geographical area.
- To use wireless Internet, the Product must be connected to a wireless access point or modem. If the wireless access point supports DHCP, the Product can use a DHCP or static IP address to connect to the wireless network.
- Select a channel that is not currently being used by the wireless access point. If the channel set is currently being used by the wireless access point to communicate with another device, the result is usually interference 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 access point.

Wireless security protocols

The Product only supports the following wireless network security protocols. The Product cannot connect to non-certified wireless access point.

- Authentication Modes: WEP, WPAPSK, WPA2PSK
- Encryption Types: WEP, TKIP, AES

In compliance with the Wi-Fi certification specifications, Samsung Product do not support WEP or TKIP security encryption in networks running in the 802.11n mode. If the wireless access point supports WPS (Wi-Fi Protected Setup), you can connect the Product to your network using PBC (Push Button Configuration) or a PIN (Personal Identification Number). WPS automatically configures the SSID and WPA key settings.

Read Before Playing Photo, Video, or Music Files

Read this information before playing media content.

Limitations to the use of photo, video, and music files [Try Now](#)

- The Product supports Mass Storage Class (MSC) USB devices only. MSC is a class designation for mass storage devices. Types of MSC devices include external hard drives, flash card readers, and digital cameras. (USB hubs are not supported.) These kinds of devices must be connected directly to the USB port. The Product may not be able to recognize a USB device or read the files on the device if it is connected with a USB extension cable. Do not disconnect USB devices while they are transferring files.
- When connecting an external hard drive, use the USB (HDD 5V 1A) port. We recommend that you use an external hard drive with its own power adapter.

 USB (HDD 5V 1A) port is supported by some models.

- Certain digital cameras and audio devices may not be compatible with the Product.
- If there are multiple USB devices connected to the Product, the Product might not be able to recognize some or all the devices. USB devices that use high-power input should be connect to the USB (HDD 5V 1A) port.

 USB (HDD 5V 1A) port is supported by some models.

- The Product supports the FAT, exFAT, and NTFS file systems.
- In the media contents list, the Product can display up to 1,000 files per folder. If the USB device contains more than 8,000 files and folders, however, some files and folders might not be accessible.
- Certain files, depending on how they are encoded, may not play on the Product.
- Certain files are not supported on all models.
- The DivX and DTS codecs are not supported by the Samsung Product models released in 2021.

Supported subtitles

Subtitle formats

Name	Format
MPEG-4 Timed text	.txt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
SMPTE-TT Text	.xml

Video formats with subtitles

Name	Container
Xsub	AVI
SubStation Alpha	MKV
Advanced SubStation Alpha	MKV
SubRip	MKV
VobSub	MKV
MPEG-4 Timed text	MP4
TTML in smooth streaming	MP4
SMPTE-TT TEXT	MP4
SMPTE-TT PNG	MP4

Supported image formats and resolutions

File extension	Format	Resolution
*.jpg *.jpeg	JPEG	15360 x 9024
*.png	PNG	4096 x 4096
*.bmp	BMP	4096 x 4096
*.mpo	MPO	15360 x 8640
*.heic	HEIF	12000 x 9000

 The MPO format is supported partly.

 HEIF supports only the single image of grid type (grid) and its minimum resolution must be at least 512 pixels in width or height.

Supported music formats and codecs

File extension	Format	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Supports up to 16/24 Bit, 48/96/192 kHz, 5.1 channel
*.ogg	OGG	Vorbis	Supports up to 2 channels
*.wma	WMA	WMA	WMA is supported up to 10 Pro 5.1 channels. WMA lossless audio is not supported.
*.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

File format	Container	Video codecs	Resolution	Frame rate (fps)	Bitrate (Mbps)	Audio codecs
*.avi *.mkv *.asf *.wmv *.mp4 *.mov *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.flv *.vob *.svi *.m2ts *.mts	AVI MKV ASF MP4 3GP MOV FLV VRO VOB PS TS SVAF	H.264 BP/MP/HP HEVC (H.265 - Main, Main10) Motion JPEG MVC MPEG4 SP/ASP Window Media Video v9 (VC1) MPEG2 MPEG1 Microsoft MPEG-4 v1, v2, v3 Window Media Video v7 (WMV1), v8 (WMV2) H.263 Sorrenson VP6 AV1	3840 x 2160 7680 x 4320 3840 x 2160 1920 x 1080 7680 x 4320	3840 x 2160: 60 1920 x 1080: 120 7680 x 4320: 60 3840 x 2160: 120 30 60 30 7680 x 4320: 60 3840 x 2160: 120	60 100 80 20 80	Dolby Digital LPCM ADPCM(IMA, MS) AAC HE-AAC WMA Dolby Digital+ MPEG(MP3) AC-4 G.711(A-Law, μ -Law) OPUS
*.webm	WebM	VP8 VP9 (Profile 0, profile 2 supported) AV1	1920 x 1080 3840 x 2160 7680 x 4320	60 60 7680 x 4320: 60 3840 x 2160: 120	20 80 80	Vorbis
*.rmvb	RMVB	RV8/9/10 (RV30/40)	1920 x 1080	60	20	RealAudio 6

 Because the specifications are based on the current 8K connectivity and decoding standards, future connectivity, broadcasting, and decoding standards may not be supported. Upgrading for meeting future standards may require purchase of additional devices.

 Some third-party standards may not be supported.

Other restrictions

- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the Product 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 Product.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The MVC codec is supported partly.

Video decoders

- H.264 UHD is supported up to Level 5.1, and H.264 FHD is supported up to Level 4.2 (Product does not support FMO / ASO / RS).
- HEVC UHD is supported up to Level 5.2, and HEVC FHD is supported up to Level 4.1.
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.

Audio decoders

- WMA is supported up to 10 Pro 5.1 channels, M2 profile.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB/WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital+ is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.

Read After Installing the Product

Read this information after installing the Product.

Picture sizes and input signals

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

Input signal	Picture size
Digital channel (720p)	16:9 Standard, Custom, 4:3
Digital channel (1080i, 1080p)	16:9 Standard, Custom, 4:3
* Digital channel (3840 x 2160p @ 24/30 Hz)	16:9 Standard, Custom
* Digital channel (3840 x 2160p @ 50/60 Hz)	16:9 Standard, Custom
* Digital channel (4096 x 2160p)	16:9 Standard, Custom
HDMI (720p)	16:9 Standard, Custom, 4:3
* HDMI (1080i, 1080p)	16:9 Standard, Custom, 4:3
* HDMI (3840 x 2160p)	16:9 Standard, Custom
* HDMI (4096 x 2160p)	16:9 Standard, Custom
*HDMI (7680 x 4320p)	16:9 Standard, Custom
USB (720p)	16:9 Standard, Custom, 4:3
USB (1080i/p @ 60 Hz)	16:9 Standard, Custom, 4:3
* USB (3840 x 2160p @ 24/30 Hz)	16:9 Standard, Custom
* USB (3840 x 2160p @ 60 Hz) * USB (4096 x 2160p @ 24/30/60 Hz)	16:9 Standard, Custom
*USB (7680 x 4320p @ 24/30/60 Hz)	16:9 Standard, Custom

 *: This input signal may differ depending on the model and geographical area.

 The input ports for external devices may differ depending on the model and geographical area.

Installing an anti-theft lock

An anti-theft lock is a physical device that can be used to protect the Product against theft. Look for the lock slot on the back of the Product. 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 Product's lock slot. The lock is sold separately. The method of using an anti-theft lock may differ for each model. Refer to the lock's user manual for more information.

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

Resolutions for Input Signals supported by Product (except for MBOXACE)

Check the resolutions for input signals supported by Product.

 This function may not be supported depending on the model.

 The resolution may not be supported depending on the model.

If Input Signal Plus is set to Off

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	-	-	-	0

If Input Signal Plus is set to On

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

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	0	0	0	0
	10 bit	*0	*0	0	0
120	8 bit	*0	*0	*0	0
	10 bit	*0	*0	*0	*0

 *: These specifications are supported for HDMI 6 port.

