SAMSUNG

User Manual

U28R55*

The colour and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

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An administration fee may be charged in the following situations:

(a) An engineer is called out at your request, but it is found that the product has no defect (i.e., where the user manual has not been read).

(b) You bring the unit to a repair centre, but it is found that the product has no defect (i.e., where the user manual has not been read).

You will be informed of the administration fee amount before a technician visits.

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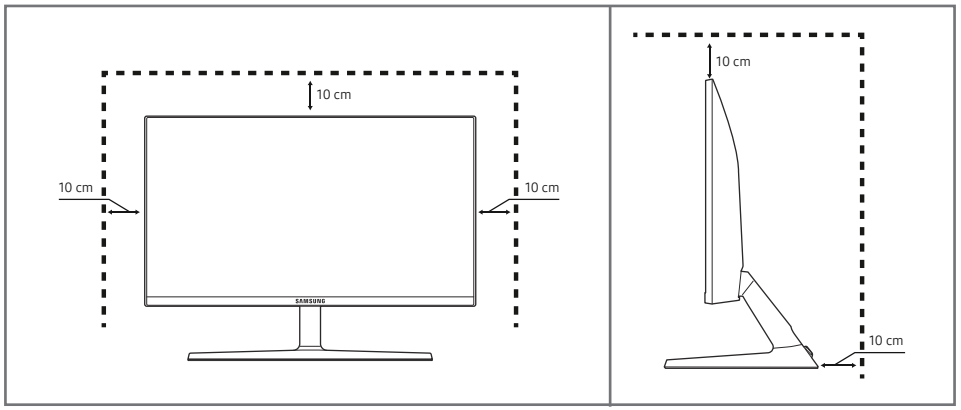
Chapter 01
Before Using the Product

Securing the Installation Space

Make sure to have enough space for ventilation when placing the product. An internal temperature rise may cause fire and damage the product. Maintain enough space around the product as shown in the diagram when installing the product.

― The exterior may differ depending on the product.



Safety Precautions

Warning	A serious or fatal injury may result if instructions are not followed.
Caution	Personal injury or damage to properties may result if instructions are not followed.

CAUTION			
RISK OF ELECTRIC SHOCK. DO NOT OPEN.			
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.			
	This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.		AC voltage: Rated voltage marked with this symbol is AC voltage.
	This symbol indicates that this product has included important literature concerning operation and maintenance.		DC voltage: Rated voltage marked with this symbol is DC voltage.
	Class II product: This symbol indicates that a safety connection to electrical earth (ground) is not required. If this symbol is not present on a product with a mains lead, the product MUST have a reliable connection to protective earth (ground).		Caution. Consult instructions for use: This symbol instructs the user to consult the user manual for further safety related information.

Cleaning

High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.

— Contact your nearest Samsung Customer Service Centre if you want to clean the inside of the product (Service fee will be charged.)

Do not press the product screen with hands or other objects. There is a risk of damaging the screen.

— Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

— Take the following steps when cleaning.

1 Power off the product and PC.

2 Disconnect the power cord from the product.

— Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.

3 Wipe the product with a clean, soft and dry cloth.

– Do not apply a cleaning agent that contains alcohol, solvent, or surfactant to the product.

– Do not spray water or detergent directly on the product.

4 Wet a soft cloth in water, wing it out well, and then use the cloth to wipe the exterior of the product clean.

5 Connect the power cord to the product when cleaning is finished.

6 Power on the product and PC.

Electricity and Safety

Warning

- Do not use a damaged power cord or plug, or a loose power socket.
- Do not use multiple products with a single power socket.
- Do not touch the power plug with wet hands.
- Insert the power plug all the way in so it is not loose.
- Connect the power plug to a grounded power socket (type 1 insulated devices only).
- Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.
- Do not place the power cord or product near heat sources.
- Clean any dust around the pins of the power plug or the power socket with a dry cloth.

Caution

- Do not disconnect the power cord while the product is being used.
- Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.
- Keep the power socket where the power cord is connected unobstructed.
  – The power cord must be disconnected to cut off power to the product when an issue occurs.
- Hold the plug when disconnecting the power cord from the power socket.

Installation

Warning

- DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.
- Keep the plastic packaging out of the reach of children.
  - Children may suffocate.
- Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)
  - The product may fall and become damaged and/or cause an injury.
  - Using the product in an area with excess vibration may damage the product or cause a fire.
- Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.
- Do not expose the product to direct sunlight, heat, or a hot object such as a stove.
  - The product lifespan may be reduced or a fire may result.
- Do not install the product within the reach of young children.
  - The product may fall and injure children.
- Edible oil (such as soybean oil) may damage or distort the product. Keep the product away from oil pollution. And do not install or use the product in the kitchen or near the kitchen stove.

Caution

- Do not drop the product while moving.
- Do not set down the product on its front.
- When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.
  - The product may fall and become damaged and/or cause an injury.
  - Install the product only on cabinets or shelves of the right size.
- Set down the product gently.
  - Product failure or personal injury may result.
- Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.
  - Be sure to consult Samsung Customer Service Centre if you want to install the product at such a place.

Operation

Warning

- There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.
  - Contact Samsung Customer Service Centre for repairs.
- To move the product, first disconnect all the cables from it, including the power cable.
- If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Centre.
- Do not let children hang from the product or climb on top of it.
  - Children may become injured or seriously harmed.
- If the product is dropped or the outer case is damaged, turn off the power and disconnect the power cord. Then contact Samsung Customer Service Centre.
  - Continued use can result in a fire or electric shock.
- Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.
  - The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.
- During a lightning or thunderstorm, power off the product and remove the power cable.
- Do not drop objects on the product or apply impact.
- Do not move the product by pulling the power cord or any cable.
- If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.
- Do not lift or move the product by pulling the power cord or any cable.
- Do not use or keep combustible spray or an inflammable substance near the product.
- Ensure the vents are not blocked by tablecloths or curtains.
  - An increased internal temperature may cause a fire.
- Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).
  - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.
  - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.

Caution

- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Set the screen to power-saving mode or moving-picture screen saver when not using the product for an extended period of time.
- Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).
  - Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.
- Use the product at the recommended resolution and frequency.
  - Your eyesight may deteriorate.
- Do not put AC/DC adapters together.
- Remove the plastic bag from the AC/DC adapter before you use it.
- Do not let water enter the AC/DC adapter device or get the device wet.
  - An electric shock or fire may result.
  - Avoid using the product outdoors where it can be exposed to rain or snow.
  - Be careful not to get the AC/DC adapter wet when you wash the floor.
- Do not put the AC/DC adapter near to any heating apparatus.
  - Otherwise, a fire may result.
- Keep the AC/DC adapter in a well-ventilated area.
- If you place the AC/DC power adapter hanging with the cord input facing upwards, water or other foreign substances could enter the Adapter and cause the Adapter to malfunction.

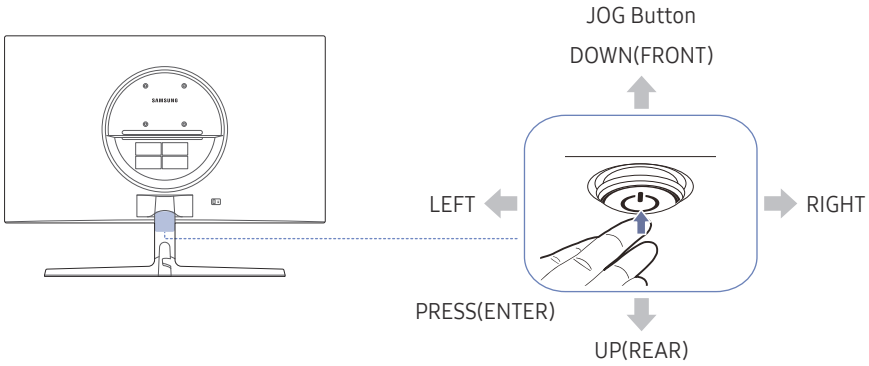
  Make sure to rest the AC/DC power adapter flat on a table or the floor.
- Do not hold the product upside-down or move it by holding the stand.
  - The product may fall and become damaged or cause an injury.
- Looking at the screen too close for an extended period of time can deteriorate your eyesight.
- Do not use humidifiers or stoves around the product.
- Rest your eyes for more than 5 minutes or look at distance objects for every 1 hour of product use.
- Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.
- Store small accessories out of the reach of children.
- Exercise caution when adjusting the product angle or stand height.
  - Your hand or finger may get stuck and injured.
  - Tilting the product at an excessive angle may cause the product to fall and an injury may result.
- Do not place heavy objects on the product.
  - Product failure or personal injury may result.

