



User Manual

UD46E-A UD46E-C UD46E-B UD55E-B

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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Chapter 01

Before Using the Product

Copyright

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Microsoft, Windows are registered trademarks of Microsoft Corporation.

VESA, DPM and DDC are registered trademarks of the Video Electronics Standards Association.

Ownership of all other trademarks is attributed to their due owner.

- An administration fee may be charged if either
 - (a) an engineer is called out at your request and there is no defect in the product (i.e. where you have failed to read this user manual).
 - (b) you bring the unit to a repair centre and there is no defect in the product (i.e. where you have failed to read this user manual).
- The amount of such administration charge will be advised to you before any work or home visit is carried out.

Safety Precautions

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.



This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Symbols

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.



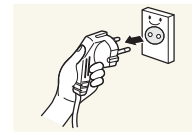
Activities marked by this symbol are prohibited.



Instructions marked by this symbol must be followed.

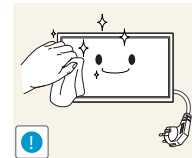
Cleaning

- Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.
- Take the following steps when cleaning.
- The following images are for reference only. Real-life situations may differ from what is shown in the images.

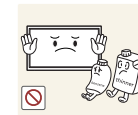


- 1 Power off the product and computer.
- 2 Disconnect the power cord from the product.

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



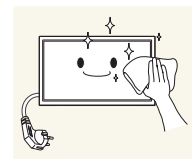
- 3 Wipe the product with a clean, soft and dry cloth.



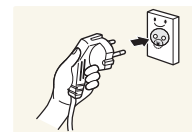
- Do not use detergents that contain alcohol, solvent or surface-active agents.



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



- 4 Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.



- 5 Connect the power cord to the product when cleaning is finished.
- 6 Power on the product and computer.

Storage

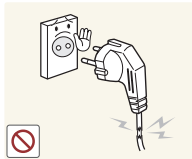
Due to the characteristics of high-glossy products, using a UV humidifier nearby may create white-coloured stains on the product.

— Contact Customer Service Centre if the inside of the product needs cleaning (service fee will be charged).

Electricity and Safety

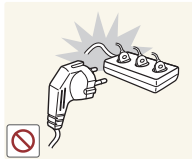
— The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



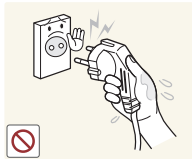
Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

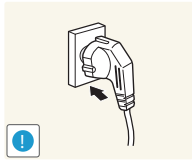


Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

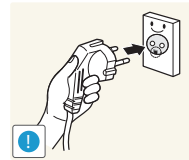


Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



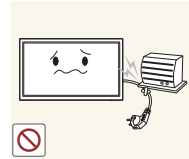
Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.



Connect the power plug to a grounded power socket (type 1 insulated devices only).

- An electric shock or injury may result.



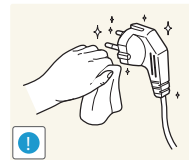
Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

- Damage to the cord may result in a fire or electric shock.



Do not place the power cord or product near heat sources.

- A fire or electric shock may result.



Clean any dust around the pins of the power plug or the power socket with a dry cloth.

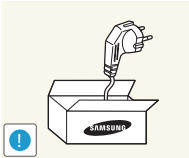
- A fire may result.

Caution



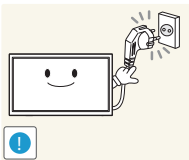
Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.



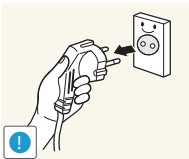
Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- A fire or electric shock may result.



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.
- Note that the product is not completely powered down by using only the power button on the remote.



Hold the plug when disconnecting the power cord from the power socket.

- An electric shock or fire may result.

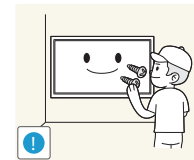
Installation

Warning



DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- A fire may result.



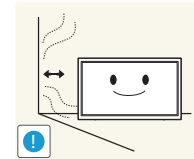
Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.



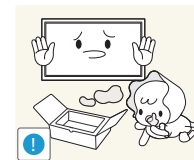
Do not install the product in poorly ventilated spaces such as a bookcase or closet.

- An increased internal temperature may cause a fire.



Install the product at least 10 cm away from the wall to allow ventilation.

- An increased internal temperature may cause a fire.



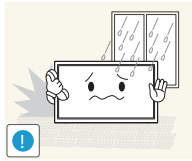
Keep the plastic packaging out of the reach of children.

- Children may suffocate.



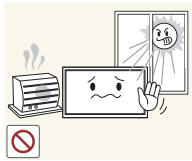
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- 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.



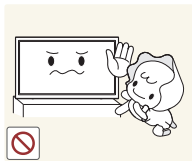
Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.



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.



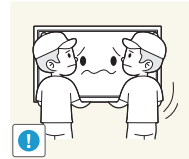
Do not install the product within the reach of young children.

- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.



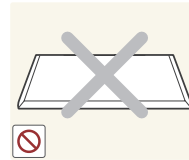
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



Do not drop the product while moving.

- Product failure or personal injury may result.



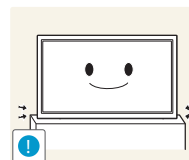
Do not set down the product on its front.

- The screen may become damaged.



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.

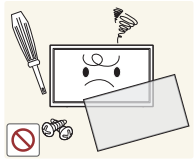


Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.

- Be sure to consult Samsung Customer Service Centre if you want to install the product at such a place.

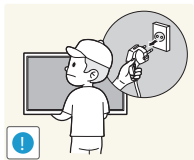
Operation

Warning



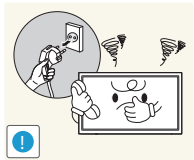
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Centre for repairs.



Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

- Otherwise, the power cord may be damaged and a fire or electric shock may result.



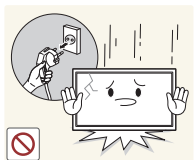
If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Centre.

- An electric shock or fire may result.



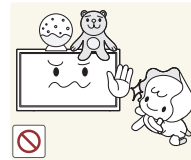
Do not let children hang from the product or climb on top of it.

- Children may become injured or seriously harmed.



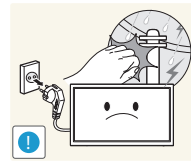
If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Centre.

- Continued use can result in a fire or electric shock.



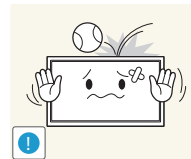
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

- The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.



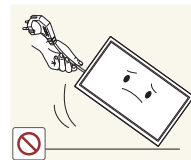
During a lightning or thunderstorm, power off the product and remove the power cable.

- A fire or electric shock may result.



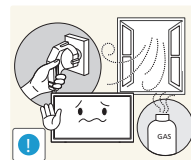
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



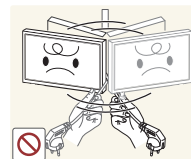
Do not move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



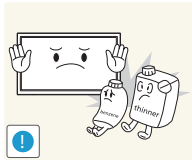
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



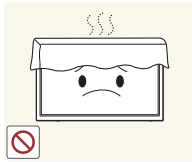
Do not lift or move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



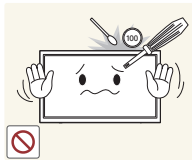
Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



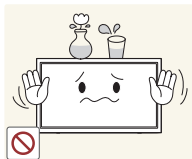
Ensure the vents are not blocked by tablecloths or curtains.

- 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).

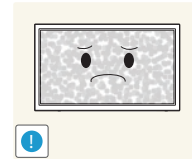
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.



Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

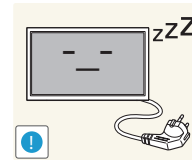
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.

Caution



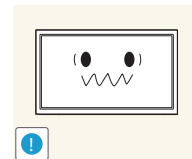
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

- Activate power-saving mode or a moving-picture screen saver if you will not be 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.