- Resolution: 7680 x 4320p

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
24 / 30 / 50 / 60	8 bit	*0	*0	*0	*0
	10 bit	*0	*0	*0	*0

 *: These specifications are supported for HDMI 6 port.

Resolutions for Input Signals supported by MBOXACE

Check the resolutions for input signals supported by MBOXACE.

 The resolution may not be supported depending on the model.

If Input Signal Plus is set to Off

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	-	-	-	0

If Input Signal Plus is set to On

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

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
50 / 60	8 bit	0	0	0	0
	10 bit	*0	*0	0	0
120	8 bit	*0	*0	*0	0
	10 bit	*0	*0	*0	*0

 *: These specifications are supported for HDMI 4 port.

- Resolution: 7680 x 4320p

Frame rate (fps)	Color Depth / Chroma Sampling	RGB 4:4:4	YCbCr 4:4:4	YCbCr 4:2:2	YCbCr 4:2:0
24 / 30 / 50 / 60	8 bit	*0	*0	*0	*0
	10 bit	*0	*0	*0	*0

 *: These specifications are supported for HDMI 4 port.

Supported Resolutions for FreeSync (VRR) (except for MBOXACE)

[Check the supported resolutions for the FreeSync \(VRR\) signal.](#)

When **Game Mode** is set to **On** or **Auto**, the FreeSync (**VRR**) function is activated.

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

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
1920 x 1080	120 Hz	135.000	120.000	297.000	progressive
2560 x 1440	120 Hz	150.000	120.000	495.000	progressive
3840 x 2160	120 Hz	270.000	120.000	1188.000	progressive
4096 x 2160	120 Hz	270.000	120.000	1188.000	progressive
* 7680 x 4320	60 Hz	264.000	60.000	2376.000	progressive

 *: The resolution may not be supported depending on the model.

Supported Resolutions for Wide Screen

[Check the supported resolutions for Wide Screen.](#)

When the computer is connected and **Game Mode** is set to **On** or **Auto**, the wide screen (21:9 or 32:9) is activated on **Game Bar**. When you press and hold the  button in Game Mode, Game Bar runs.

 This function may not be supported depending on the model.

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	SCAN
3840 x 1600 (21:9)	60 Hz	99.419	60.000	521.750	progressive
2560 x 1080 (21:9)	60 Hz	66.000	60.000	198.000	progressive
*2560 x 1080 (21:9)	120 Hz	131.748	120.000	347.810	progressive
3840 x 1080 (32:9)	60 Hz	66.625	60.000	266.500	progressive
*3840 x 1080 (32:9)	120 Hz	137.250	120.000	549.000	progressive

 *: The resolution may not be supported depending on the model.

 When the screen size is not changed even in Wide Screen, set the resolution in the external device.

 Wide Screen is available in an external device that supports the resolution of 21:9 or 32:9. First set the resolution to 21:9 or 32:9 before running a game.

 Wide Screen may be unavailable in MacBook.

 In case of a gaming device, the function is unavailable even if the external device name has been changed to PC.

Read Before Connecting a Computer (Supported Resolutions)

Check the resolutions supported for PC input signals.

When you connect your Product to a computer, set the computer's video card to one of the standard resolutions listed in the tables below. The Product will automatically adjust to the resolution you choose. Note that the optimal and recommended resolutions are 3840 x 2160 @ 60 Hz. Choosing a resolution not included in the tables can result in a blank or flickering screen or can turn on only the receiver of the remote control. Refer to the user manual of your graphics card for compatible resolutions.

 The native resolutions are 3840 x 2160 @ 60 Hz with the **Input Signal Plus** set to **On**. The native resolution is 3840 x 2160 @ 30 Hz with the **Input Signal Plus** set to **Off**.

IBM

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
720 x 400	70 Hz	31.469	70.087	28.322	- / +

MAC

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
640 x 480	67 Hz	35.000	66.667	30.240	- / -
832 x 624	75 Hz	49.726	74.551	57.284	- / -
1152 x 870	75 Hz	68.681	75.062	100.000	- / -

VESA DMT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
640 x 480	60 Hz	31.469	59.940	25.175	- / -
640 x 480	72 Hz	37.861	72.809	31.500	- / -
640 x 480	75 Hz	37.500	75.000	31.500	- / -
800 x 600	60 Hz	37.879	60.317	40.000	+ / +
800 x 600	72 Hz	48.077	72.188	50.000	+ / +
800 x 600	75 Hz	46.875	75.000	49.500	+ / +
1024 x 768	60 Hz	48.363	60.004	65.000	- / -
1024 x 768	70 Hz	56.476	70.069	75.000	- / -
1024 x 768	75 Hz	60.023	75.029	78.750	+ / +
1152 x 864	75 Hz	67.500	75.000	108.000	+ / +
1280 x 720	60 Hz	45.000	60.000	74.250	+ / +
1280 x 800	60 Hz	49.702	59.810	83.500	- / +
1280 x 1024	60 Hz	63.981	60.020	108.000	+ / +
1280 x 1024	75 Hz	79.976	75.025	135.000	+ / +
1440 x 900	60 Hz	55.935	59.887	106.500	- / +
1600 x 900	60 Hz	60.000	60.000	108.000	+ / +
1680 x 1050	60 Hz	65.290	59.954	146.250	- / +
1920 x 1080	60 Hz	67.500	60.000	148.500	+ / +

VESA CVT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
2560 x 1440	60 Hz	88.787	59.951	241.500	+ / -
*2560 x 1440	120 Hz	192.996	119.998	497.750	+ / -

 *: The resolution may not be supported depending on the model.

 2560 x 1440 @ 60 Hz resolution is not supported in [Game Mode](#). (except for MBOXACE)

CTA-861

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
1920 x 1080i	50 Hz	28.125	50.000	74.250	+ / +
1920 x 1080i	60 Hz	33.750	60.000	74.250	+ / +
*1920 x 1080	100 Hz	112.500	100.000	297.000	+ / +
*1920 x 1080	120 Hz	135.000	120.003	297.000	+ / +
3840 x 2160	30 Hz	67.500	30.000	297.000	- / -
*3840 x 2160	60 Hz	135.000	60.000	594.000	- / -
*3840 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*3840 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
4096 x 2160	24 Hz	54.000	24.000	297.000	+ / +
4096 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*4096 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*4096 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*4096 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*4096 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
*7680 x 4320	24 Hz	108.000	24.000	1188.000	+ / +
*7680 x 4320	30 Hz	132.000	30.000	1188.000	+ / +
*7680 x 4320	50 Hz	220.000	50.000	2376.000	+ / +
*7680 x 4320	60 Hz	264.000	60.000	2376.000	+ / +

 *: The resolution may not be supported depending on the model.

Supported Resolutions for Video Signals

Check the resolutions supported for video signals.