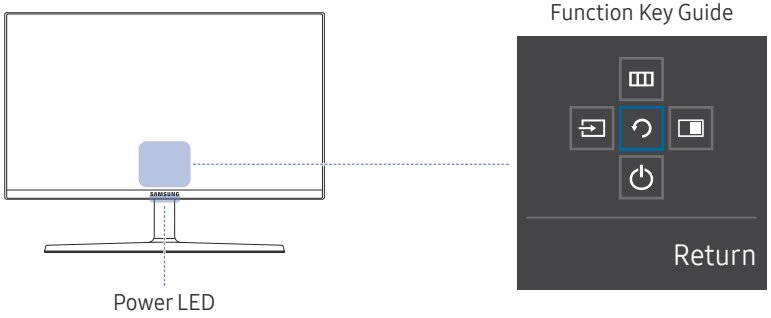
Chapter 02
Preparations

Parts

Control Panel

― The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

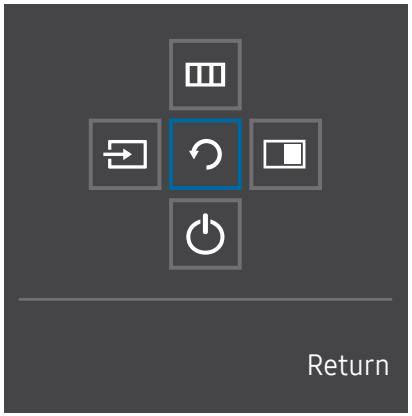




Parts	Description
JOG Button	Multi directional button that helps navigate. ― JOG button is located in the bottom of the screen center, and has 5 directions as UP/DOWN/LEFT/RIGHT/PRESS(ENTER).
Power LED	This LED is power status indicator and works as • Power On (Power button): Power LED Off • Power saving mode: Power LED Blinking • Power Off (Power button): Power LED On ― The Power LED operation can be swapped by changing in the menu. (System → Power LED On) Function Key Guide may vary depending on the function or product model. Please refer to the actual product. ― Press the power button ⏻ on the JOG button to turn it on or off.
Function Key Guide	Press the JOG button when the screen is turned on. The Function Key Guide will appear. To access the onscreen menu when the guide is displayed, press the corresponding direction button again. ― Function Key Guide may vary depending on the function or product model. Please refer to the actual product.

Function Key Guide

— To use the Function Key Guide, press the JOG button. Then the following window appears.



UP/DOWN/LEFT/RIGHT: Move to the item you want. The description for each item will appear when the focus changes.

PRESS(ENTER): The selected item will be applied.

Parts		Description
Source		Selects to change the input source by moving the JOG button in the Function Key Guide screen. A message will appear on the top left corner of the screen if the input source has been changed.
Menu		Selects by moving the JOG button in the Function Key Guide screen. This product shows the menu as an on-screen display. On screen display menu lock: Lock the on screen display menu to maintain the current settings or prevent other users from changing settings. Enable/Disable: To enable or disable the on screen display menu lock, display the “Menu” screen, move the JOG button to the right to go to the next stage, and then press and hold the button to the left for 10 seconds until the Function Key Guide disappears. — If the on screen display menu lock is enabled, Brightness and Contrast can be adjusted. Eye Saver Mode is available. Information can be viewed.
PIP/PBP		Selects by moving the JOG button in the Function Key Guide screen. And then press the JOG button when configuring settings for the PIP/PBP function is required.
Power Off		Selects to turn the product off by moving the JOG button in the Function Key Guide screen.
Return		Exit the Function Key guide menu by using the JOG button to select the icon when the Function Key Guide screen is displayed.

— Actual models because of functional variation, Function Key Guide options will be different.

When the product displays nothing (i.e. Power saving mode or Non-signal mode), 3 direct keys for control source and power could be used as below.

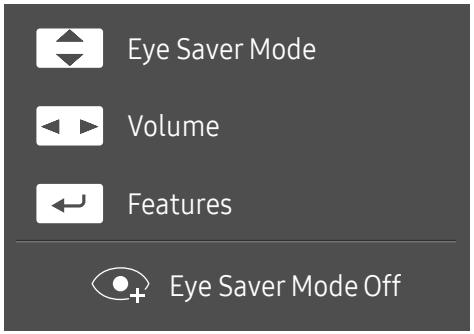
JOG Button	Power saving/Non-signal mode
UP	Source Change
Down	
PRESS(ENTER) for 2 seconds	Power Off

When the product displays the menu, the JOG Button could be used as below.

JOG Button	Action
UP/DOWN	Move the option
LEFT	Exit the menu (Function Key Guide). Close Sublist without saving value. Value decreases in the slider.
RIGHT	Move to sublist. Value increases in the slider.
PRESS(ENTER)	Save the value and close Sublist.

Direct Key Guide

On the Direct Key Guide screen, the following menu options appear when the product screen is switched on or the input source is changed.



- UP/DOWN: Adjust Brightness, Contrast, Eye Saver Mode.
- LEFT/RIGHT: Adjust Volume.
- PRESS(ENTER): Display Function Key Guide.

Configuring Eye Saver Mode, Brightness and Contrast from Direct Key Guide

Adjust the Brightness, Contrast and Eye Saver Mode by moving the JOG button.

- The displayed image may differ depending on the model.
- The default brightness can vary depending on the region.

Brightness

- This menu is not available when SAMSUNG MAGICBright is set to Dynamic Contrast mode.
- This menu is not available when Eco Saving Plus is enabled.
- This menu is not available when Eye Saver Mode is enabled.

Contrast

- This menu is not available when SAMSUNG MAGICBright is in Cinema or Dynamic Contrast mode.
- This menu is not available when Game Mode is enabled.
- This menu is not available when PIP/PBP Mode is set to On and the Screen Size is set to (PBP Mode).

Changing the Volume setting

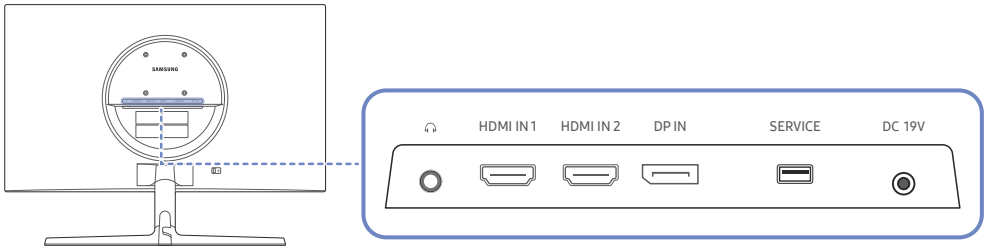
You can adjust Volume by moving the JOG button left or right, if no OSD menu is displayed.

- The displayed image may differ depending on the model.
- If the audio quality of a connected input device is poor, the Auto Mute function on the product may mute the sound or cause choppy audio when applying the headphones or speakers. Set the input volume for the input device to at least 20% and control the volume using the volume control (JOG button LEFT/RIGHT) on the product.
  - What is Auto Mute?

    The function mutes the audio to improve sound effect when there is sound noise or when the input signal is weak, usually due to a problem with the volume of an input device.
- To activate the Mute function, access the Volume control screen, then use the JOG button to move the focus down. To deactivate the Mute function, access the Volume control screen, then increase or decrease the Volume.

Types of Ports

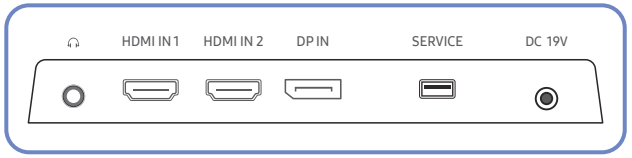
— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality. Refer to the actual product.



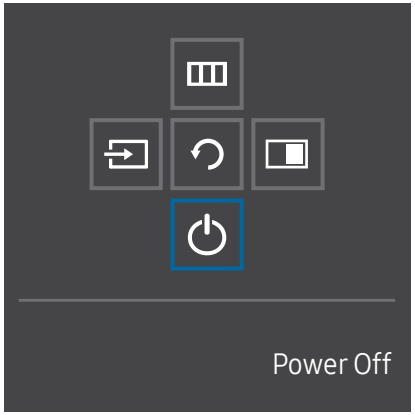
Port	Description
	Connect to an audio output device such as headphones or earphones. — The sound could only be heard when using the HDMI to HDMI cable or DP cable.
HDMI IN 1 HDMI IN 2	Connects to a source device using an HDMI cable or HDMI-DVI cable.
DP IN	Connects to a PC using a DP cable.
SERVICE	Use a USB memory stick to perform software upgrade.
DC 19V	Connects to the AC/DC adapter.

Upgrading the Software via USB

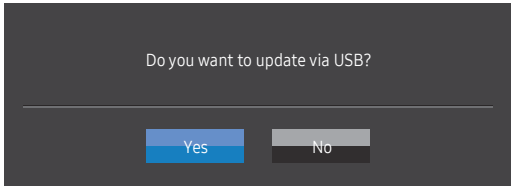
1 Connect a USB memory to the **SERVICE** port shown in the figure.