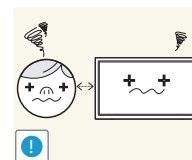
Use the product at the recommended resolution and frequency.

- Your eyesight may deteriorate.



Do not hold the product upside-down or move it by holding the stand.

- The product may fall and become damaged or cause an injury.

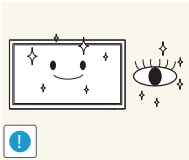


Looking at the screen too close for an extended period of time can deteriorate your eyesight.



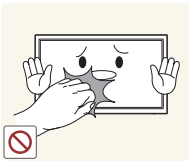
Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

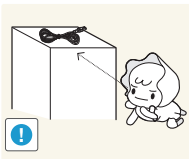


Rest your eyes for more than 5 minutes for every 1 hour of product use.

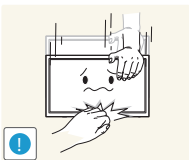
- Eye fatigue will be relieved.



Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.

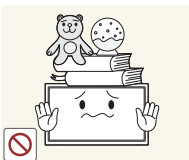


Store small accessories out of the reach of children.



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.



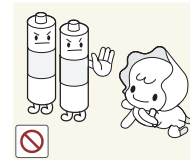
Do not place heavy objects on the product.

- Product failure or personal injury may result.



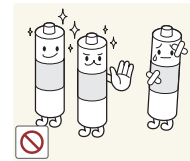
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



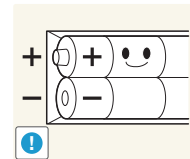
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



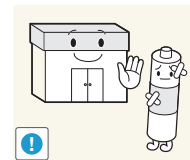
When replacing the battery, insert it with the right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

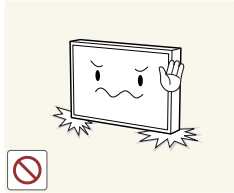
- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



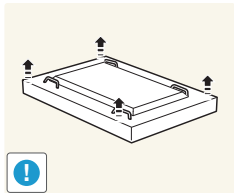
The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling Centre or to a store selling the same type of the battery or rechargeable battery.

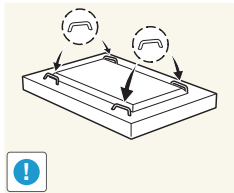
Precautions when handling the panel



Do not stand the product as shown in the image. The panel is fragile and can get damaged.



Lay the product down to handle it as shown in the image. (the packaging can be used).



Ensure you use the handles on the back when moving the product.



Do not hold or grasp any area of the product within 15 mm from the front.

Chapter 02

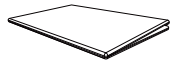
Preparations

Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The pictures may look different from the actual components.

Components

— Components may differ in different locations.



Quick Setup Guide



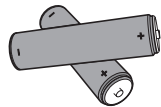
Warranty card
(Not available in some locations)



Regulatory guide



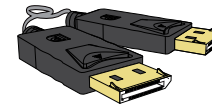
Power cord



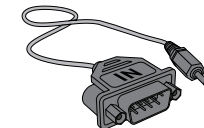
Batteries
(Not available in some locations)



Remote Control



DP cable



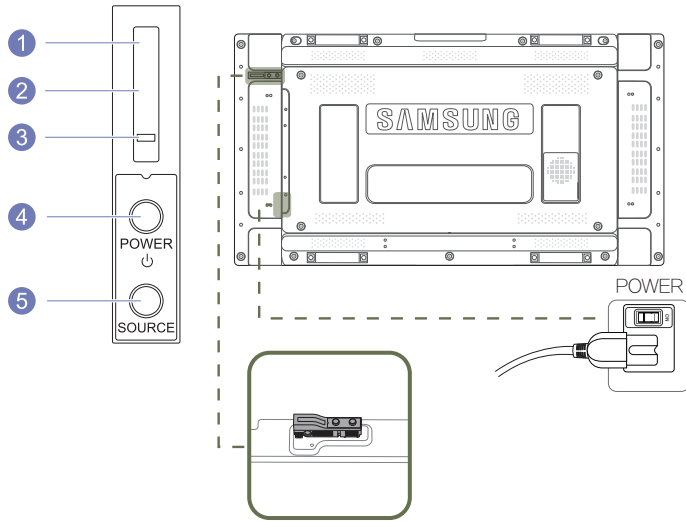
RS232C(IN) adapter



Holder-Ring (4EA) / Screw (4EA)

Parts

External sensor KIT



- The External sensor KIT has a remote-control sensor, a brightness sensor and function keys. If mounting the display onto a wall, you can move the External sensor KIT to the side of the display.
- The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Buttons

Description

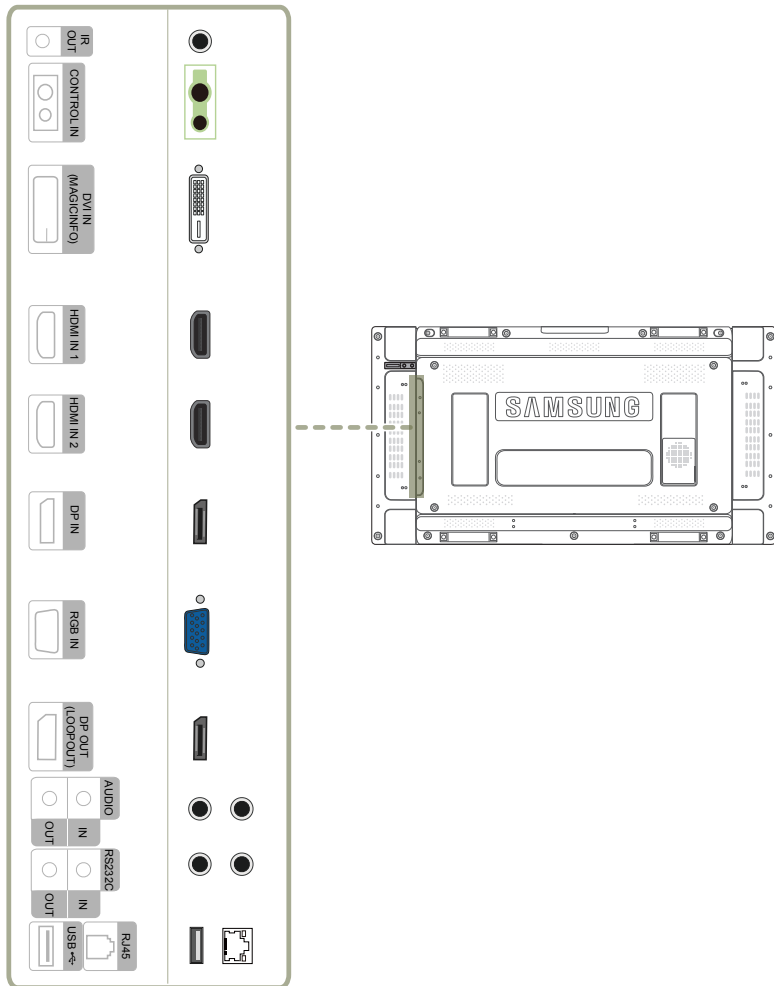
| Buttons | Description |
|--------------------------------|---|
| 1 Remote Control Sensor | Aim the remote control towards this spot on the LCD Display. — Keep the area between the remote sensor and remote control obstacle-free. |
| 2 Light sensor | Automatically detects the intensity of ambient light around a selected display and adjusts the screen brightness. |
| 3 Power indicator | The power indicator will turn off when the product is turned on. It will blink in power-saving mode. |
| 4 POWER button | Use this button for turning the LCD Display on and off. |
| 5 SOURCE button | Switches from PC mode to Video mode. Selects the input source that an external device is connected to. |

Use the remote control within 7m to 10m from the sensor on the product at an angle of 30° from the left and right.

- Store used batteries out of reach of children and recycle.
- Do not use a new and used battery together. Replace both batteries at the same time.
- Remove batteries when the remote control is not to be used for an extended period of time.