CTA-861

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
720 (1440) x 576i	50 Hz	15.625	50.000	27.000	- / -
720 (1440) x 480i	60 Hz	15.734	59.940	27.000	- / -
720 x 576	50 Hz	31.250	50.000	27.000	- / -
720 x 480	60 Hz	31.469	59.940	27.000	- / -
1280 x 720	50 Hz	37.500	50.000	74.250	+ / +
1280 x 720	60 Hz	45.000	60.000	74.250	+ / +
1920 x 1080i	50 Hz	28.125	50.000	74.250	+ / +
1920 x 1080i	60 Hz	33.750	60.000	74.250	+ / +
1920 x 1080	24 Hz	27.000	24.000	74.250	+ / +
1920 x 1080	25 Hz	28.125	25.000	74.250	+ / +
1920 x 1080	30 Hz	33.750	30.000	74.250	+ / +
1920 x 1080	50 Hz	56.250	50.000	148.500	+ / +
1920 x 1080	60 Hz	67.500	60.000	148.500	+ / +
*1920 x 1080	100 Hz	112.500	100.000	297.000	+ / +
*1920 x 1080	120 Hz	135.000	120.003	297.000	+ / +
3840 x 2160	24 Hz	54.000	24.000	297.000	+ / +
3840 x 2160	25 Hz	56.250	25.000	297.000	+ / +
3840 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*3840 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*3840 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*3840 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*3840 x 2160	120 Hz	270.000	120.000	1188.000	+ / +

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
4096 x 2160	24 Hz	54.000	24.000	297.000	+ / +
4096 x 2160	30 Hz	67.500	30.000	297.000	+ / +
*4096 x 2160	50 Hz	112.500	50.000	594.000	+ / +
*4096 x 2160	60 Hz	135.000	60.000	594.000	+ / +
*4096 x 2160	100 Hz	225.000	100.000	1188.000	+ / +
*4096 x 2160	120 Hz	270.000	120.000	1188.000	+ / +
*7680 x 4320	24 Hz	108.000	24.000	1188.000	+ / +
*7680 x 4320	30 Hz	132.000	30.000	1188.000	+ / +
*7680 x 4320	50 Hz	220.000	50.000	2376.000	+ / +
*7680 x 4320	60 Hz	264.000	60.000	2376.000	+ / +

 *: The resolution may not be supported depending on the model.

VESA CVT

Resolution (Dots x lines)	Display format	Horizontal frequency (KHz)	Vertical frequency (Hz)	Clock frequency (MHz)	Polarity (horizontal / vertical)
2560 x 1440	60 Hz	88.787	59.951	241.500	+ / -
2560 x 1440	120 Hz	192.996	119.998	497.750	+ / -

 The resolution may not be supported depending on the model.

Read Before Using Bluetooth Devices

Read this information before using a Bluetooth device.

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

Restrictions on using Bluetooth

- You can't use Bluetooth devices and the [Wi-Fi Speaker Surround Setup](#) feature simultaneously.
- Compatibility issues may occur, depending on the Bluetooth device (A Mobile exclusive headphone may not be available, depending on the environment).
- Lip-sync errors may occur.
- The Product and Bluetooth device may disconnect, depending on the distance between them.
- A Bluetooth device may hum or malfunction:
 - When a part of your body is in contact with the receiving/transmitting system of the Bluetooth device or the Product.
 - When the device is subject to electrical variation from obstructions caused by a wall, corner, or office partitioning.
 - When the device is exposed to electrical interference from same frequency-band devices including medical equipment, microwave ovens, and wireless LANs.
- If the problem persists, we recommend you use a wired connection.
 - DIGITAL AUDIO OUT (OPTICAL) port
 - HDMI (eARC) port

Blocking programs based on their TV Rating

Read this information before viewing a blocking program.

To block content in [TV Rating](#), select a rating category to lock. All programs at that level and higher are blocked and require the PIN to watch. To unblock a category, select the lock icon. To unblock all the categories in a row, select the lock under [ALL](#).

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

Categories on the left:

- [TV-Y](#): Young children.
- [TV-Y7](#): Children 7 and over.
- [TV-G](#): General audience.
- [TV-PG](#): Parental guidance.
- [TV-14](#): Viewers 14 and over.
- [TV-MA](#): Mature audience.

Categories on the top:

- [ALL](#): Lock all TV ratings.
- [FV](#): Fantasy violence.
- [V](#): Violence.
- [S](#): Sexual situations.
- [L](#): Adult language.
- [D](#): Sexually suggestive dialog.

Blocking movies based on their Motion Picture Association of America (MPAA) rating

The [Movie Rating \(MPAA\)](#) system applies to all materials with supplied ratings in the U.S.A.

From the MPAA:

“The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.”

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- [G](#): General audience (no restrictions).
- [PG](#): Parental guidance suggested.
- [PG-13](#): Parents strongly cautioned.
- [R](#): Restricted. Children under 17 should be accompanied by an adult.
- [NC-17](#): No children under age 17.
- [X](#): Adults only.
- [NR](#): Not rated.

Blocking programs based on their Canadian English Rating

The [Canadian English Rating](#) system applies to all rated material viewed on English-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- [C](#): Programming intended for children under age 8.
- [C8+](#): Programming generally considered acceptable for children 8 years and over to watch on their own.
- [G](#): General programming, suitable for all audiences.
- [PG](#): Parental Guidance.
- [14+](#): Programming containing themes or content that may not be suitable for viewers under the age of 14.
- [18+](#): Adult programming.

Blocking programs based on their Canadian French Rating

The [Canadian French Rating](#) system applies to all rated material viewed on French-Canadian TV channels.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

- [G](#): General.
- [8 ans+](#): Programming acceptable for children 8 years and over to watch on their own.
- [13 ans+](#): Programming that may not be suitable for children under the age of 13.
- [16 ans+](#): Programming not suitable for children under the age of 16.
- [18 ans+](#): Programming restricted to adults.

Blocking Programs based on their Downloadable U.S. Rating

The [Downloadable U.S. Rating](#) system only applies to material originating from US DTV channels.

Parental restriction information is automatically downloaded while you watch DTV channels. This download may take several seconds. If the information is unavailable from the broadcasting station, the [Downloadable U.S. Rating](#) menu is deactivated.

Parental restriction levels differ with the broadcasting station. The default menu name and the [Downloadable U.S. Rating](#) name changes depending on the downloaded information.

Even when the on-screen display is set to another language, the [Downloadable U.S. Rating](#) menu appears only in English.

Select a lock beside one of the rating categories to block that category and all higher categories. To unblock a category, select the lock icon.

Licenses

Check the license information and trademarks applied in your Product.



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 This can be supported through a firmware update in future.

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



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Open Source License Notice

Open Source used in this product can be found on the following webpage (<https://opensource.samsung.com>).

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Troubleshooting

If you have a problem with your Product, you can access various solutions while using it. If your problem is not addressed in the Troubleshooting section, contact the Samsung Call Center.

Picture Issues

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

Testing the picture

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Picture Test](#) [Try Now](#)

Before you review the list of problems and solutions below, use [Picture Test](#) to determine if the problem is caused by the Product. [Picture Test](#) displays a high definition picture you can examine for flaws or faults.

The problem	Try this!
Flickering and Dimming	If your Product is flickering or dimming sporadically, you may need to disable some of the energy efficiency features. Disable Brightness Optimization, Brightness Reduction, Motion Lighting, or Contrast Enhancer.  These functions may not be available, depending on the installation method.  >  Settings > General > Power and Energy Saving > Brightness Optimization  >  Settings > General > Power and Energy Saving > Brightness Reduction  >  Settings > General > Power and Energy Saving > Motion Lighting  >  Settings > Picture > Expert Settings > Contrast Enhancer Run Picture Test. When the tested image quality is normal, check the signal of the connected device.  >  Settings > Support > Device Care > Self Diagnosis > Picture Test
Screen Color	If the color on your Product screen is not correct or the black and white colors are off, run Picture Test.  >  Settings > Support > Device Care > Self Diagnosis > Picture Test If the test results indicate that the problem is not caused by the Product, do the following: When using the One Connect Box, confirm that its video input connectors are connected to the correct external device video output connectors. For more information about how to connect an external device, run Connection Guide.  >  Source > Connection Guide