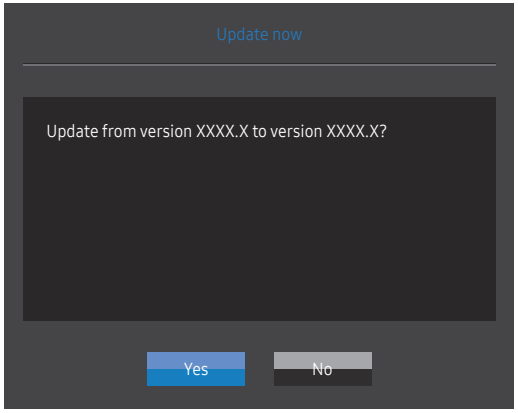
When the screen is on, press the JOG button to display the Function Key Guide. When the Function Key Guide are displayed, press and hold the JOG button down for approximately 5 seconds.



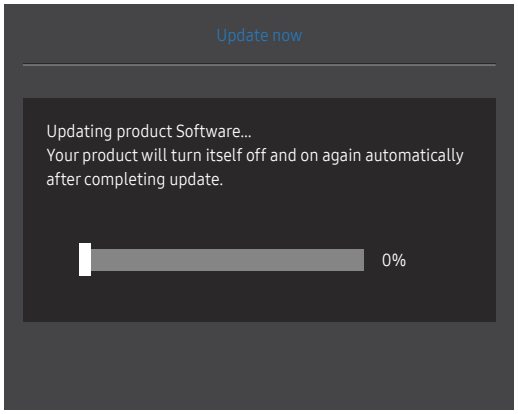
2 When the message as shown in the following figure is displayed on the product, select Yes to upgrade the software.



3 When the screen as shown in the following figure is displayed, select Yes.



4 The software upgrading proceeds.



5 Your product will turn itself off and on again automatically after completing update, and then turn off your product.

6 Remove the power cord from the power outlet and then reconnect the cord after turning off.

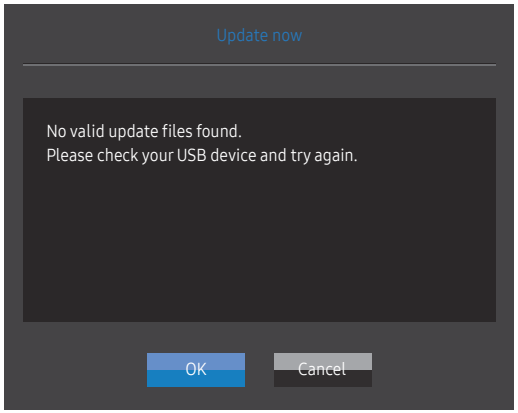
Note

1 To perform software upgrade by using a USB memory, first format the USB memory to FAT32.

2 When performing upgrade, make sure that only one BIN file (.bin) is saved in the root directory.

3 To upgrade the software for the UR55 model, make sure the upgrade files are .bin formats. The file name should follow the naming conventions for the UR55 model (e.g. M-R55**UGDA-****.*[four-digit number].bin). The ** is the screen size in inches, the ****.* is the version number, and the four-digit number is the checksum. For example, “M-R5528UGDA-0804.0[1899].bin” conforms to the naming conventions for the UR55 28" model and should be copied to the root directory.

4 If the No valid update files found. Please check your USB device and try again. message is displayed, this is probably due to the following reasons.

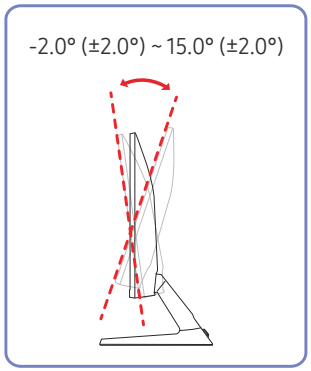


- A USB memory is not connected to the SERVICE port.
- The files in the connected USB memory are not compatible formats.
- There are no valid upgrade files found in the connected USB memory. (There are no upgrade files saved in the memory or the file names are incorrect.)

5 Do not turn off the product. And prevent the upgrading from any interruption as far as possible. In general, the product returns to the previous version if an upgrade is interrupted.

Adjusting the Product Tilt

— The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



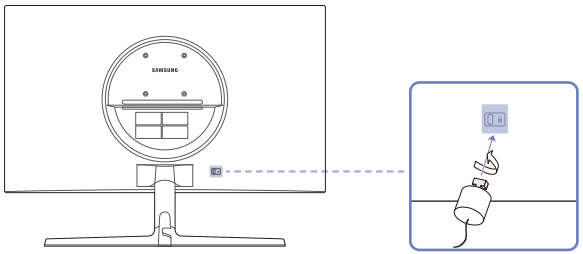
- The product tilt can be adjusted.
- Hold the lower part of the product and adjust the tilt carefully.

Anti-theft Lock

— An anti-theft lock allows you to use the product securely even in public places.

— The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

To lock an anti-theft locking device:



1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.

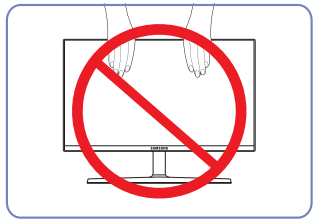
2 Put one end of the cable through the loop on the other end.

3 Insert the locking device into the anti-theft lock slot at the back of the product.

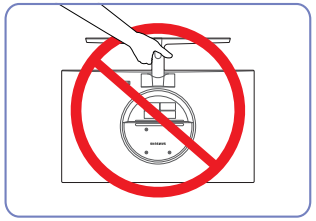
4 Lock the locking device.

- An anti-theft locking device can be purchased separately.
- Refer to the user guide provided with your anti-theft locking device for details.
- Anti-theft locking devices can be purchased at electronics retailers or online.

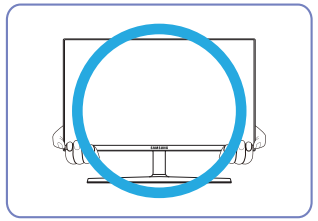
Precautions for moving the product



- Do not directly apply pressure on the screen.
- Do not hold the screen when moving the product.



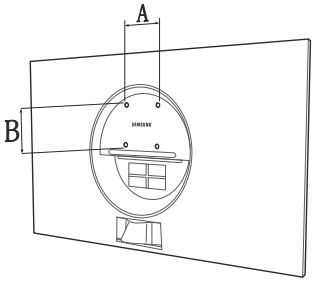
- Do not hold the product upside down only by the stand.



- Hold the lower corners or edges of the product when moving it.

Wall Mount Kit Specifications (VESA)

— Install your wall mount on a solid wall perpendicular to the floor. Before attaching the wall mount to surfaces other than plaster board, please contact your nearest dealer for additional information. If you install the product on a slanted wall, it may fall and result in severe personal injury. Samsung wall mount kits contain a detailed installation manual and all parts necessary for assembly are provided.



- Do not use screws that are longer than the standard length or do not comply with the VESA standard screw specifications. Screws that are too long may cause damage to the inside of the product.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
- Do not fasten the screws too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not mount the product at more than a 15 degree tilt.
- Standard dimensions for wall mount kits are shown in the table below.

Unit: mm

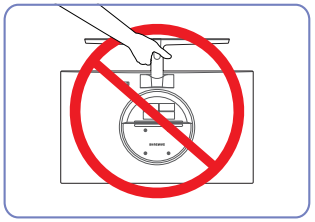
Model name	VESA screw hole specs (A * B) in millimetres	Standard Screw	Quantity
U28R55*	75.0 x 75.0	M4	4

— Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.

Installation

Attaching the Stand

— Before assembling the product, place the product down on a flat and stable surface so that the screen is facing downwards.

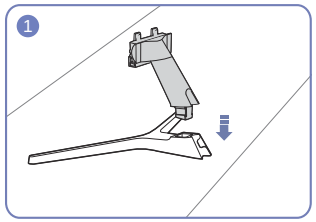


Caution

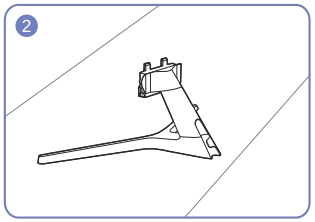
Do not hold the product upside down only by the stand.

Caution

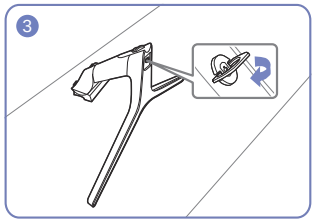
Do not press down on the product. There is a risk of damaging the product.



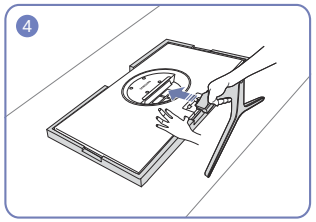
Insert the stand neck into the stand base in the direction shown in the figure.



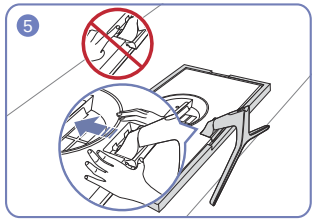
Check that the stand neck is firmly connected.