Reverse Side

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



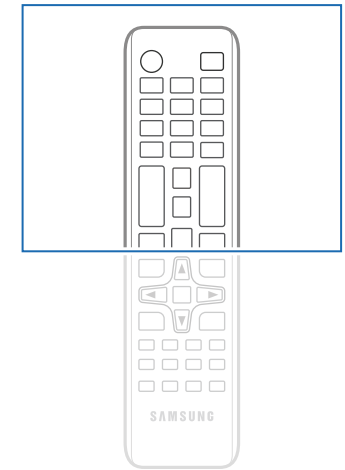
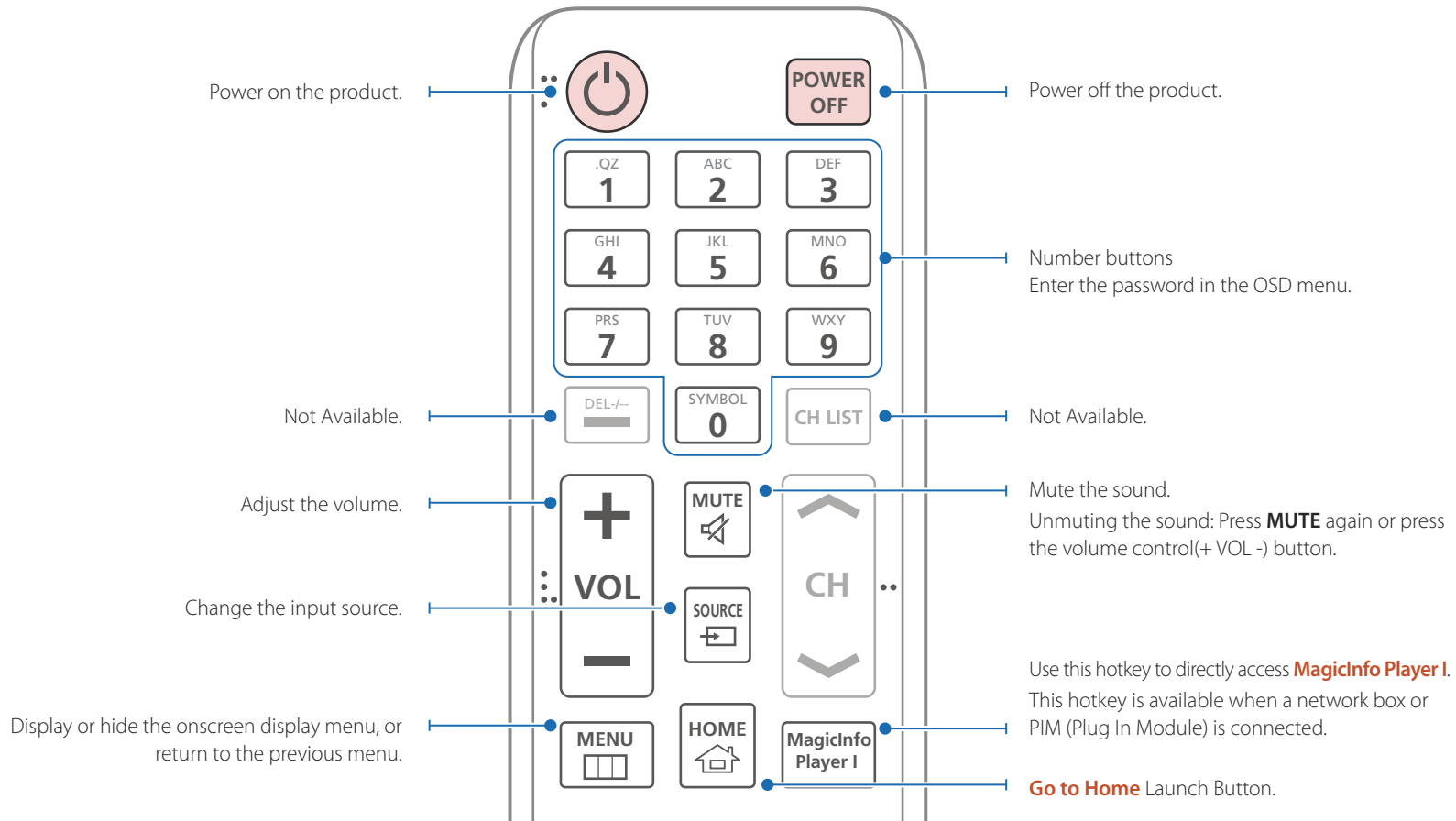
Port

Description

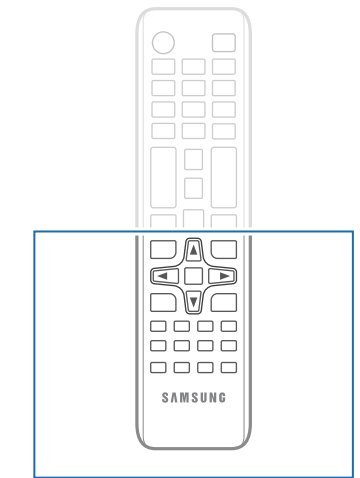
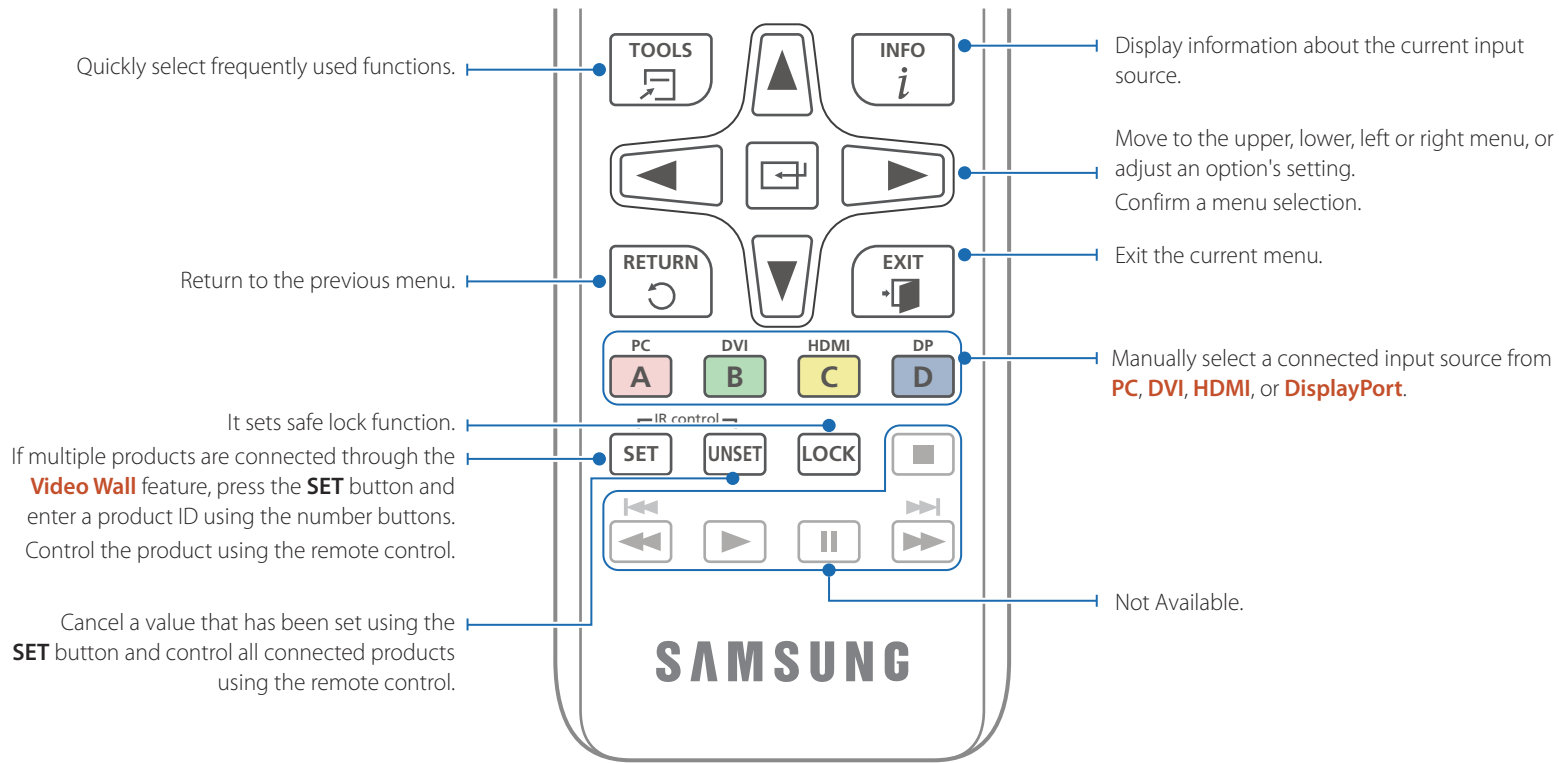
| | |
|---|---|
| IR OUT | Receives the remote control signal via the external sensor board and outputs the signal via LOOP OUT. |
| CONTROL IN | Supplies power to the external sensor board or receives the light sensor signal. |
| DVI IN (MAGICINFO) | DVI IN: Connects to a source device using a DVI cable or HDMI-DVI cable. MAGICINFO: To use MagicInfo, make sure to connect the DP-DVI cable. |
| HDMI IN 1, HDMI IN 2 | Connects to a source device using an HDMI cable. |
| DP IN | Connects to a PC using a DP cable. |
| RGB IN | Connects to a source device using a D-SUB cable. |
| DP OUT (LOOP OUT) | Connects to another product using a DP cable. — When connecting monitors through DP Loopout, using the DP cable that came with the package is recommended. — This port uses an algorithm that is specific to UHD resolution input and output. The port is not compatible with monitors that have FHD content-specific DP Loopout ports. Connecting Loopout ports between monitors of the same model is recommended. |
| AUDIO IN | Receives sound from a PC via an audio cable. |
| AUDIO OUT | Connects to the audio of a source device. |
| RS232C IN | Connects to MDC using an RS232C adapter. |
| RS232C OUT | |
| RJ45 | Connects to MDC using a LAN cable. |
| USB  | Connect to a USB memory device. (Only for update purpose) |