The problem	Try this!
Screen Brightness	If the screen appears too dim, try changing the settings under Reset Picture or disabling Brightness Optimization. •  >  Settings > Picture > Expert Settings > Reset Picture •  >  Settings > General > Power and Energy Saving > Brightness Optimization If the colors on your Product are correct but just a little too dark or bright, try adjusting the following settings first. •  >  Settings > Picture > Expert Settings > Contrast •  >  Settings > Picture > Expert Settings > Brightness •  >  Settings > Picture > Expert Settings > Sharpness •  >  Settings > Picture > Expert Settings > Color •  >  Settings > Picture > Expert Settings > Tint (G/R)
Blurring, or Juddering	If you notice blurring or juddering on the screen, use the Picture Clarity Settings function to resolve the issue. •  >  Settings > Picture > Expert Settings > Picture Clarity Settings
Unwanted Powering Off	If your Product appears to turn off by itself, try disabling some of the Product's energy efficiency functions. See if Sleep Timer has been enabled. The Sleep Timer automatically turns the Product off after a specified period of time. •  >  Settings > General > System Manager > Time > Sleep Timer If the Sleep Timer has not been enabled, see if Auto Power Off or Off Timer has been enabled and disable it. •  >  Settings > General > Power and Energy Saving > Auto Power Off •  >  Settings > General > System Manager > Time > Off Timer
Problems Powering On	If you are having problems powering on your Product, there are a number of things to check before calling the service department. Confirm that the Product's power cord is connected correctly at both ends and that the remote control is operating normally. If you have a cable box or satellite box, confirm that it is plugged in and turned on. Check the One Connect Cable between the Product and One Connect Box.
Unable to find a Channel	When using a broadcast receiver such as set-top box and IPTV, check the connection to the Product. •  >  Source > Connection Guide When the symptom persists, contact your service provider.

The problem	Try this!
The Product image does not look as good as it did in the store	Store displays are tuned to a digital UHD channel or HD channel. Change the output resolution of your devices, such as digital broadcast receiver, IPTV, and set-top box to UHD or HD. Be sure to use an HDMI cable to enjoy high quality videos.  >  Source > Connection Guide > Video Device > HDMI To connect the Product with your PC, make sure that your PC's graphic card supports UHD resolutions.  For more information about the supported Product resolutions, refer to "Resolutions for Input Signals supported by Product (except for MBOXACE)."  For more information about the supported Product resolutions, refer to "Resolutions for Input Signals supported by MBOXACE."  Make sure that the set-top box or cable box supports the content or broadcast for UHD and set the resolution. For more information, contact your service provider.  When using a Samsung TV Plus channel, check the network connection. When the network speed is slow, the app may not work or the image quality may be poor.
The picture is distorted	The compression of video content may cause picture distortions, especially in fast moving pictures from sports programs and action movies. If the signal reception is weak or poor, screen distortion may be visible but it is not a malfunction. Mobile phones used close to the Product (within 3.2 ft) may cause noise on analog and digital channels.
The color is wrong or missing	Check whether the cables are correctly connected to their ports. Incorrect or loose connections may cause color problems or a blank screen.
The color is poor or the picture is not bright enough	Go to Picture and then adjust the Picture Mode, Brightness, Sharpness, and Color settings.  >  Settings > Picture > Picture Mode  >  Settings > Picture > Expert Settings > Brightness  >  Settings > Picture > Expert Settings > Sharpness  >  Settings > Picture > Expert Settings > Color See if Brightness Reduction has been enabled.  >  Settings > General > Power and Energy Saving > Brightness Reduction Try resetting the picture.  >  Settings > Picture > Expert Settings > Reset Picture

The problem	Try this!
There is a dotted line on the edge of the screen	Change Picture Size to 16:9 Standard. •  >  Settings > Picture > Picture Size Settings Change the output resolution of your external device.
The picture is black and white	Check whether Grayscale is set to On. •  >  Settings > General > Accessibility > Grayscale
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 Product. Adjust the picture size options on your external device or set the Product to full screen. •  >  Settings > Picture > Picture Size Settings > Picture Size
The caption does not appear on the Product.	When an external device is connected via an HDMI cable, activate the caption function on the external device.
The HDR of the connected external device turns off	Expand the reception range of the corresponding HDMI input signal in Input Signal Plus. •  >  Settings > General > External Device Manager > Input Signal Plus

-  If the test picture does not appear or there is noise or distortion, the Product may have a problem. Contact Samsung's Call Center 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 Information](#) or refer to the external device's user manual.

Sound and Noise Issues

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

Testing the sound

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Sound Test](#) [Try Now](#)

If the Product plays the [Sound Test](#) melody without distortion, there may be a problem with an external device or the broadcast signal's strength.

The problem	Try this!
How can I connect an audio device to the Product?	The connection method may differ depending on the audio device, such as HDMI (eARC), Optical, Bluetooth, and Wi-Fi. For more information about how to connect an audio device, run Connection Guide.  >  Source > Connection Guide > Audio Device
There is no sound or the sound is too low at maximum volume.	Check the volume control of your Product, and then check the volume control of the external device (cable box or satellite box, DVD, Blu-ray, etc.) connected to your Product. Check the cable connection between an external device and the Product and then try cable connection again.
The picture is good but there is no sound.	Set Sound Output to MICRO LED Speaker.  >  Settings > Sound > Sound Output  Some models may not have embedded speakers. 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 Product is using an HDMI cable. To listen to computer sound, connect an external speaker to the computer's audio output connector. If your Product 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. With a set-top box or cable box, check the cable connection and reboot the external device. When the symptom persists, contact your service provider.
No sound is heard.	Check whether Digital Output Audio Format is set to Pass-Through. If you select the Pass-Through option to use an AV receiver that does not support Dolby Digital+, no sound is output with Dolby Digital+ content. It is recommended to set Digital Output Audio Format to Auto when the connected receiver supports only the limited audio formats.  >  Settings > Sound > Expert Settings > Digital Output Audio Format > Auto

The problem	Try this!
The speakers are making an odd sound.	Run Sound Test. • Home > Settings > Support > Device Care > Self Diagnosis > Sound Test Make sure that the audio cable is connected to the correct audio output connector on the external device. Check the Signal Information. Noise may be caused by a low signal level. • Home > Settings > Support > Device Care > Self Diagnosis > Signal Information
The sound is interrupted.	The sound may frequently be interrupted when a Bluetooth speaker is used. Make sure that the Bluetooth speaker and the wireless access point are on a straight line, and the Bluetooth speaker is placed as close as possible to the Product. To minimize interruptions, we recommend a wireless access point that uses a 5 GHz frequency. 5 GHz may not be available depending on the model. When the symptom persists, it is recommended to use wired connection such as HDMI eARC and Optical.
Whenever a function is used on the Product or the channel is changed, the Product voices the activity. The Product explains in voice-over the video scenes displayed on the screen.	Turn off the Voice Guide function in Voice Guide Settings. • Home > Settings > General > Accessibility > Voice Guide Settings > Voice Guide
The Product audio is not being played through the AV receiver.	Check the A/V receiver's power supply and its settings. • When connecting the optical cable between the Product and A/V receiver, make sure that the sound output is set Optical or MICRO LED + Optical on your Product. • In case of HDMI eARC connection, make sure that it is connected to the eARC dedicated HDMI port on your Product. However, the eARC can be used only when the A/V receiver supports the eARC feature.

The problem	Try this!
The sound is not heard clearly.	Change to an appropriate sound mode. •  >  Settings > Sound > Sound Mode When Intelligent Mode and Adaptive Sound+ are turned on, the sound effects are automatically adjusted to the surroundings. •  >  Settings > General > Intelligent Mode Settings > Intelligent Mode  This function may not be supported depending on the model.  This function may not be available, depending on the installation method. To optimize the sound depending on the surroundings, select Adaptive Sound+. •  >  Settings > General > Intelligent Mode Settings > Adaptive Sound+  This function may not be supported depending on the model.
The volume of the external device cannot be adjusted.	Check the cable connection between the Product and the external device. When connecting an external speaker such as home theater via HDMI, make sure it is connected to the HDMI (eARC) port on the Product. Make sure that the  >  Settings > General > External Device Manager > Anynet+ (HDMI-CEC) is active on your Product.
I want to turn off and on the Product and audio device at the same time.	When you connect the Samsung Soundbar to the Product via Bluetooth, the power turns off and on together. It may not be supported depending on the Samsung Soundbar model. When you connect an audio device that supports HDMI eARC to the HDMI (eARC) port on the Product, the power turns off and on together.