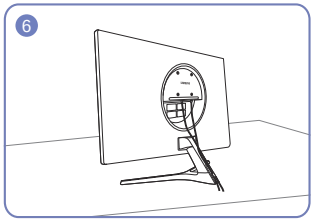
Tightly fasten the connecting screw at the bottom of the stand base.



Place the protective Styrofoam (cushion) included in the package on the floor and place the product facing down on the Styrofoam, as shown in the image. If Styrofoam is unavailable, use a thick sitting mat.



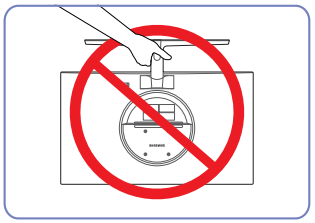
Hold the main body of the product with your hand as shown by the figure. Push the assembled stand into the main body in the direction of the arrow as shown in the figure.



Connect the power supply and the signal cable as shown in the figure.

Removing the Stand

Before removing the stand from the product, place the product on a flat and stable surface with the screen facing down.

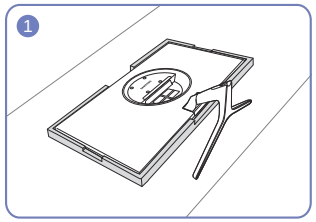


Caution

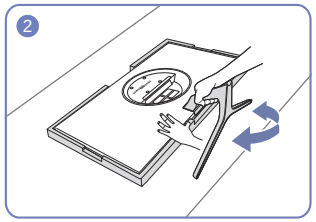
Do not hold the product upside down only by the stand.

Caution

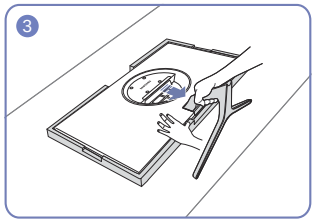
Do not press down on the product. There is a risk of damaging the product.



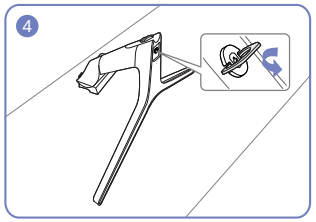
Place the protective Styrofoam (cushion) included in the package on the floor and place the product facing down on the Styrofoam, as shown in the image. If Styrofoam is unavailable, use a thick sitting mat.



To disassemble the stand from the monitor, be sure to press the lower part of the monitor with one hand, and shake the stand from side to side with the other hand to make some gap between them.



Press the lower part of the monitor with one hand, and pull the stand with the other hand in the direction of the arrow as shown in the figure.



Remove the stand neck from the stand base by turning the screw in the arrow direction as shown in the figure.

Chapter 03
Connecting and Using a Source Device

Read below before installing the product.

1 Before installing the product, check the shapes of both ports of the supplied signal cables and the shapes and locations of the ports on the product and external device.

2 Before installing the product, make sure you remove the power cables from both the product and the external device to prevent damage to the product due to a short circuit or over current.

3 After all signal cables have been properly connected, connect the power cables back to the product and the external device.

4 After installation is completed, make sure you read the user guide to acquaint yourself with the product functions, precautions and other information required to use the product properly.

Connecting and Using a PC

Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

— Provided ports may vary depending on the product.

Connection Using the HDMI Cable

First make sure that the power cables for product and other devices (e.g. PC, settop box, etc.) are removed.

HDMI IN 1, HDMI IN 2

— When connecting an HDMI cable, use the cable that came with the components of the product. If you use an HDMI cable other than provided by Samsung, the image quality may be degraded.

Connection Using an HDMI-DVI Cable

First make sure that the power cables for product and other devices (e.g. PC, settop box, etc.) are removed.

HDMI IN 1, HDMI IN 2

— The audio function is not supported if the source device is connected using the HDMI-DVI cable.

— The optimum resolution may not be available with an HDMI-DVI cable.

Connection Using an DP Cable

First make sure that the power cables for product and other devices (e.g. PC, settop box, etc.) are removed.

DP IN

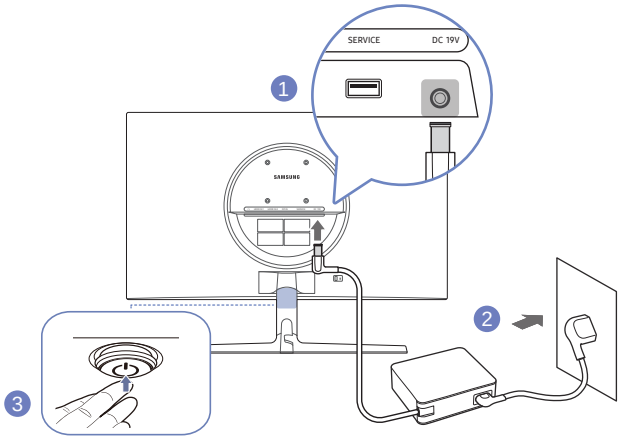
— A DP cable shorter under 1.5 m in length is recommended. Using a cable longer than 1.5 m can affect the picture quality.

Connecting to headphones or earphones

— Use headphones or earphones when activating sound with an HDMI-HDMI or DP cable.

— The headphones or earphones jack supports only the 3 conductor tip-ring-sleeve (TRS) type.

Connecting the Power



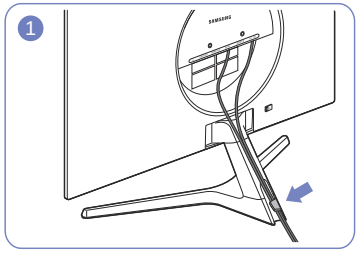
1 Connect the power cable to the AC/DC adapter. Then, connect the AC/DC adapter to the **DC 19V** port on the back of the product.

2 Next, connect the power cable to the power outlet.

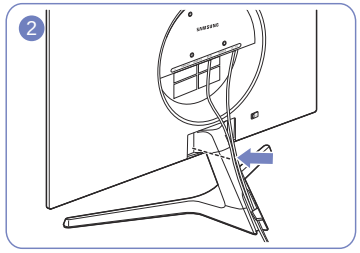
3 Press the JOG button at the bottom of the product to turn it on.

— The input voltage is switched automatically.

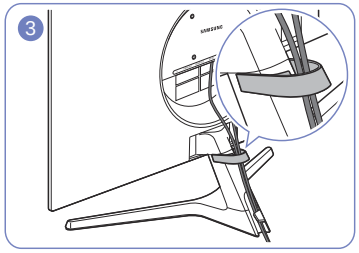
Tidying Up the Connected Cables



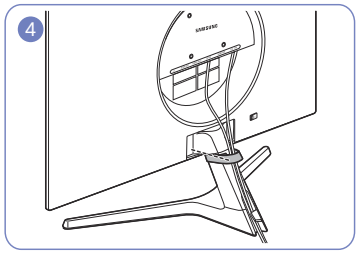
Connect cables to their port and route them through the ring on the back of the stand.



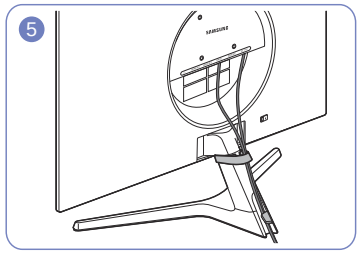
Push the cables further close to the stand.



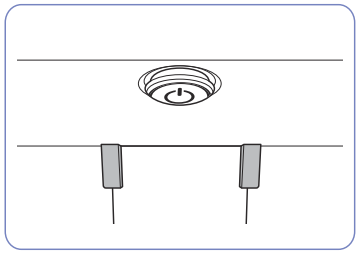
Route the cables through the HOLDER-CABLE.



Secure the HOLDER-CABLE to the stand. (HOOK type)



Cables arrangement is complete.



View from the front

Correct posture to use the product

Use the product in the correct posture as follows:

- Straighten your back.
- Allow a distance of 45 to 50cm between your eye and the screen, and look slightly downward at the screen.
- Keep your eyes directly in front of the screen.
- Adjust the angle so light does not reflect on the screen.
- Keep your forearms perpendicular to your upper arms and level with the back of your hands.
- Keep your elbows at about a right angle.
- Adjust the height of the product so you can keep your knees bent at 90 degrees or more, your heels attached to the floor, and your arms lower than your heart.
- Do the Eye excercises or blink frequently, then eye fatigue will be relieved.

Driver Installation

— You can set the optimum resolution and frequency for this product by installing the corresponding drivers.

— To install the latest version of the product driver, download it from the Samsung website at http://www.samsung.com.

Setting Optimum Resolution

An information message about setting optimum resolution will appear if you power on the product for the first time after purchase.

Select a language on information message and change the resolution on your PC to the optimum setting.

— If the optimum resolution is not selected, the message will appear up to three times for a specified time even when the product is turned off and on again.

— If you want to set the optimum resolution for your computer. Please refer to (Q&A) → "How can I change the resolution?"