Remote Control

- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- A button without a description in the image below is not supported on the product.

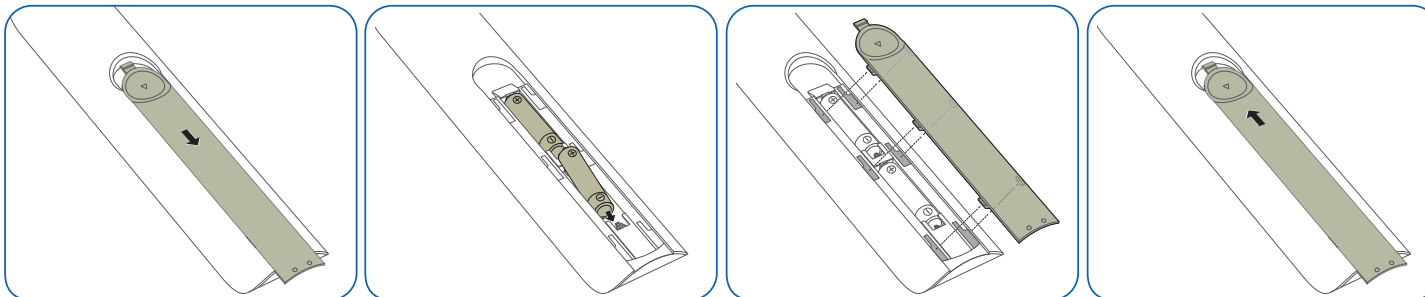


Remote control button functions may differ for different products.



- Remote control button functions may differ for different products.

To place batteries in the remote control



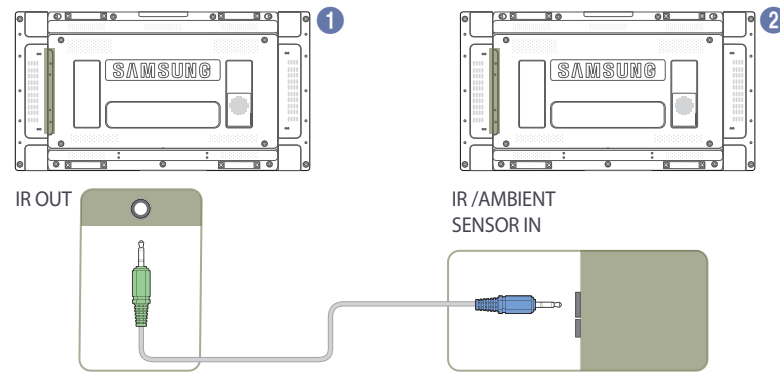
Connection Using an IR Stereo Cable (sold separately)

Make sure to connect the External ambient sensor while the product is powered off. Then, power on the product.

Controlling more than one display product using your remote control

- Connect the **IR OUT** port on the product to the **IR /AMBIENT SENSOR IN** port on the other display product using the dedicated stereo cable.
- A command sent from the remote control pointed at product ① will be received by both display products ① and ②.

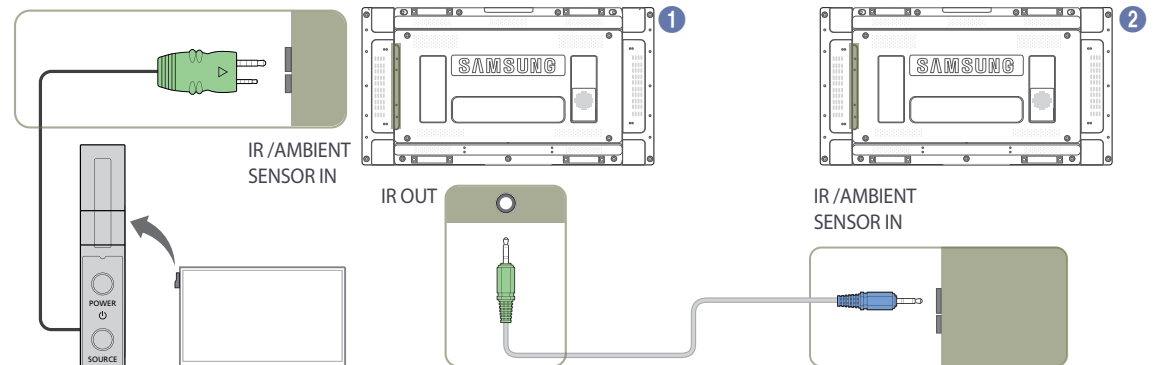
— The appearance may differ depending on the product.



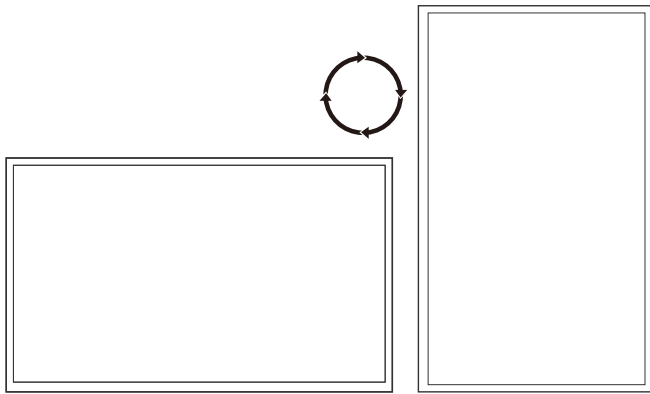
Controlling more than one display product using an External ambient sensor (sold separately)

- A command sent from the remote control pointed at product ① (to which the External ambient sensor is connected) will be received by both display products ① and ②.

— The appearance may differ depending on the product.