External Device Connectivity Issues

When the Product has difficulties connecting to external devices such as a PC, game console, or mobile device, these steps may help resolve the problem.

The problem	Try this!
The "Mode Not Supported" message appears.	Adjust the output resolution of the external device to a resolution supported by the Product.
The video is OK but there is no audio.	If you are using an HDMI connection, check the audio output setting on your PC. If you are using a DVI to HDMI cable, a separate audio cable is required. To listen to the computer sound, connect external speakers to the audio output connection of the computer.
I want to connect to a PC and mobile device via screen mirroring.	To wirelessly connect the Product to your PC, read the instructions at PC > Screen Sharing (Wireless) in Connection Guide, and then try to connect.  >  Source > Connection Guide > PC > Screen Sharing (Wireless) Confirm that the Product and your PC are connected to the same network. To wirelessly connect the Product to your mobile device, read the instructions at Smartphone > Screen Sharing (Smart View) in Connection Guide, and then try to connect.  >  Source > Connection Guide > Smartphone > Screen Sharing (Smart View) If the Product has difficulties connecting to your PC or mobile device due to surrounding radio interferences, change the frequency of the wireless access band, and then try to connect.
No screen appears when connecting the Product to an external device.	For more information about how to connect an external device, run Connection Guide.  >  Source > Connection Guide Make sure that the external device is connected securely and turned on. Move to Sources to switch to other input sources.  >  Source > Sources Using HDMI Troubleshooting, you can check the connection to HDMI cable and external devices (takes approximately 2 minutes).  >  Source > Connection Guide > Video Device > HDMI Troubleshooting When using a set-top box or cable box, check the broadcast signals or the network that is connected to the external device.

The problem	Try this!
The "No signal" or "Check Device Power" message appears.	When using a USB (type C) adapter, a gender changer that supports HDMI 2.0 (DP 1.2 or later) is recommended. If the message above appears, remove the gender changer from the source device and confirm that it is a compatible model. If the problem persists, please contact the gender changer manufacturer.  This function may not be supported depending on the model and geographical area.
I want to connect to a Bluetooth speaker.	For more information on how to connect a Bluetooth speaker, see Audio Device > Bluetooth in Connection Guide.  >  Source > Connection Guide > Audio Device > Bluetooth
The PC screen does not appear or it flickers.	When the PC screen does not appear or the PC is not recognized, check the power supply of the PC and then reconnect the HDMI cable between the PC and Product. When the symptom persists, check that the PC is in Sleep mode and then set Input Signal Plus to On.  >  Settings > General > External Device Manager > Input Signal Plus When the set resolution is not matched, it may cause a blank or flickering screen.  For the PC supported resolution, refer to "Read Before Connecting a Computer (Supported Resolutions)."

Network Issues

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

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Smart Hub Connection Test](#) [Try Now](#)

If the Product has trouble with network connection or Product services, check the Smart Hub connection status.

The problem	Try this!
Wireless network connection failed. Unable to connect to a wireless access point.	Make sure that no items that can generate electromagnetic interferences are placed between the Product and the wireless/wired access point. Check if the access point is turned on. If it is on, turn it off, wait 1 or 2 minutes, and then turn it on. Enter the correct password if required. If the wireless connection fails, connect the Product to the access point via a LAN cable. If the Product can connect to the Internet normally via the wired connection, there might be a problem with the access point. In this case, try using a different access point.
Wired network connection failed.	Check if the LAN cable is plugged in on both ends. If it is plugged in, check if the access point is turned on. If it is on, turn it off, wait 1 or 2 minutes, and then turn it on.
Auto IP configuration failed. Unable to connect to the network.	Check if the LAN cable is plugged in on both ends. If it is plugged in, check if the access point is turned on. If the access point is on, turn it off, wait 1 or 2 minutes, and then turn it on. Disconnect and then reconnect the power cable of the Product, or press and hold the power button for 3 seconds.
Connected to a local network, but not to the Internet.	1. Check if the Internet LAN cable is connected to the access point's external LAN port. 2. Check the DNS setting in IP Settings. –  >  Settings > General > Network > Network Status > IP Settings
Network setup is completed, but unable to connect to the Internet.	If the problem persists, contact your Internet service provider.

 Wired networks are not supported by some models.

Anynet+ (HDMI-CEC) Issues

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

The problem	Try this!
What is Anynet+?	You can use the Product's remote control to control external devices that support Anynet+ (HDMI-CEC) and that are connected to the Product via an HDMI cable. For example, if a connected external device supports Anynet+, you can have the connected device turn on or off when you turn the Product on or off.
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) and see if Anynet+ (HDMI-CEC) has been set to On. •  >  Settings > General > External Device Manager > Anynet+ (HDMI-CEC) Anynet+ may not function when some other functions are active, including Channel Search, Smart Hub, Initial Setup, etc. If you have disconnected and then reconnected the HDMI cable, scan for devices again or turn your Product off and on.
I want to start Anynet+. I also want the connected devices to turn on when the Product is turned on.	Move the focus to the Anynet+ device at  >  Source, press the up directional button to move to Anynet+ (HDMI-CEC), and then press the Select button. Check if the Anynet+ device is properly connected to the Product, and then select Anynet+ (HDMI-CEC) menu to see if Anynet+ (HDMI-CEC) is set to On. •  >  Settings > General > External Device Manager > Anynet+ (HDMI-CEC)
I want to exit Anynet+. It is inconvenient to turn on other devices because the Product also turns on. It is inconvenient because the connected devices (e.g. set-top box) turn off together.	To turn off the Anynet+ function of a device connected to the Product, turn off the Anynet+ (HDMI-CEC) function of the device. •  >  Settings > General > External Device Manager > Anynet+ (HDMI-CEC) When Anynet+ (HDMI-CEC) is turned off, the sound bar connected via the HDMI (eARC) port does not turn off and on together with the Product. To prevent a specific device connected to the Product from turning off automatically, turn off the HDMI-CEC function on a specific device connected to the Product.

The problem	Try this!
The message "Connecting to Anynet+ device..." or "Disconnecting from Anynet+ device" appears on the screen.	You cannot use the remote control when the Product is configuring Anynet+ or switching to the Product main screen. Use the remote control after the Product has completed the Anynet+ configuration or has switched to the Product main screen.
The Anynet+ device won't play.	You cannot use the play function when Reset is in progress.
The connected device is not displayed.	Check whether the device supports Anynet+. Anynet+ devices must be connected to the Product using an HDMI cable. Make sure the device is connected to your Product with an HDMI cable. Some HDMI cables may not support Anynet+. Check whether the HDMI cable is properly connected. Go to Anynet+ (HDMI-CEC) and see if Anynet+ (HDMI-CEC) has been set to On.  >  Settings > General > External Device Manager > Anynet+ (HDMI-CEC) Scan for Anynet+ devices again. 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.

Remote Control Issues

When the remote control isn't working, these steps may help resolve the problem.

The problem	Try this!
The remote control does not work.	The connection between the remote control and the Product may be lost. Point the Samsung Smart Remote at the front of the Product, and then press and hold the  and  buttons simultaneously for 3 seconds or more. Also, if the remote control does not work properly or its response is very slow, the battery might be low or dead. - Charge the remote control by using the USB port (C-type) on the bottom, or turn over the remote to expose the solar cell. You can check remaining battery of Samsung Smart Remote with solar cell in   >  Settings > General > Power and Energy Saving > Available Remote Battery. - If the remote control has batteries, replace them with new ones.
External devices cannot be operated with the Product remote control.	Check the cable connection between the Product and external devices. When the symptom persists, set it manually in  >  Source > Universal Remote.