List of graphic cards supporting HDR10

HDR10 is accessible only on Windows 10 systems equipped with graphic cards that support Play Ready 3.0 Digital Rights Management (for protected HDR content). Use graphic cards listed below for HDR10.

- NVIDIA GeForce 1000 series or higher
- AMD Radeon™ RX 400 series or higher
- Intel UHD Graphics 600 series or higher

— Graphic cards that support hardware-accelerated 10-bit video decoding for HDR video codecs are recommended.

Chapter 04
Screen Setup

Function Key Guide → ☰ → Picture
Configure the screen settings such as brightness. A detailed description of each function is provided. Refer to your product for details.

— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

SAMSUNG MAGIC Bright

This menu provides an optimum picture quality suitable for the environment where the product will be used.

— This menu is not available when Eco Saving Plus is enabled.

— This menu is not available when Game Mode is enabled.

— This menu is not available when Eye Saver Mode is enabled.

— Not available when PIP/PBP Mode is set to On.

In PC mode

- Custom: Customise the contrast and brightness as required.
- Standard: Obtain a picture quality suitable for editing documents or using Internet.
- Cinema: Obtain the brightness and sharpness of monitors suitable for enjoying video and DVD content.
- Dynamic Contrast: Obtain balanced brightness through automatic contrast adjustment.

In AV mode

When the external input is connected through HDMI/DP and PC/AV Mode is set to AV, SAMSUNG MAGIC Bright has four automatic picture settings (Dynamic, Standard, Movie and Custom) that are preset at the factory. You can activate either Dynamic, Standard, Movie or Custom. You can select Custom which automatically recalls your personalised picture settings.

- Dynamic: Select this mode to view a sharper image than in Standard mode.
- Standard: Select this mode when the surroundings are bright.
- Movie: Select this mode when the surroundings are dark. This will save power and reduce eye fatigue.
- Custom: Select this mode when you want to adjust the image according to your preferences.

Brightness

You can adjust the general brightness of the picture. (Range: 0~100)

A higher value will make the picture appear brighter.

— This menu is not available when SAMSUNG MAGIC Bright is set to Dynamic Contrast mode.

— This menu is not available when Eco Saving Plus is enabled.

— This menu is not available when Eye Saver Mode is enabled.

Contrast

Adjust the contrast between the objects and background. (Range: 0~100)

A higher value will increase the contrast to make the object appear clearer.

— This option is not available when SAMSUNG MAGIC Bright is in Cinema or Dynamic Contrast mode.

— This menu is not available when Game Mode is enabled.

— This menu is not available when PIP/PBP Mode is set to On and the Screen Size is set to (PBP Mode).

Sharpness

Make the outline of objects more clear or blurry. (Range: 0~100)

A higher value will make the outline of objects clearer.

— This option is not available when SAMSUNG MAGIC Bright is in Cinema or Dynamic Contrast mode.

— This menu is not available when Game Mode is enabled.

— Not available when PIP/PBP Mode is set to On.

Color

Adjust the tint of the screen.

— This menu is not available when SAMSUNG MAGIC Bright is set to Cinema or Dynamic Contrast mode.

— This menu is not available when Game Mode is enabled.

— This menu is not available when Eye Saver Mode is enabled.

— Not available when PIP/PBP Mode is set to On.

- Red: Adjust the red saturation level. Values closer to 100 mean greater intensity for the colour.
- Green: Adjust the green saturation level. Values closer to 100 mean greater intensity for the colour.
- Blue: Adjust the blue saturation level. Values closer to 100 mean greater intensity for the colour.
- Color Tone: Select a colour tone that best suits your viewing needs.
  - Cool 2: Set the colour temperature to be cooler than Cool 1.
  - Cool 1: Set the colour temperature to be cooler than Normal mode.
  - Normal: Display the standard colour tone.
  - Warm 1: Set the colour temperature to be warmer than Normal mode.
  - Warm 2: Set the colour temperature to be warmer than Warm 1.
  - Custom: Customise the colour tone.

  — When the external input is connected through HDMI/DP and PC/AV Mode is set to AV, Color Tone has four colour temperature settings (Cool, Normal, Warm and Custom).
- Gamma: Adjust the middle level of luminance.
  - Mode1 / Mode2 / Mode3

SAMSUNG MAGIC Upscale

SAMSUNG MAGIC Upscale function can enhance the layers of the picture details and the vividness of the picture.

The function has more obvious effects on low-resolution pictures.

— This menu is not available when SAMSUNG MAGIC Bright is set to Cinema or Dynamic Contrast mode.

— This menu is not available when Game Mode is enabled.

— Not available when PIP/PBP Mode is set to On.

- Off / Mode1 / Mode2

  — Comparing with Mode1, Mode2 has a stronger effect.

HDMI Black Level

If a DVD player or set-top box is connected to the product via HDMI, image quality degradation (contrast/colour degradation, black level, etc.) may occur, depending on the connected source device.

In such case, HDMI Black Level can be used to adjust the image quality.

— This function is only available in HDMI mode.

— Not available when PIP/PBP Mode is set to On.

- Normal: Select this mode when there is no contrast ratio degradation.
- Low: Select this mode to reduce the black level and increase the white level when there is a contrast ratio degradation.

— HDMI Black Level may not be compatible with some source devices.

— The HDMI Black Level feature is only activated at a certain AV resolution, such as 720P @ 60 Hz and 1080P @ 60 Hz.

Eye Saver Mode

Set to an optimum picture quality suitable for eye relaxation.

TÜV Rheinland “Low Blue Light Content” is a certification for products which meet requirements for lower blue light levels. When Eye Saver Mode is 'On', the blue light that wavelength is around 400nm will decrease, and it will provide an optimum picture quality suitable for eye relaxation. At the same time, the blue light level is lower than in the default settings, and it was tested by TÜV Rheinland and certified as it met the requirements of TÜV Rheinland “Low Blue Light Content” standards.

Game Mode

Configure the product screen settings for game mode.

Use this feature when playing games on a PC or when a game console such as PlayStation™ or Xbox™ is connected.

— This menu is not available when Eye Saver Mode is enabled.

— When the product turns off, enters power-saving mode or changes input sources, Game Mode turns Off even if it is set to On.

— If you want to keep Game Mode enabled all the time, select Always On.

— Not available when PIP/PBP Mode is set to On.

Response Time

Accelerate the panel response rate to make video appear more vivid and natural.

— Use Standard mode when not playing a video or game.

— This menu is not available when PIP/PBP Mode is set to On and the Screen Size is set to (PIP Mode).

Screen Ratio

Change the picture size.

— This menu is not available when PIP/PBP Mode is set to On and the Screen Size is set to (PBP Mode).

In PC mode

- Auto: Display the picture according to the aspect ratio of the input source.
- Wide: Display the picture in full screen regardless of the aspect ratio of the input source.

In AV mode

- 4:3: Display the picture with an aspect ratio of 4:3. Suitable for videos and standard broadcasts.
- 16:9: Display the picture with an aspect ratio of 16:9.
- Screen Fit: Display the picture with the original aspect ratio without cutting off.

— The function may not be supported depending on the ports provided with the product.

— Changing the Screen Ratio is available when the following conditions are satisfied.

— The input source is 480p, 576p, 720p, or 1080p and product can display normally (Not every model can support all of these signals.).

— This can only be set when the external input is connected through HDMI/DP and PC/AV Mode is set to AV.

Screen Adjustment

— This option is only available when PC/AV Mode is set to AV.

— This menu is only available when Screen Ratio is set to Screen Fit in AV Mode.
When a 480P or 576P or 720P or 1080P signal is input in AV mode and the product can display normally, select Screen Fit to adjust horizontal position and vertical position in 0-6 levels.

Configuring H-Position & V-Position

H-Position: Move the screen to the left or right.

V-Position: Move the screen up or down.

Chapter 05
Configuring the PIP/PBP Settings

Function Key Guide → ☰ → PIP/PBP
A detailed description of each function is provided. Refer to your product for details.

— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

PIP/PBP Mode

Enable or disable the PIP/PBP Mode function.

The PIP (Picture in Picture) function separates the screen into two parts. One source device is displayed on the main screen at the same time the another source device is displayed in inset windows.

The PBP (Picture by Picture) function separates the screen in half displaying output from two different source devices simultaneously on the left and right sides of the screen.

— PIP/PBP mode is compatible with Windows 7, Windows 8, and Windows 10.

— The PIP/PBP function may not be available depending on the specifications of the graphics card used. If the screen is blank in PIP/PBP mode when the optimum resolution is selected, go to Control Panel → Display → Screen Resolution and click Detect on the PC. (Instructions are based on Windows 7.) If the screen is blank when the resolution is set to the optimum resolution, change the resolution to 1280 x 1024.

— The screen may flicker briefly or appear after a delay when you enable or disable the PIP/PBP function or when you change the screen size with the PIP/PBP function activated. This can typically arise when a PC and a product are connected to two or more input sources. It has nothing to do with the performance of a product. The issue is mainly caused when the video signals are delayed in transmission to the product depending on the graphics card performance.