Before Installing the Product (Installation Guide)



To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

- Ensure that an authorized installation company installs the wall mount.
- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.

Switching between portrait and landscape

— Contact Samsung Customer Service Centre for further details.

- To use the product in portrait orientation, rotate it clockwise.

Ventilation

Installation on a Perpendicular Wall

A Minimum 40 mm

B Ambient temperature: Under 35°C

- When installing the product on a perpendicular wall, allow at least 40 mm of space between the product and wall surface for ventilation and ensure that the ambient A temperature is kept below 35°C.

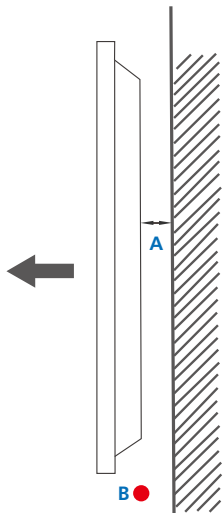


Figure 1.1 Side view

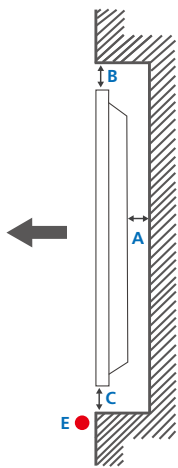
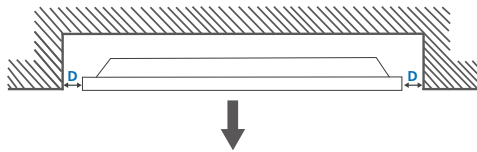


Figure 1.2 Side view

Figure 1.3 Side view



Installation on an Indented Wall

— Contact Samsung Customer Service Centre for further details.

Plane view

A Minimum 40 mm

B Minimum 70 mm

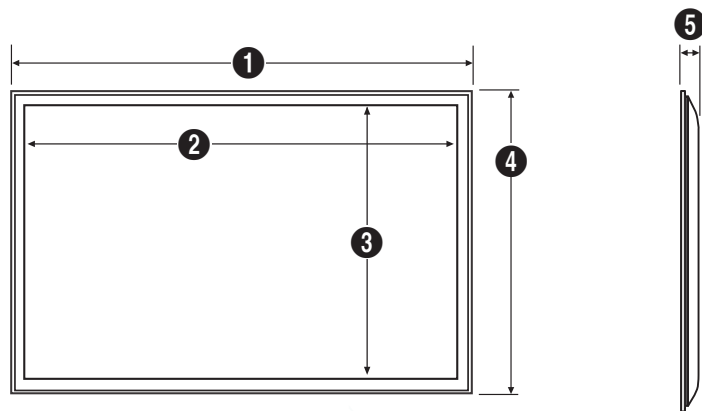
C Minimum 50 mm

D Minimum 50 mm

E Ambient temperature: Under 35°C

— When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 35°C.

Dimensions

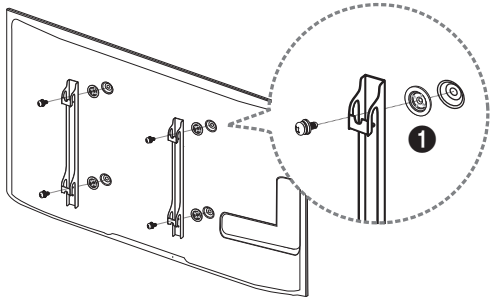


Unit: mm (inches)

| Model name | 1 | 2 | 3 | 4 | 5 |
|------------|---------------|---------------|--------------|--------------|-------------|
| UD46E-A | 1022.1 (40.2) | 1018.3 (40.1) | 572.9 (22.6) | 576.6 (22.7) | 97.4 (3.8) |
| UD46E-C | 1024 (40.3) | 1018.3 (40.1) | 572.9 (22.6) | 578.6 (22.8) | 113.6 (4.5) |
| UD46E-B | 1022.1 (40.2) | 1018.3 (40.1) | 572.9 (22.6) | 576.6 (22.7) | 97.4 (3.8) |
| UD55E-B | 1213.5 (47.8) | 1209.8 (47.6) | 680.6 (26.8) | 684.3 (26.9) | 96.6 (3.8) |

— All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice. Refer to the dimensions prior to performing installation of your product. Not responsible for typographical or printed errors.

Installing the Wall Mount



Preparing before installing Wall-Mount

To install a wall-mount from another manufacturer, use the Holder-Ring(❶).

Installing the Wall Mount

The wall mount kit (sold separately) allows you to mount the product on the wall.

For detailed information on installing the wall mount, see the instructions provided with the wall mount.

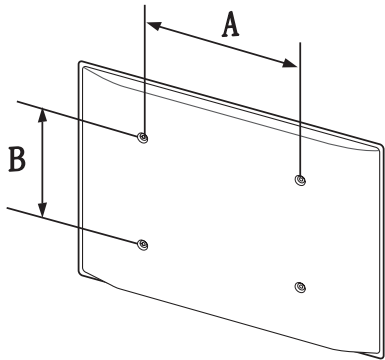
We recommend you contact a technician for assistance when installing the wall mount bracket.

Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you elect to install the wall mount on your own.

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.
- Always have two people mount the product on a wall.
- Standard dimensions for wall mount kits are shown in the table below.

Unit: mm (inches)

| Model name | VESA screw hole specs (A * B) in millimeters | Standard Screw | Quantity |
|---------------------------------------|--|----------------|----------|
| UD46E-A / UD46E-C / UD46E-B / UD55E-B | 600 x 400 (23.6 x 15.7) | M8 | 4 |

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

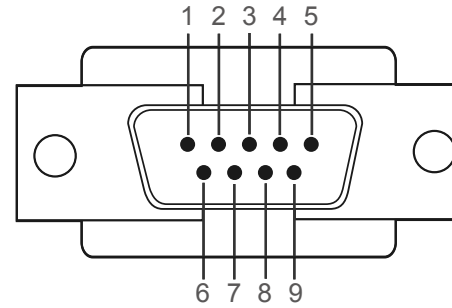
Remote Control (RS232C)

Cable Connection

RS232C Cable

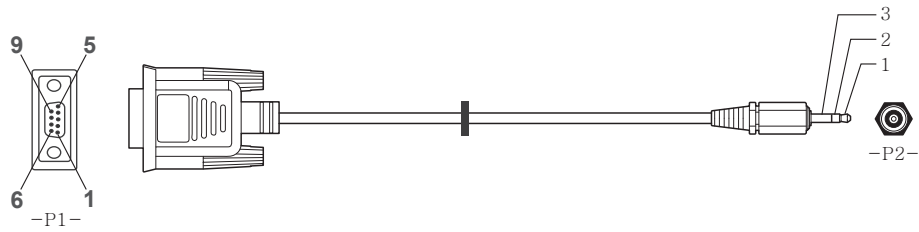
| | |
|-----------------------|------------------------------------|
| Interface | RS232C (9 pins) |
| Pin | TxD (No.2), RxD (No.3), GND (No.5) |
| Bit rate | 9600 bps |
| Data bits | 8 bit |
| Parity | None |
| Stop bit | 1 bit |
| Flow control | None |
| Maximum length | 15 m (only shielded type) |

- Pin assignment



| Pin | Signal |
|-----|-----------------------|
| 1 | Detect data carrier |
| 2 | Received data |
| 3 | Transmitted data |
| 4 | Prepare data terminal |
| 5 | Signal ground |
| 6 | Prepare data set |
| 7 | Send request |
| 8 | Clear to send |
| 9 | Ring indicator |