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 a different language. How can I change the language?	Languages supported by an app may be different from the Product Language set in the menu. The ability to change the language depends on the app's provider.
The app does not work properly. Its image quality is poor.	Check the network connection. When the network speed is slow, the app may not work or its image quality may be poor. The services of your application are not provided by the Product but by the application service provider. Refer to the Help section on the application service provider's website.
The Smart Hub home screen keeps appearing whenever you turn on the Product.	Turn off the Autorun Smart Hub function in Smart Features . •  >  Settings > General > Smart Features > Autorun Smart Hub

Media Files

When files don't play, this may help resolve the problem.

The problem	Try this!
Some files are interrupted during playback.	This problem may occur with unsupported files or high-bitrate files. Most files can be played back, but some files may not play smoothly.
Some files can't be played.	Some files that use an unsupported codec may not be played back. Make sure that the codec is supported by the Product. For more information, refer to " Read Before Playing Photo, Video, or Music Files ."

Voice Assistant Issues

When the Voice Assistant isn't working, these steps may help resolve the problem.

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

The problem	Try this!
The voice commands do not work well.	Voice commands may differ depending on the Voice Assistant. Refer to the command examples for each Voice Assistant. Bixby:  > Explore Now Amazon Alexa:  >  Settings > General > Voice > Amazon Alexa Settings
Bixby or Alexa answers automatically.	The Product may recognize an ambient noise or everyday conversation as a call to Voice Assistant. Turn off the Voice Wake-up function or set the Wake-Up Sensitivity to Low.  > Explore Now >  Settings > Voice Wake-up
I spoke "Hi, Bixby" but Bixby does not answer. I spoke "Alexa" but Amazon Alexa does not answer.	When the Product is far from you or the ambient noise is so loud, the Product may be unable to recognize your voice. - For best results, you need to be within 10 feet (3-4 m) of your Product. Please look at your Product screen and speak. Turn on the Voice Wake-up function.  > Explore Now >  Settings > Voice Wake-up
Voice recognition does not work with the Samsung Smart Remote unlike other features. There is no response even if the Voice Assistant entry button is pressed.	The connection between the remote control and the Product may be lost. Try pairing the remote control with the Product. Point the Samsung Smart Remote at the front of the Product, and then press and hold the  and  buttons simultaneously for 3 seconds or more. Also, if the remote control does not work properly or its response is very slow, the battery might be low or dead. - Charge the remote control by using the USB port (C-type) on the bottom, or turn over the remote to expose the solar cell. You can check remaining battery of Samsung Smart Remote with  solar cell in  >  Settings > General > Power and Energy Saving > Available Remote Battery. - If the remote control has batteries, replace them with new ones.

The problem	Try this!
During voice recognition, the heavy load message appears and the function does not work.	Unplug and then plug the Product power cable and then try again after 1 minute and 30 seconds. It may take a while if the voice recognition server is being inspected.
I want to see weather information of the desired area.	Say with the area name included.

Other issues

Use these procedures to resolve other issues that may occur in relation to the product.

The problem	Try this!
The Product is hot.	Watching the broadcast 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 Product. The bottom, however, may feel hot to the touch after extended use. Children watching the broadcast need constant adult supervision to prevent them from touching the Product. This heat, however, is not a defect and does not affect the Product's functionality.
The Product smells like plastic.	This smell is normal and will dissipate over time.
The settings are lost after 5 minutes or every time the Product is turned off.	If Usage Mode is set to Retail Mode, the Product's audio and video settings are automatically reset every 5 minutes. Change Usage Mode to Home Mode. •  >  Settings > General > System Manager > Usage Mode
The Product is tilted to the side.	Remove the base stand from the Product and reassemble it.
The stand is wobbly or crooked.	Refer to the Quick Setup Guide and make sure that the stand is assembled correctly.
A POP (Product's internal banner ad) appears on the screen.	Change Usage Mode to Home Mode. •  >  Settings > General > System Manager > Usage Mode
The Product is making a popping noise.	The expansion and contraction of the Product's outer casing may cause a popping noise. This does not indicate a product malfunction. The Product is safe to use.

The problem	Try this!
The Product is making a humming noise.	Your Product utilizes high-speed switching circuits and high levels of electrical current. Depending on the Product's brightness level, the Product may seem slightly noisier than a conventional Product. Your Product has undergone strict quality control procedures that meet our demanding performance and reliability requirements. Some noise coming from the Product is considered normal and is not an acceptable cause for an exchange or refund.
The software update over the Internet has failed.	Check the network connection status.  >  Settings > General > Network > Network Status If the Product is not connected to a network, connect it to a network. The upgrade stops if you already have the latest software version.
The Product narrates the screen events in voice-over.	To turn off Voice Guide, move the focus from Accessibility Shortcuts to Voice Guide and then press the Select button. You can turn on or off Voice Guide. To run Accessibility Shortcuts, see the following: Press and hold the +/- (Volume) button on your Samsung Smart Remote or Remote Control.

Diagnosing Product operational issues

You can diagnose issues with your Product and Smart Hub and run reset functions.

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) [Try Now](#)

You can use the [Picture Test](#) to help diagnose video issues and the [Sound Test](#) to diagnose sound issues. You can also view signal strength information for over-the-air digital signals, test the Smart Hub Internet connection, and run the Smart Hub and Product factory reset functions.

- [Video Test](#)

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

- [Picture Test](#)
- [Sound Test](#)
- [HDMI Troubleshooting](#)
- [Signal Information](#)
- [Smart Hub Connection Test](#)
- [Reset Smart Hub](#)
- [Installation Test](#)

The problem	Try this!
Cannot select Signal Information in Self Diagnosis .	Verify that the current channel is a digital channel. Signal Information is only available for digital channels. •  >  Settings > Support > Device Care > Self Diagnosis > Signal Information
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. •  >  Settings > Support > Device Care > Self Diagnosis > Reset Smart Hub
Reset picture	Resets current picture settings to the default settings. •  >  Settings > Picture > Expert Settings > Reset Picture
Reset sound	Resets current sound settings to the default settings. •  >  Settings > Sound > Expert Settings > Reset Sound
Installation Test	Tests to check whether the Product is assembled correctly or not. •  >  Settings > Support > Device Care > Self Diagnosis > Installation Test

Getting Support

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

Getting support through Remote Management

 >  [Settings](#) > [Support](#) > [Remote Management](#) [Try Now](#)

After consenting to our service agreement, you can use [Remote Management](#) to access Remote Support and have a Samsung service technician diagnose your Product, correct problems, and update your Product's software remotely via the web. You can also turn [Remote Management](#) on and off.

 This function requires an Internet connection.

Finding the contact information for service

 >  [Settings](#) > [Support](#) > [About The Wall](#) [Try Now](#)

You can view the address of the Samsung website, the call center phone number, your Product's model number, your Product's software version, Open Source License and other information you may need to get service support from a Samsung call agent or the Samsung website.

 You can also view information by scanning the QR code of your Product.

 You can also start this function by pressing and holding the  button for 5 or more seconds. Continue holding the button until the customer information pop-up window appears.

Requesting service

 >  [Settings](#) > [Support](#) > [Device Care](#) > [Request Support](#) [Try Now](#)

You can request service when you encounter a problem with the Product. Select the item matching the problem that you encountered, enter the required item, move the focus to [Next](#), and then press the Select button. Select [Request Now](#) > [Send](#) or [Schedule Appointment](#) > [Request](#) > [Send](#). Your service request will be registered. The Samsung Contact Center will contact you to set up or confirm your service appointment.

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

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

 This function requires an Internet connection.

Accessibility Guidance

Provides a menu and a remote control guide that aid the visually impaired.

Learn the Menu Screen

Learn the menus on the Product screen. Once enabled, your Product will tell you the structure and features of the menus you select.

Using the Remote control

You can see the description of the buttons on the Samsung Smart Remote.

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

Orientation of the Samsung Smart Remote or Remote Control

Hold the remote control with the buttons facing towards you. The remote is slightly thinner towards the top and thicker towards the bottom.