— When the PIP/PBP function is enabled, the resolution will not be able to automatically switch to the optimum resolution due to a compatibility issue between the graphics card and the Windows system. Set PIP/PBP Mode to Off. Alternatively, restart the product, then set the resolution to the optimum setting using the Windows interface.

— If the product is set to an incompatible resolution, the product may display an abnormal or blank screen. Change to a supported resolution by referring to the Standard Signal Mode Table.

Screen Size

Select the size and aspect ratio of the sub-screen.

- / / /

Position

Select the position of the sub-screen from the available options.

- / / /
  - Not available when PBP is selected.
  - The screen may flicker if the input source is unstable.

Sound Source

Set which screen you want to hear the sound for.

PBP mode

/

PIP mode

/

Source

Select the source for each screen.

PBP Mode (available in PBP mode(Screen Size))

- The input source for each screen changes.
- The screen may flicker if the input signal is unstable.
- When the input signal of the left and right screens are the same, the operation cannot be performed.
- When the Function Key Guide appears, move the JOG button LEFT to select the icon and then press the JOG button. The same PBP source setting menu appears. The mode switches in the order of DisplayPort → HDMI1 → HDMI2.

PIP Mode (available in PIP mode(Screen Size / /))

- The input source for the sub screen changes.
- With the exception of the current input source for main screen, the other two input sources can be selected. Use the function key and go to → PIP/PBP Mode → Source to select the input source.
- The screen may flicker if the input signal is unstable.
- When the Function Key Guide appears, move the JOG button LEFT to select the icon and then press the JOG button. The main screen will switch in the order DisplayPort → HDMI1 → HDMI2. With the exception of the current input source for the sub screen, the other two input sources can be selected for the main screen.

Screen Ratio

Select the image size for each screen.

PBP Mode (available in PBP mode(Screen Size))

In PC mode

- Auto: Display the picture according to the aspect ratio of the each screen input source.
- Wide: Display the picture in full screen regardless of the aspect ratio of the each screen input source.

In AV mode

- 4:3: Display the picture of the sub-screen with an aspect ratio of 4:3. Suitable for videos and standard broadcasts.
- 16:9: Display the picture of the sub-screen with an aspect ratio of 16:9.
- Screen Fit: Display the picture of the sub-screen with the original aspect ratio without cutting anything off.

— The function may not be supported depending on the ports provided with the product.

— Changing the screen size is available when the following conditions are satisfied.

— The input source is 480p, 576p, 720p, or 1080p and product can display normally (Not every model can support all of these signals.).

— This can only be set when the external input is connected through HDMI/DP and PC/AV Mode is set to AV.

PIP Mode (available in PIP mode (Screen Size / /))

In PC mode

- Auto: Display the picture according to the aspect ratio of the each screen input source.
- Wide: Display the picture in full screen regardless of the aspect ratio of the each screen input source.

In AV mode

- 4:3: Display the picture of the sub-screen with an aspect ratio of 4:3. Suitable for videos and standard broadcasts.
- 16:9: Display the picture of the sub-screen with an aspect ratio of 16:9.
- Screen Fit: Display the picture of the sub-screen with the original aspect ratio without cutting anything off.

— The function may not be supported depending on the ports provided with the product.

— Changing the screen size is available when the following conditions are satisfied.

— The input source is 480p, 576p, 720p, or 1080p and product can display normally (Not every model can support all of these signals.).

— This can only be set when the external input is connected through HDMI/DP and PC/AV Mode is set to AV.

Contrast

PBP Mode (available in PBP mode(Screen Size))

Adjust the contrast level for each screen.

PIP Mode (available in PIP mode(Screen Size / /))

Adjust the contrast level for sub-screen.

Chapter 06
Adjusting OSD (On Screen Display) settings

Function Key Guide → ▥ → On Screen Display
A detailed description of each function is provided. Refer to your product for details.

— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Transparency

Set the transparency for the menu windows.

Position

H-Position

Move the menu position to the left or right.

V-Position

Move the menu position up or down.

Language

Set the menu language.

— A change to the language setting will only be applied to the onscreen menu display.

— It will not be applied to other functions on your PC.

Display Time

The OSD menu will automatically disappear if the menu is not used for a specified period of time.

Display Time is a function to specify the time which you want the OSD menu to disappear.

Chapter 07
Setup and Reset

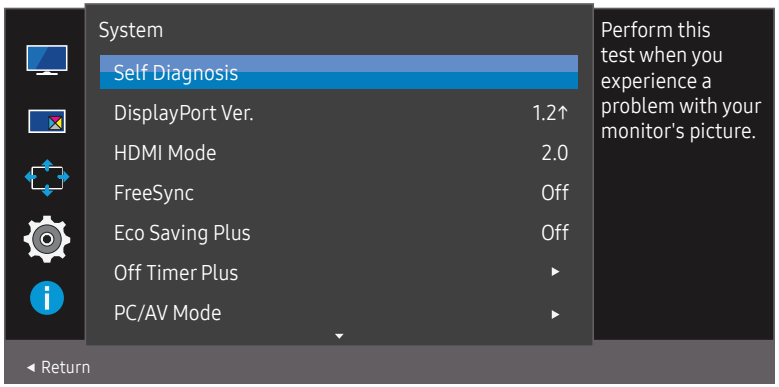
Function Key Guide → ☰ → System
A detailed description of each function is provided. Refer to your product for details.

— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

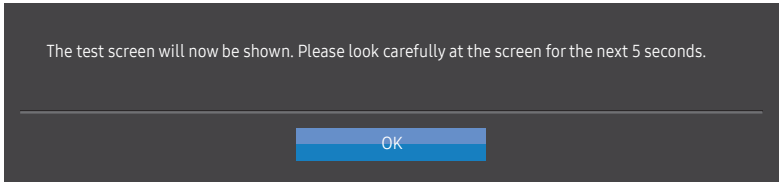
Self Diagnosis

— Not available when PIP/PBP Mode is set to On.

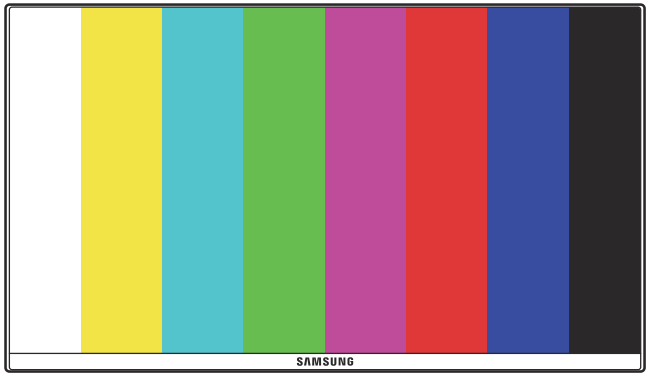
1 Use the Function Key Guide and go to ☰ → System → Self Diagnosis.



2 Select OK when the following screen is prompted.

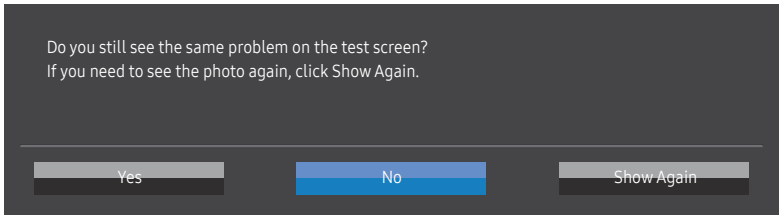


- Review the test screen.

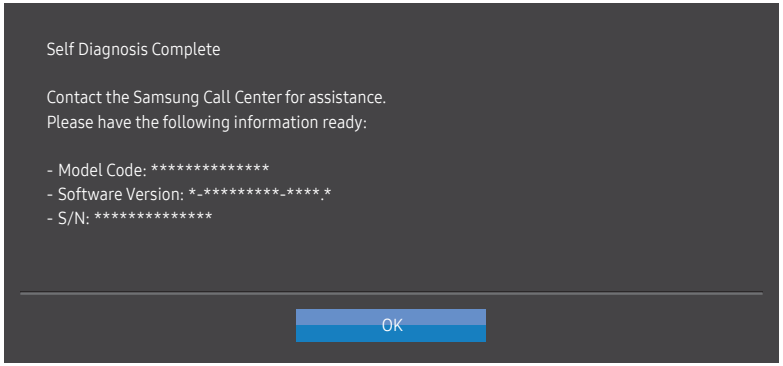


— Never turn off the power nor change the input source during self diagnosis. If possible, try not to interrupt testing.