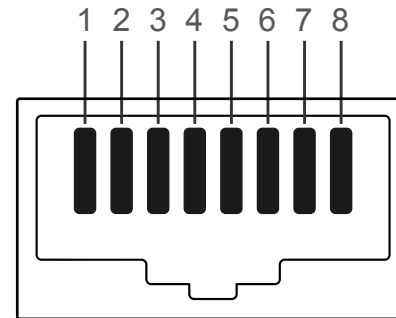
- RS232C cable
Connector: 9-Pin D-Sub to Stereo Cable



| -P1- | | -P1- | | -P2- | | -P2- | |
|--------|-----|------|--------|------|-----|--------|--|
| Female | Rx | 2 | -----> | 3 | Tx | STEREO | |
| | Tx | 3 | <----- | 2 | Rx | PLUG | |
| | Gnd | 5 | ----- | 5 | Gnd | (3.5ø) | |

LAN Cable

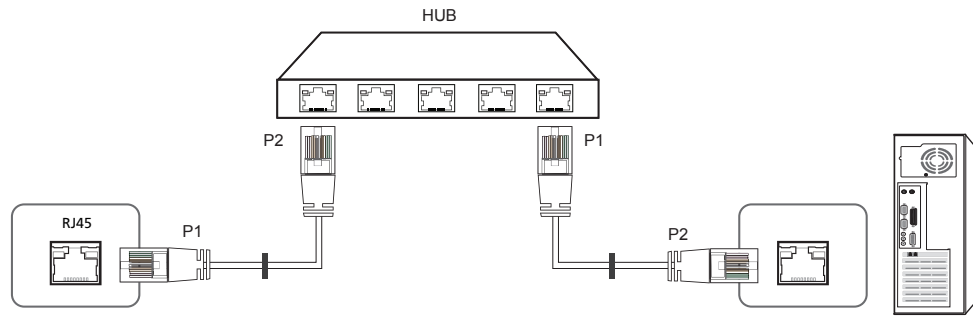
- Pin assignment



| Pin No | Standard Colour | Signal |
|--------|------------------|--------|
| 1 | White and orange | TX+ |
| 2 | Orange | TX- |
| 3 | White and green | RX+ |
| 4 | Blue | NC |
| 5 | White and blue | NC |
| 6 | Green | RX- |
| 7 | White and brown | NC |
| 8 | Brown | NC |

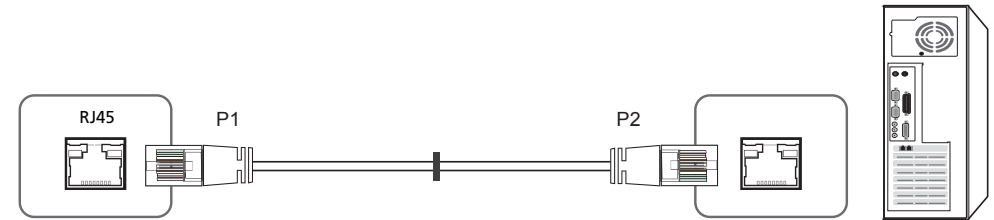
- Connector: RJ45

Direct LAN cable (PC to HUB)



| Signal | P1 | | P2 | Signal |
|--------|----|---------|----|--------|
| TX+ | 1 | <-----> | 1 | TX+ |
| TX- | 2 | <-----> | 2 | TX- |
| RX+ | 3 | <-----> | 3 | RX+ |
| RX- | 6 | <-----> | 6 | RX- |

Cross LAN cable (PC to PC)

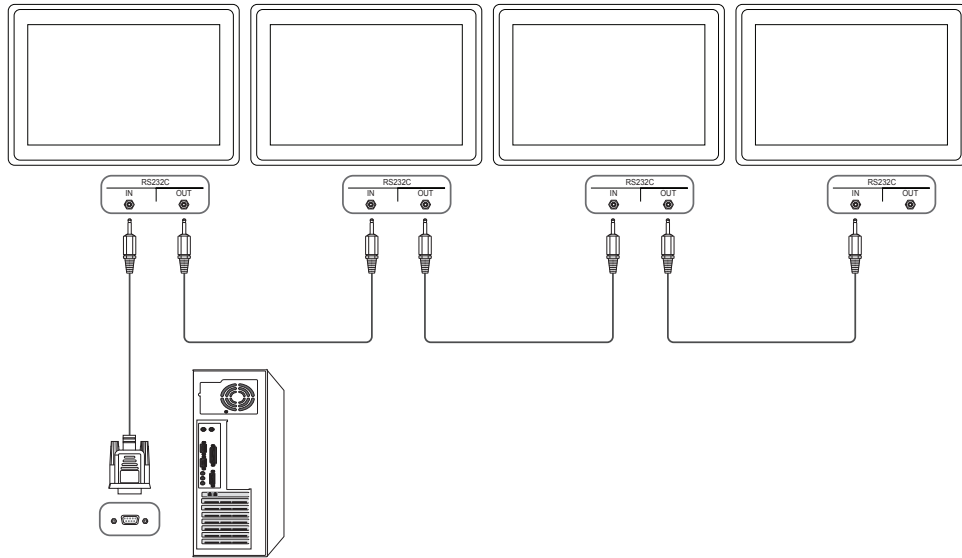


| Signal | P1 | | P2 | Signal |
|--------|----|---------|----|--------|
| TX+ | 1 | <-----> | 3 | RX+ |
| TX- | 2 | <-----> | 6 | RX- |
| RX+ | 3 | <-----> | 1 | TX+ |
| RX- | 6 | <-----> | 2 | TX- |

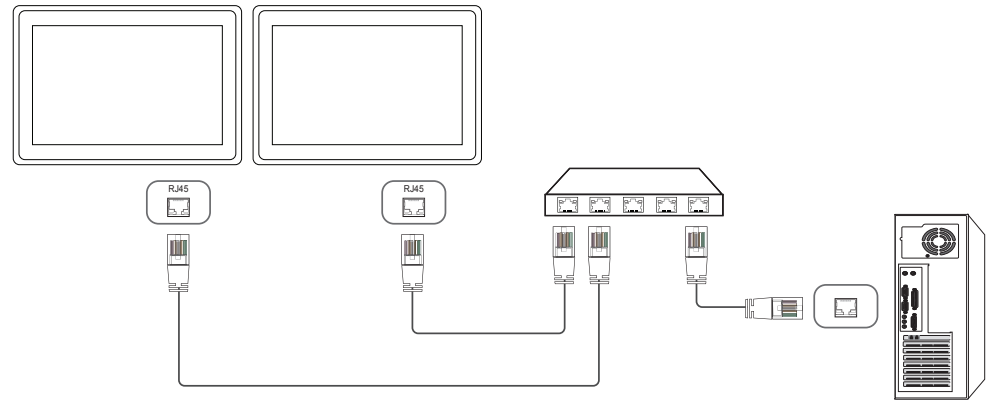
Connection

— Ensure you connect each of the adapters to the correct RS232C IN or OUT port on the product.

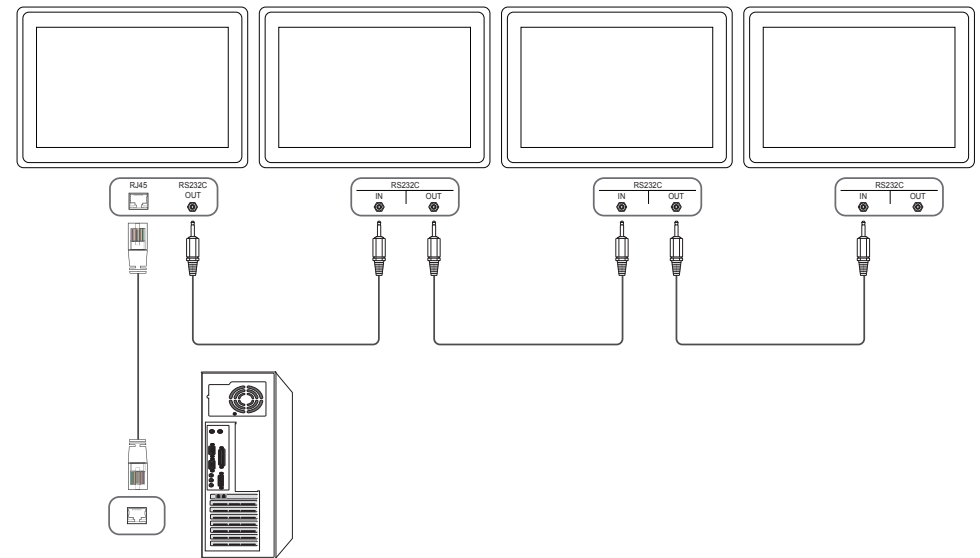
- Connection 1



- Connection 2



- Connection 3



Control Codes

Viewing control state (Get control command)

| Header | Command | ID | Data length | Checksum |
|--------|--------------|----|-------------|----------|
| 0xAA | Command type | | 0 | |