Description of the Samsung Smart Remote or Remote Control

 The images, buttons, and functions of the remote control may differ with the model or geographical area.

 The functions related to the broadcast and channel are available only in some apps or external devices.

From top to bottom and left to right:

- The  button is at the top left.
- There is a small LED (microphone) to the right of the  button, but it cannot be felt by hand.
- For the Samsung Smart Remote, there is a round button below the LED, which is the  button.
- Of the 2 buttons below the  button on the Samsung Smart Remote that comes with Product, the left one is the  button and the right one is the  button.

- If you press the  button twice, and then press the Select button while viewing a program, the [Info](#), red, green, yellow, blue, and [Move to the top](#) (or [Move to the bottom](#)) options appear.

 Select the [Move to the top](#) button to move the menu to the top.

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

- Underneath these 2 buttons are a round button and a large outer circle button. The round button is the Select button, and the large outer circle button consists of 4 directional buttons (up / down / left / right).
- Underneath the directional button are 3 buttons, one on the left, one on the right, and one in the center. The one on the left is the  button and the one on the right is the  button. The round button in the middle is the  button.
- Underneath the  button are 2 thin horizontal buttons. These buttons protrude higher above the surface than the other buttons on the remote control. The one on the left is the volume button and the one on the right is the channel button. Push up from beneath or down from above to use these as rocker buttons to change the channel or volume.
 - Briefly press the $\pm$ (Volume) button to mute the sound.
 - Press and hold the $\pm$ (Volume) button to open the [Accessibility Shortcuts](#) menu.
 - Briefly press the $\wedge/\vee$ (Channel) button to open the [Guide](#).

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

Using the Accessibility Menu

View how to use the Accessibility functions and descriptions on their functions.

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

Running the Accessibility Shortcuts menu

You can turn on or turn off the accessibility functions such as [Voice Guide](#), [Sign Language Zoom](#), [Learn Remote](#), [Learn Menu Screen](#), [Picture Off](#), [Graphic Zoom](#), [Multi-output Audio](#), [High Contrast](#), [Enlarge](#), [Grayscale](#), [Color Inversion](#), [Slow Button Repeat](#), and you can move to the [Learn Remote](#) and [Learn Menu Screen](#) pages.

 The menu name may differ depending on the model.

- Samsung Smart Remote

On the Samsung Smart Remote, there are 2 thin horizontal rocker buttons next to each other located slightly below the middle of the remote. The one on the left is the volume button. Press and hold the volume button to open the [Accessibility Shortcuts](#) menu.

Even if the [Voice Guide](#) is set to **Off** or muted, when you press and hold the volume button, the voice guide for [Accessibility Shortcuts](#) is enabled.

Running the Accessibility menu functions using the General menu

 >  [Settings](#) > [General](#) > [Accessibility](#)

You can also go to the [Accessibility](#) menu from the Product settings menu. This provides more options, for example, to change the speed of Voice Guide.

The Product will not verbalize this menu unless [Voice Guide](#) is already turned on.

1. Press the  button.
2. Press the left directional button until you reach  [Settings](#).
3. Press the Select button to open the Product's Settings menu.
4. Press the down directional button to reach [General](#), and then press the Select button to open this menu.

5. Use the directional buttons to go to the [Accessibility](#) menu, and then press the Select button to open this menu.
6. The menu will appear with [Voice Guide Settings](#) as the first selection. Highlight [Voice Guide Settings](#), and then press the Select button.
7. A menu appears with the options to change [Voice Guide](#), [Volume](#), [Speed](#), [Pitch](#), and [The Wall Background Volume](#).
8. Select the menu using the directional buttons, and then press the Select button.

 The menus are activated when [Voice Guide](#) is on.

Running the Accessibility menu functions using Bixby

 This function is available only if Voice Assistant is set to Bixby. ( >  [Settings](#) > [General](#) > [Voice](#) > [Voice Assistant](#))

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

To use Bixby, the Product must be set up and tuned and must be connected to the Internet. You can connect the Product to the Internet during the initial setup or do it later through the settings menu.

There are many commands you can say to control the Product. These can be used together with [Voice Guide](#) to give you voice input and voice output. You can use the Samsung Smart Remote but the Product must be connected to the Internet.

To speak a command, press and hold the  button (located near the top of the Samsung Smart Remote, directly below the small LED (microphone) and above the directional button) and say the command, and then release the  button. The Product will confirm the command.

For example you can:

- Turn Voice Guide on

Press the  button on the Samsung Smart Remote, and then say "Voice Guide on."

- Turn High Contrast on

Press the  button on the Samsung Smart Remote, and then say "High Contrast on."

Learning about the Accessibility menu functions

- **Voice Guide Settings**

Provides voice guides to make it easier for the visually impaired to use the Product. Voice guide supports basic operations such as changing channels and adjusting the volume, provides voice descriptions about the current broadcast and the following broadcast, and offers guidance on setting up Scheduled Viewing events. The feature also provides voice descriptions on [Internet](#), [Search](#), and other smart services.

Move to [Voice Guide](#) and press the Select button to enable/disable the feature.

- **Picture Off**

Turn off the Product screen and provide only sound to reduce overall power consumption. When you press a button on the remote control other than Volume and Power while the screen is off, the Product screen turns back on.

- **Graphic Zoom**

Enlarge the screen to make the picture or text bigger. You can adjust the zoom level or move the zoom area.

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

- **High Contrast**

To display all menus with an opaque black background and a white font, providing maximum contrast.

 If [High Contrast](#) is on, some [Accessibility](#) menus are not available.

- **Grayscale**

You can change the color of the Product screen to black and white to sharpen blurred edges caused by colors.

 If [Grayscale](#) is on, some [Accessibility](#) menus are not available.

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

- **Color Inversion**

You can invert the colors of the text and background displayed on the Product screen to make it easier to read the text.

 If [Color Inversion](#) is on, some [Accessibility](#) menus are not available.

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

- [Enlarge](#)

You can enlarge important elements on the menu such as the names of programs.

- [Learn Remote](#)

Learn the names and functions of the buttons on remote control. On this screen, pressing the power button (top left button) will turn off the Product, but when any other button is pressed the Product will say the button name and briefly tell what that button does. This teaching mode helps you to learn the location and operation of the buttons on the remote without affecting normal Product operation. Press the  button twice to exit [Learn Remote](#).

- [Learn Menu Screen](#)

Learn the menus on the Product screen. Once enabled, your Product will tell you the structure and features of the menus you select.

- [Multi-output Audio](#)

You can turn on both the Product speaker and Bluetooth headphone designed for the hearing impaired at the same time. The hearing impaired can then set the volume of their Bluetooth headphone higher than the volume of the Product speaker without affecting the volume of the Product speaker, allowing both the hearing impaired and their families to listen to the Product at comfortable sound levels.

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

- [Sign Language Zoom Settings](#)

You can zoom in the sign language screen when the program you are watching provides it. Set [Sign Language Zoom](#) to [On](#) and then adjust the window's position and aspect ratio under [Edit Sign Language Zoom](#).

- [Remote Button Repeat Settings](#)

You can configure the operation speed of the remote control buttons so that they slow down when you continually press and hold them.

Using the Product with Voice Guide on

Turn on Voice Guide that describes the menu options aloud to aid the visually impaired.

Changing channel

There are 2 ways to change the channel. Every time you change channels, the new channel details will be announced. The ways to change the channel are below.

 The functions related to the broadcast and channel are available only in some apps or external devices.

-  (Channel) button

Of the 2 buttons that protrude from the center of the Samsung Smart Remote, the right one is the  (Channel) button. Push up or pull down the  (Channel) button to change the channel.

- Number button

Use the  button on the Samsung Smart Remote to open the virtual numeric pad, enter a number, and then select **Done**.

Using on-screen number entry via the Samsung Smart Remote

Use the virtual numeric pad to enter numbers (e.g., to enter a channel number or to enter a PIN).