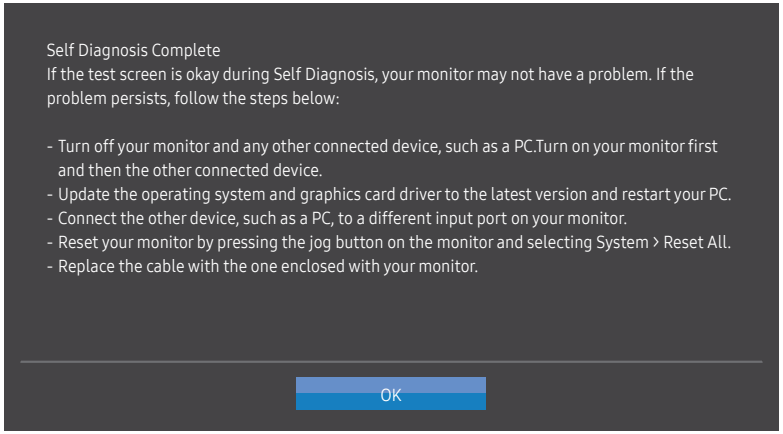
3 Base on the test result, select Yes / No / Show Again.



- You will see the following screen when you select Yes.



- You will see the following screen when you select No.



DisplayPort Ver.

Select the DisplayPort version to use.

- Incorrect settings may cause the screen to go blank. If this occurs, check the device specifications.
- If the product (when set to DisplayPort) is displaying the message Check the cable connection and the settings of the source device. press the JOG button to display the Function Key Guide screen and then select → System → DisplayPort Ver. → 1.1 or 1.2↑.

HDMI Mode

Select the HDMI mode to use.

- The supportable device and resolution may differ depending on its version.
- When the version is changed, the screen may blink.
- If you set the HDMI Mode to 1.4, some high resolutions may not be supported because of bandwidth limitation of the HDMI 1.4 protocol.
- When the setting is not appropriate, a blank screen may appear. In this case, check the specifications of the device.
- This menu is not available when PIP/PBP Mode is set to On and the Screen Size is set to (PBP Mode).

FreeSync

FreeSync technology is solution that eliminates screen tearing without all the usual lag and latency.

This feature will eliminate screen tearing and lag during game play. Improve your gaming experience.

The displayed FreeSync menu items on the monitor may vary, depending on the monitor model and compatibility with the AMD graphics card.

- Off: Disable FreeSync.
- On: Turn on the AMD graphics cards' FreeSync function. You may experience intermittent flickers when playing some games.

Apply the optimum resolution when using FreeSync.

The refresh rate setting method please refer to Q & A → How can I change the frequency?

— The FreeSync function is only enabled in HDMI or DisplayPort mode.
Use the HDMI/DP cable provided by the manufacturer when using FreeSync.

— Not available when PIP/PBP Mode is set to On.

If you use the FreeSync function while playing a game, the following symptoms may occur:

- The screen may flicker depending on the type of graphics card, the game option settings, or the video being played. Try the following actions: decrease the game setting values, change the current FreeSync mode to Off, or visit the AMD website to check your graphics driver's version and update it with the latest one.
- While you are using the FreeSync function, the screen may flicker due to variation of the output frequency from the graphics card.
- The response rate during the game may fluctuate depending on the resolution. A higher resolution generally decreases the response rate.
- The sound quality of the monitor may be degraded.

— If you encounter any issues when using the function, contact the Samsung Service Centre.

— If you change the screen resolution while the function is On, the screen may intermittently blank out due to the graphi card. Set FreeSync to Off and change the resolution.

— The function is unavailable in the devices (e.g. AV devices) that have no AMD graphic card. If the function is applied, the screen may have malfunction.

The models in the Graphics Cards list supports FreeSync

FreeSync can only be used with specific AMD graphics card models. Refer to the following list for supported graphics cards:

Make sure to install the latest official graphics drivers from AMD that support FreeSync.

— For additional AMD graphics card models that support the FreeSync feature, visit the official AMD website.

— Select FreeSync Off if you are using a graphics card from a different manufacturer.

— When applying the FreeSync function via the HDMI cable, it may fail to work due to the bandwidth limitation of certain AMD graphics card.

- Radeon™ RX Vega series
- Radeon™ RX 500 series
- Radeon™ RX 400 series
- Radeon™ R9/R7 300 series (excluding R9 370/X, R7 370/X, R7 265)
- Radeon™ Pro Duo (2016 edition)
- Radeon™ R9 Nano series
- Radeon™ R9 Fury series
- Radeon™ R9/R7 200 series (excluding R9 270/X, R9 280/X)

Eco Saving Plus

Reduce energy consumption compared to consumption at the maximum brightness level.

— This option is not available when SAMSUNG MAGICBright is in Dynamic Contrast mode.

— This menu is not available when Game Mode is enabled.

— This menu is not available when Eye Saver Mode is enabled.

— Not available when PIP/PBP Mode is set to On.

- Off: Deactivate the Eco Saving Plus function.
- Auto: The power consumption will automatically be reduced by about 10% over the current setting. (The reduction of power consumption depends on the customer screen brightness condition.)
- Low: Saves up to 25 % energy compared to the maximum brightness.
- High: Saves up to 50 % energy compared to the maximum brightness.

Off Timer Plus

Configuring Off Timer

Off Timer: Turn on Off Timer mode.

Turn Off After: The off timer can be set within a range of 1 to 23 hours. The product will automatically power off after the specified number of hours.

— This option is only available when Off Timer is set to On.

— For products for the market in some regions, the Off Timer is set to automatically activate 4 hours after the product powers on. This is done in accordance with power supply regulations. If you do not want the timer to activate, go to ☰ → System → Off Timer Plus and set Off Timer to Off.

Configuring Eco Timer

Eco Timer: Turn on Eco Timer mode.

Eco Off After: The Eco Timer can be set between 10 and 180 minutes. The product will automatically power off after the specified time has elapsed.

— This option is only available when Eco Timer is set to On.

PC/AV Mode

Set PC/AV Mode to AV. The picture size will be enlarged.

This option is useful when you view a movie.

- Set to PC when connected to a PC.
- Set to AV when connected to an AV device.

— Products with a display area of 16:9 or 16:10 are only supported.

— If the product is in HDMI, DisplayPort mode and the screen says Check the cable connection and the settings of the source device. press the JOG button to display the Function Key Guide screen and then select → System → PC/AV Mode → HDMI, DisplayPort → PC or AV.

Source Detection

Select either Auto or Manual as the method to recognise input source.

— Not available when PIP/PBP Mode is set to On.

Key Repeat Time

Control the response rate of a button when the button is pressed.

Acceleration, 1 sec, or 2 sec can be selected. If No Repeat is selected, a command responds only once when a button is pressed.

Power LED On

Configure the settings to enable or disable the power LED located at the lower part of the product.

- Working: The power LED is on when the product is turned on.
- Stand-by: The power LED is on when the product is turned off.

Reset All

Return all the settings for the product to the default factory settings.

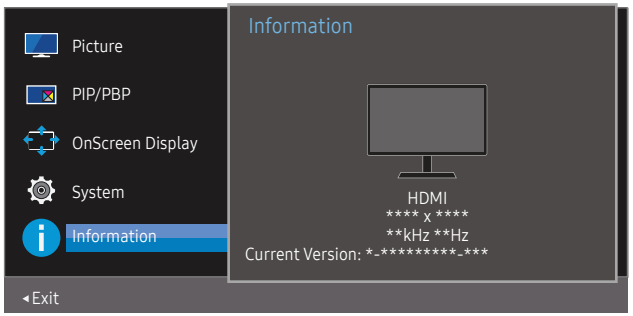
Chapter 08
Information

Function Key Guide → ☰ → Information
A detailed description of each function is provided. Refer to your product for details.

— The functions available may vary depending on the product model. The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

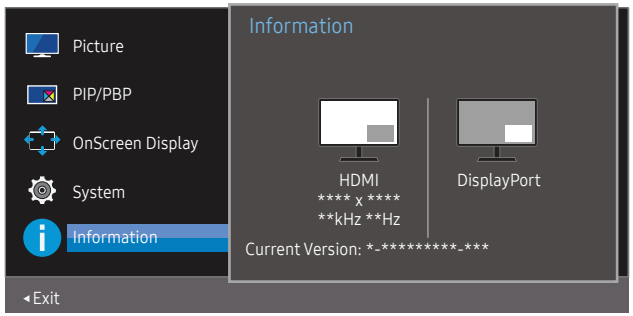
Information

View the current input source mode, frequency and resolution that are in use and the current product version.

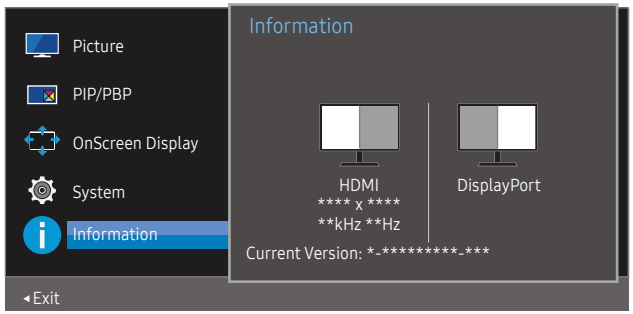


— The displayed image may differ depending on the model.