Controlling (Set control command)

| Header | Command | ID | Data length | Data | Checksum |
|--------|--------------|----|-------------|-------|----------|
| 0xAA | Command type | | 1 | Value | |

Command

| No. | Command type | Command | Value range |
|-----|---|---------|-------------|
| 1 | Power control | 0x11 | 0~1 |
| 2 | Volume control | 0x12 | 0~100 |
| 3 | Input source control | 0x14 | - |
| 4 | Screen mode control | 0x18 | - |
| 5 | Screen size control | 0x19 | 0~255 |
| 6 | Auto adjustment control (PC and BNC only) | 0x3D | 0 |
| 7 | Video wall mode control | 0x5C | 0~1 |
| 8 | Safety Lock | 0x5D | 0~1 |
| 9 | Video Wall On | 0x84 | 0~1 |

| No. | Command type | Command | Value range |
|-----|-------------------------|---------|-------------|
| 10 | Video Wall User Control | 0x89 | - |

- All communications take place in hexadecimal. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below (11+FF+01+01=112), the first digit is removed.

E.g. Power On & ID=0

| Header | Command | ID | Data length | Data 1 | Checksum |
|--------|---------|----|-------------|---------|----------|
| 0xAA | 0x11 | | 1 | "Power" | |

| Header | Command | ID | Data length | Data 1 | Checksum |
|--------|---------|----|-------------|--------|----------|
| 0xAA | 0x11 | | 1 | 1 | 12 |

- To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as "0xFE" and transmit commands. Commands will be executed by each device but ACK will not respond.

Power control

- Function
A product can be powered on and off using a PC.
- Viewing power state (Get Power ON / OFF Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x11 | | 0 | |

- Setting power ON/Off (Set Power ON / OFF)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|---------|----------|
| 0xAA | 0x11 | | 1 | "Power" | |

"Power": Power code to be set on a product.

1: Power ON

0: Power OFF

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|---------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x11 | "Power" | |

"Power": Power code to be set on a product.

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x11 | "ERR" | |

"ERR" : A code showing what error has occurred.

Volume control

- Function
The volume of a product can be adjusted using a PC.
- Viewing volume state (Get Volume Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x12 | | 0 | |

- Setting the volume (Set Volume)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|----------|----------|
| 0xAA | 0x12 | | 1 | "Volume" | |

"Volume": Volume value code to be set on a product. (0-100)

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|----------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x12 | "Volume" | |

"Volume": Volume value code to be set on a product. (0-100)

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x12 | "ERR" | |

"ERR" : A code showing what error has occurred.

Input source control

- Function
The input source of a product can be changed using a PC.
- Viewing input source state (Get Input Source Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x14 | | 0 | |

- Setting the input source (Set Input Source)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|----------------|----------|
| 0xAA | 0x14 | | 1 | "Input Source" | |

"Input Source": An input source code to be set on a product.

| | |
|------|--------------|
| 0x14 | PC |
| 0x18 | DVI |
| 0x0C | Input source |
| 0x08 | Component |
| 0x20 | MagicInfo |
| 0x1F | DVI_video |
| 0x30 | RF(TV) |
| 0x40 | DTV |
| 0x21 | HDMI1 |
| 0x22 | HDMI1_PC |
| 0x23 | HDMI2 |

| | |
|------|-------------|
| 0x24 | HDMI2_PC |
| 0x25 | DisplayPort |

— DVI_video, HDMI1_PC and HDMI2_PC cannot be used with the Set command. They only respond to "Get" commands.

— This model does not support HDMI1, HDMI1_PC, HDMI2 and HDMI2_PC ports.

— **MagicInfo** is only available with models that contain the **MagicInfo** function.

— RF(TV), DTV are only available with models that include a TV.

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|----------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x14 | "Input Source" | |

"Input Source": An input source code to be set on a product.

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x14 | "ERR" | |

"ERR": A code showing what error has occurred.

Screen mode control

- Function
The screen mode of a product can be changed using a PC.
Screen mode cannot be controlled when the **Video Wall** function is enabled.

— This control can only be used on models that include a TV.

- Viewing screen status (Get Screen Mode Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x18 | | 0 | |

- Setting the picture size (Set Picture Size)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|---------------|----------|
| 0xAA | 0x18 | | 1 | "Screen Mode" | |

"Screen Mode": A code that sets the product status

| | |
|------|-----------|
| 0x01 | 16:9 |
| 0x04 | Zoom |
| 0x31 | Wide Zoom |
| 0x0B | 4:3 |

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|---------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x18 | "Screen Mode" | |

"Screen Mode": A code that sets the product status

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x18 | "ERR" | |

"ERR": A code showing what error has occurred

Screen size control

- Function
The screen size of a product can be changed using a PC.

- Viewing the screen size (Get Screen Size Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x19 | | 0 | |

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|---------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x19 | "Screen Size" | |

"Screen Size": product screen size (range: 0 – 255, unit: inch)

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x19 | "ERR" | |

"ERR": A code showing what error has occurred

Auto adjustment control (PC and BNC only)

- Function
Automatically adjust the PC system screen using a PC.
- Viewing auto adjustment state (Get Auto Adjustment Status)
None
- Setting auto adjustment (Set Auto Adjustment)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|-------------------|----------|
| 0xAA | 0x3D | | 1 | "Auto Adjustment" | |

"Auto Adjustment": 0x00 (at all times)

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x3D | "Auto Adjustment" | |

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x3D | "ERR" | |

"ERR": A code showing what error has occurred

Video Wall Mode Control

- Function
Video Wall mode can be activated on a product using a PC.
This control is only available on a product whose **Video Wall** is enabled.
- Viewing video wall mode (Get Video Wall Mode)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x5C | | 0 | |

- Setting the video wall (Set Video Wall Mode)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|-------------------|----------|
| 0xAA | 0x5C | | 1 | "Video Wall Mode" | |

"Video Wall Mode": A code used to activate Video Wall mode on a product

1: **Full**

0: **Natural**

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x5C | "Video Wall Mode" | |

"Video Wall Mode": A code used to activate Video Wall mode on a product

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x5C | "ERR" | |

"ERR": A code showing what error has occurred

Safety Lock

- Function
PC can be used to turn the **Safety Lock** function on or off on a product.
This control is available regardless of whether or not the power is turned on.
- Viewing the safety lock state (Get Safety Lock Status)

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x5D | | 0 | |

- Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|---------------|----------|
| 0xAA | 0x5D | | 1 | "Safety Lock" | |

"Safety Lock": Safety lock code to be set on a product

1: ON

0: OFF

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|---------------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x5D | "Safety Lock" | |

"Safety Lock": Safety lock code to be set on a product

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x5D | "ERR" | |

"ERR": A code showing what error has occurred

Video Wall On

- Function
Turn Video Wall on or off on the product from your computer.
- Get Video Wall On/Off Status

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x84 | | 0 | |

- Set Video Wall On/Off

| Header | Command | ID | Data length | Data | Checksum |
|--------|---------|----|-------------|-----------|----------|
| 0xAA | 0x84 | | 1 | V.Wall_On | |

- V.Wall_On: Video Wall code to be assigned to the product

1: Video Wall ON

0: Video Wall OFF

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|-----------|----------|
| 0xAA | 0xFF | | 3 | 'A' | 0x84 | V.Wall_On | |