Press the  button on the Samsung Smart Remote and the virtual numeric pad with 2 rows appears on screen. Voice Guide speaks “virtual numeric pad, 6” which indicates that the number strip is on screen and the focus is on the number 6. This strip has the following buttons:

- The top row has one option, **Done**.
- Press the  button: On the bottom row: From the far left: **More**, **1**, **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**, **0**, **-**, Delete, **Move to the top** (**Move to the bottom**)

 The options that you can select in the virtual numeric pad may vary depending on the viewing mode.

Use the left and right directional buttons to move along the row, and then press the Select button to choose the numeric pad. When you have finished selecting all the numbers you need (for example, 123), press the up directional button to move to the **Done** option, and then press the Select button to finish.

When entering a channel number, you can enter the number, and then select the **Done** option on the top row or you can enter the channel number and wait. After a short while, the channel will change and the virtual numeric pad will disappear from the screen.

Changing volume

Use the **+/-** (Volume) button on the left to change the volume. Every time you change the volume, the new volume level will be announced.

- Samsung Smart Remote

Of the 2 buttons that protrude from the center of the Samsung Smart Remote, the left one is the **+/-** (Volume) button. Push up or pull down the **+/-** (Volume) button to change the volume.

Using program information

When watching the program, press the Select button to view program information which then appears at the top of the screen. Voice Guide will say program subtitles or audio descriptions if they are available. To view more detailed program information, press and hold the Select button. Voice Guide will say more details such as a synopsis of the program.

Press the left or right directional button to see what you can watch next on the same channel. Press the up or down directional button to move to other channels and see which programs are currently being broadcast on them.

Press  to go back or close the program details.

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

Using Smart Hub

Learn how to open Smart Hub to access apps, games, movies, and more.

Smart Hub

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

-  Some Smart Hub services are for pay services.
-  To use Smart Hub, the Product must be connected to the Internet.
-  Some Smart Hub features may not be supported depending on the service provider, language, or geographical area.
-  Smart Hub service outages can be caused by disruptions in your Internet service.
-  To use Smart Hub, you must agree to the Smart Hub service agreement and the collection and use of personal information. Without giving consent, you cannot use the additional features and services. You can view the entire text of the [Terms & Privacy](#) by navigating to  > [Settings](#) > [Terms & Privacy](#).
-  If you want to stop using Smart Hub, you can cancel the agreement. To cancel the Smart Hub service agreement, select [Reset Smart Hub](#) ( > [Settings](#) > [Support](#) > [Device Care](#) > [Self Diagnosis](#) > [Reset Smart Hub](#)).

Press the  button on your remote. This will bring up a display with 2 rows. Try moving the focus to another item on the bottom row. The options on the top row change depending on the item selected in the bottom row.

The buttons to the right of [Samsung TV Plus](#) provide quick access to apps such as [Netflix](#) and [Prime Video](#).

-  Supported apps may vary depending on the model.

Use the left and right directional buttons to move between a menu or apps on a row and the up and down directional buttons to move between rows. Press the Select button to access a menu or apps.

When the Smart Hub home screen appears, use the left or right directional button to move the focus to [Samsung TV Plus](#). Press the up directional button to move to the top row. You will be on the [Guide](#) item. The items in this row may include [Guide](#), [Channel List](#), and others.

Using the Smart Hub Home Screen

On the leftmost part of the Smart Hub home screen is the static menu listed below. You can quickly and easily use the listed menu items to access the main Product settings or external devices, search, and apps.

- **Settings**

When the focus is moved to **Settings**, a list of quick settings icons appears above the top of the menu. You can quickly set frequently used functions by clicking the icons. You can set **e-Manual**, **Intelligent Mode**, **Picture Mode**, **Sound Mode**, **Sound Output**, **Game Mode**, **Sleep Timer**, **Caption**, **Network**, **Color Tone**, **Picture Clarity**, **Digital Output Audio Format**, **Device Care**, and **All Settings**.

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

 These functions may not be available, depending on the installation method.

- **Source**

You can select an external device connected to the Product.

 For more information, refer to "[Switching between external devices connected to the Product.](#)"

- **SmartThings**

This function allows the Product to connect and control the detected devices in the same space.

 For more information, refer to "[Using SmartThings.](#)"

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

- **Search**

A virtual keyboard appears on the screen, and you can search for channels, programs, titles of movies, or apps provided by the Smart Hub service.

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

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

- **Apps**

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

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

 For more information, refer to "[Using the Apps Service.](#)"

- **Multi View**

You can simultaneously view multiple screens that are split.

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

 For more information, refer to "[Using Multi View.](#)"

- **Ambient Mode**

You can enhance your living space with decorative content that matches the surroundings or view essential realtime information, such as weather, time, and news, on the Product screen when you are not watching the main screen.

To return to the **ENTERTAINMENT** mode, press the  button in **Ambient Mode**. To shut off the Product, press the  button.

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

 For more information, refer to "[Using Ambient Mode.](#)"

- **Art**

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

 For more information, refer to "[Using Art Mode.](#)"

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

- **Home**

This menu appears first when you press the  button. Then you can quickly access **Samsung Account**, **Notification**, or **Privacy Choices**.

 The available features may differ depending on the model or geographical area.

- **Samsung Account**

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

 For more information, refer to "[Using a Samsung account.](#)"

- **Notification**

You can view a list of notifications for all events that occur on your Product. A notification appears on the screen when it is time to schedule viewing, or when an event occurs on a registered device.

If you move the focus to **Notification**, and then press the Select button, a notification window appears on the right containing the following functions:  **Delete All** and  **Settings**.

- **Privacy Choices**

You can view and set the privacy policy for Smart Hub and various other services.

- **Universal Guide**

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

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

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

Launching the e-Manual

Open the user manual embedded in your Product.

Press the  button to open Smart Hub, press the left directional button to move to  [Settings](#), and then press the Select button.

Use the up and down directional buttons to move to [Support](#), and then select [Open e-Manual](#) to open the e-Manual.

 >  [Settings](#) > [Support](#) > [Open e-Manual](#)

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

 Alternatively, you can download a copy of the e-Manual from Samsung's website (<https://www.samsung.com>).

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

The e-Manual's Home screen contains 1 row of menu icons. Use the left and right directional buttons to move within a row. Press the Select button to open the section you want to read.

 You can use the directional buttons on the remote control to use the functions on the top such as [Search](#), [Sitemap](#), and [Index](#).

The e-Manual contains a section called "Learn Remote" in "Accessibility Guidance". This is particularly useful for people who cannot easily see the buttons on the control or who are not clear what each button does. When you are viewing this section of the e-Manual, pressing the buttons on the remote control will not affect the Product.

Using Bixby

[Set Voice Assistant to Bixby. A guide to using Bixby to control your Product.](#)

To use Bixby, your Product must be connected to the Internet and you must use the microphone on your Samsung Smart Remote.

To use Bixby, press and hold the  button on the Samsung Smart Remote, say a command into the microphone on the remote, and then release the button to run Bixby.

-  This function may not be supported depending on the model or geographical area.
-  The existing functional specifications may be changed if Bixby is updated.
-  This function is available only if Voice Assistant is set to Bixby. ( >  [Settings](#) > [General](#) > [Voice](#) > [Voice Assistant](#))
-  The supported language may differ depending on the geographical area.

Running Bixby

Press and hold the  button on the Samsung Smart Remote. Bixby is activated in the listening mode, the Bixby icon appears at the bottom of the Product screen. Say a command, and then release the button. The Product provides feedback on how it understands the command, and then performs the commanded task.

-  If the Product does not understand the command, try again with more precise pronunciation.
-  This function may not be supported depending on the model or geographical area.
-  You can find a detailed description of the voice commands at [Explore Bixby](#). Press the  button. The [Explore Now](#) button appears at the bottom of the screen. Press the Select button to go to the [Explore Bixby](#) screen.