PIP



PBP



Chapter 09
Installing the Software

Easy Setting Box

Easy Setting Box enables users to use the product by partitioning multiple sections.

To install the latest version of **Easy Setting Box**, download it from the Samsung website at http://www.samsung.com.

— The software may not work properly if you do not restart the PC after the installation.

— The **Easy Setting Box** icon may not appear depending on the PC system and the product specifications.

— If the shortcut icon does not appear, press the F5 key.

Restrictions and Problems with the Installation

The **Easy Setting Box** installation may be affected by the Graphics Card, Motherboard and the Networking Environment.

Upgrade by downloading the firmware from the website

Visit the Samsung website at http://www.samsung.com, enter the product model and download the firmware file.

— For details on how to upgrade, refer to the upgrade guidance file provided at the website.

System Requirements

OS	Hardware
• Windows 7 32Bit/64Bit • Windows 8 32Bit/64Bit • Windows 8.1 32Bit/64Bit • Windows 10 32Bit/64Bit	• At least 32MB of memory • At least 60MB of free space on the hard disk drive

Chapter 10
Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Centre

— Before calling Samsung Customer Service Centre, test your product as follows. If the problem persists, contact Samsung Customer Service Centre.

Product diagnosis (Screen issue)

If a problem occurs with the product screen, run Self Diagnosis to check that the product is working properly.

Checking the Resolution and Frequency

If a resolution that is not supported (see the Standard Signal Mode Table) is selected, the Not Optimum Mode message may appear for a short time or the screen may not be displayed properly.

— The displayed resolution may vary, depending on the PC system settings and cables.

Check the following.

Installation issue

The screen keeps switching on and off.

Check the cable connection between the product and PC, and ensure the connectors are locked.

Blank spaces are found on all four sides of the screen when an HDMI cable is connected to the product and PC.

The blank spaces found on the screen have nothing to do with the product.

Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust the screen size in the HDMI or DVI settings for the graphics card.

If the graphics card settings menu does not have an option to adjust the screen size, update the graphics card driver to the latest version.

(Please contact the graphics card or PC manufacturer for further details about how to adjust the screen settings.)

The power plug cannot be removed from the power adapter.

Do not remove the power plug after assembly.

— The power plug may not be provided, depending on the model.

Screen issue

The power LED is off. The screen will not switch on.

Check that the power cable is connected properly.

If a problem occurs with the product screen, run Self Diagnosis to check that the product is working properly.

The message Check the cable connection and the settings of the source device. appears.

Check that the cable is properly connected to the product.

Check that the device connected to the product is powered on.

If the product is in HDMI or DisplayPort mode, press the JOG button to display the Function Key Guide screen and select the ||| icon.

Not Optimum Mode is displayed.

This message appears when the signal from the graphics card exceeds the maximum resolution or frequency for the product.

Change the maximum resolution and frequency to suit the product performance, referring to Standard Signal Mode Table (P.43).

The images on the screen look distorted.

Check the cable connection to the product.

The screen is not clear. The screen is blurry.

Remove any accessories (video extension cable, etc.) and try again.

Set the resolution and frequency to the recommended level.

The screen appears unstable and shaky. There are shadows or ghost images left on the screen.

Check that the resolution and frequency for the PC are within the range of resolution and frequency compatible with the product. Next, if required, change the settings, referring to Standard Signal Mode Table (P.43) in this manual and the Information menu on the product.

The screen is too bright. The screen is too dark.

Adjust Brightness and Contrast.

Screen colour is inconsistent.

Change the Color settings.

The colours on the screen have a shadow and are distorted.

Change the Color settings.

White does not really look white.

Change the Color settings.

There is no image on the screen and the power LED blinks every 0.5 to 1 second.

The product is operating in power-saving mode.

Press any key on the keyboard or move the mouse to return to normal operating mode.

Text is blurry.

If using a Windows OS (e.g. Windows 7, Windows 8, Windows 8.1 or Windows 10): Go to **Control Panel** → **Fonts** → **Adjust ClearType text** and change **Turn on ClearType**.

Video playback is choppy.

Playback of high-definition large video files can be choppy. This may be because the video player is not optimised for the PC resource.

Try playing the file on another video player.

Sound issue

There is no sound.

Re-check the condition of the connected audio cable and/or adjust the volume.

Check the volume.

Check whether audio is set to mute.

The volume is too low.

Adjust the volume.

If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software programme.

Video is available but there is no sound.

Sound cannot be heard if an HDMI-DVI cable is used to connect the input device.

Connect the device using an HDMI cable or a DP cable.

Source device issue

A beeping sound is heard when my PC is booting.

If a beeping sound is heard when your PC is booting, have your PC serviced.

Q & A

¯ Refer to the user manual for your PC or graphics card for further instructions on adjustment.

How can I change the frequency?

Set the frequency on your graphics card.

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Advanced settings** → **Monitor**, and adjust **Screen Refresh Rate** under **Monitor settings**.
- Windows 8(Windows 8.1): Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Advanced settings** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings** → **Display adapter properties** → **Monitor**, and adjust **Screen refresh rate** under **Monitor settings**.

How can I change the resolution?

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Adjust Resolution**.
- Windows 8(Windows 8.1): Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution**, and adjust the resolution.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings**, and adjust the resolution.

How do I set power-saving mode?

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Personalization** → **Screen Saver Settings** → **Power options** or BIOS SETUP on the PC.
- Windows 8(Windows 8.1): Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** → **Power options** or BIOS SETUP on the PC.
- Windows 10: Go to **Settings** → **Personalization** → **Lock screen** → **Screen timeout settings** → **Power & sleep** or BIOS SETUP on the PC.

Chapter 11
Specifications

General

Model Name	U28R55*
Size	28 Class (27.9 Inches / 70.8 cm)
Display area	620.928 mm (H) x 341.28 mm (V)
Pixel Pitch	0.16 mm (H) x 0.16 mm (V)
Maximum Pixel Clock	600 MHz (HDMI, DisplayPort)
Power Supply	AC100-240V~ 50/60Hz Based on the AC voltage of the adapter. For the DC voltage of the product, refer to the product label.
Signal connectors	HDMI, DisplayPort
Environmental conditions	**Operating** Temperature: 10 °C – 40 °C (50 °F – 104 °F) Humidity: 10 % – 80 %, non-condensing
	Storage Temperature: -20 °C – 45 °C (-4 °F – 113 °F) Humidity: 5 % – 95 %, non-condensing

— Plug-and-Play
This product can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the product and PC system optimises the product settings. Product installation takes place automatically. However, you can customise the installation settings if desired.

— Panel Dots (Pixels)
Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may be brighter or darker on the LCD panel. This does not affect product performance.

— The above specifications are subject to change without notice to improve quality.

— For detailed device specifications, visit the Samsung website.

Standard Signal Mode Table

Model Name		U28R55*
Synchronization	Horizontal Frequency	30 ~ 135 kHz (HDMI, DisplayPort)
	Vertical Frequency	50 ~ 75 Hz (HDMI, DisplayPort)
Resolution	Optimum Resolution	3840 x 2160 @ 60 Hz
	Maximum Resolution	

If a signal that belongs to the following standard signal modes is transmitted from your PC, the screen will automatically be adjusted. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank even though the power LED turns on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

Displayport

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA, 640 x 480	31.469	59.940	25.175	-/-
MAC, 640 x 480	35.000	66.667	30.240	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
MAC, 832 x 624	49.726	74.551	57.284	-/-
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+

Displayport

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+
VESA, 2560 x 1440	88.787	59.951	241.500	+/-
VESA, 3840 x 2160	133.313	59.997	533.250	+/-

HDMI

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA, 640 x 480	31.469	59.940	25.175	-/-
MAC, 640 x 480	35.000	66.667	30.240	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
MAC, 832 x 624	49.726	74.551	57.284	-/-
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+

HDMI

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+
VESA, 2560 x 1440	88.787	59.951	241.500	+/-
CEA, 3840 x 2160	67.500	30.000	297.000	+/+
CEA, 3840 x 2160	135.000	60.000	594.000	+/+

— Horizontal Frequency
The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

— Vertical Frequency
Repeating the same picture dozens of times per second allows you to view natural pictures. The repeat frequency is called "vertical frequency" or "refresh rate" and is indicated in Hz.

— This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your product.

— Some resolutions listed in the table above may not be available depending on graphics card specifications.

Chapter 12
Appendix

Responsibility for the Pay Service (Cost to Customers)

When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician is requested to give instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.)
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If the customer requests instructions on how to use another company's product.
- If customer requests instructions on how to use the network or another company's Programme.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- External impact or drop.
- Use of supplies or separately sold product unspecified by Samsung.
- Repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- Remodeling or repairing the product by customer.
- Using it with incorrect voltage or non-authorised electrical connections.
- Not following the "cautions" in User Manual.

Others

- If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
- If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)

If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.