V.Wall_On : Same as above

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x84 | ERR | |

"ERR": A code showing what error has occurred

Video Wall User Control

- Function
Turn the Video Wall function on or off on the product from your computer.
- Get Video Wall Status

| Header | Command | ID | Data length | Checksum |
|--------|---------|----|-------------|----------|
| 0xAA | 0x89 | | 0 | |

- Set Video Wall

| Header | Command | ID | Data length | Val1 | Val2 | Checksum |
|--------|---------|----|-------------|----------|----------|----------|
| 0xAA | 0x89 | | 2 | Wall_Div | Wall_SNo | |

Wall_Div: Video Wall Divider code assigned to the product

10x10 Video Wall Model

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Off | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 | 0x00 |
| 1 | 0x11 | 0x12 | 0x13 | 0x14 | 0x15 | 0x16 | 0x17 | 0x18 | 0x19 | 0x1A | 0x1B | 0x1C | 0x1D | 0x1E | 0x1F |
| 2 | 0x21 | 0x22 | 0x23 | 0x24 | 0x25 | 0x26 | 0x27 | 0x28 | 0x29 | 0x2A | 0x2B | 0x2C | 0x2D | 0x2E | 0x2F |
| 3 | 0x31 | 0x32 | 0x33 | 0x34 | 0x35 | 0x36 | 0x37 | 0x38 | 0x39 | 0x3A | 0x3B | 0x3C | 0x3D | 0x3E | 0x3F |
| 4 | 0x41 | 0x42 | 0x43 | 0x44 | 0x45 | 0x46 | 0x47 | 0x48 | 0x49 | 0x4A | 0x4B | 0x4C | 0x4D | 0x4E | 0x4F |
| 5 | 0x51 | 0x52 | 0x53 | 0x54 | 0x55 | 0x56 | 0x57 | 0x58 | 0x59 | 0x5A | 0x5B | 0x5C | 0x5D | 0x5E | 0x5F |
| 6 | 0x61 | 0x62 | 0x63 | 0x64 | 0x65 | 0x66 | 0x67 | 0x68 | 0x69 | 0x6A | 0x6B | 0x6C | 0x6D | 0x6E | 0x6F |
| 7 | 0x71 | 0x72 | 0x73 | 0x74 | 0x75 | 0x76 | 0x77 | 0x78 | 0x79 | 0x7A | 0x7B | 0x7C | 0x7D | 0x7E | N/A |
| 8 | 0x81 | 0x82 | 0x83 | 0x84 | 0x85 | 0x86 | 0x87 | 0x88 | 0x89 | 0x8A | 0x8B | 0x8C | N/A | N/A | N/A |
| 9 | 0x91 | 0x92 | 0x93 | 0x94 | 0x95 | 0x96 | 0x97 | 0x98 | 0x99 | 0x9A | 0x9B | N/A | N/A | N/A | N/A |
| 10 | 0xA1 | 0xA2 | 0xA3 | 0xA4 | 0xA5 | 0xA6 | 0xA7 | 0xA8 | 0xA9 | 0xAA | N/A | N/A | N/A | N/A | N/A |
| 11 | 0xB1 | 0xB2 | 0xB3 | 0xB4 | 0xB5 | 0xB6 | 0xB7 | 0xB8 | 0xB9 | N/A | N/A | N/A | N/A | N/A | N/A |
| 12 | 0xC1 | 0xC2 | 0xC3 | 0xC4 | 0xC5 | 0xC6 | 0xC7 | 0xC8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 13 | 0xD1 | 0xD2 | 0xD3 | 0xD4 | 0xD5 | 0xD6 | 0xD7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 14 | 0xE1 | 0xE2 | 0xE3 | 0xE4 | 0xE5 | 0xE6 | 0xE7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 15 | 0xF1 | 0xF2 | 0xF3 | 0xF4 | 0xF5 | 0xF6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Wall_SNo: Product Number code assigned to the product

10x10 Video Wall Model : (1 ~ 100)

| Set Number | Data |
|------------|------|
| 1 | 0x01 |
| 2 | 0x02 |
| ... | ... |
| 99 | 0x63 |
| 100 | 0x64 |

- Ack

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Val2 | Checksum |
|--------|---------|----|-------------|---------|-------|----------|----------|----------|
| 0xAA | 0xFF | | 4 | 'A' | 0x89 | Wall_Div | Wall_SNo | |

- Nak

| Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum |
|--------|---------|----|-------------|---------|-------|------|----------|
| 0xAA | 0xFF | | 3 | 'N' | 0x89 | ERR | |

"ERR": A code showing what error has occurred

Chapter 03

Connecting and Using a Source Device

Before Connecting

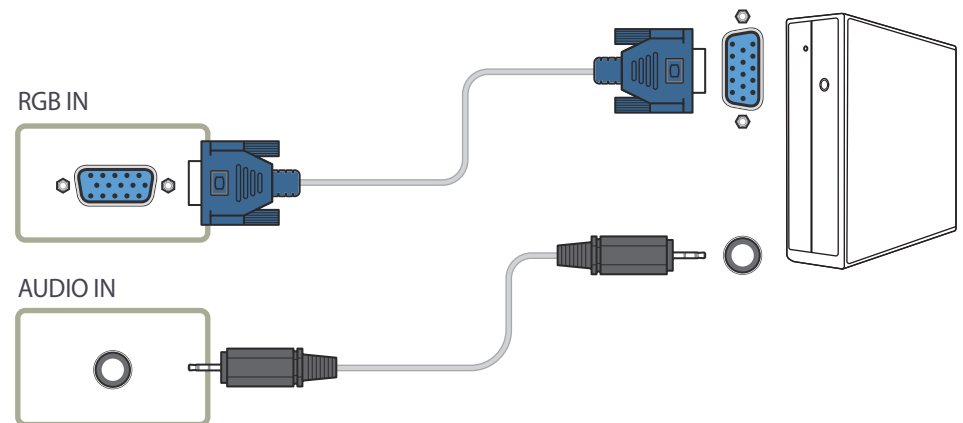
Pre-connection Checkpoints

- Before connecting a source device, read the user manual provided with it.
The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed.
Connecting the power cable during connection may damage the product.
- Connect the sound ports correctly: left = white and right = red.
- Check the types of ports at the back of the product you want to connect.

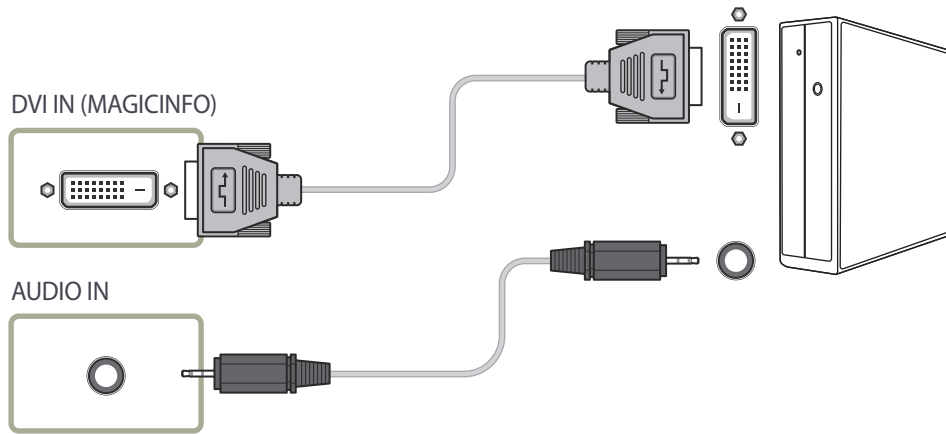
Connecting to a PC

- Do not connect the power cable before connecting all other cables.
Ensure you connect a source device first before connecting the power cable.
 - A PC can be connected to the product in a variety of ways.
Select a connection method suitable for your PC.
- Connecting parts may differ in different products.

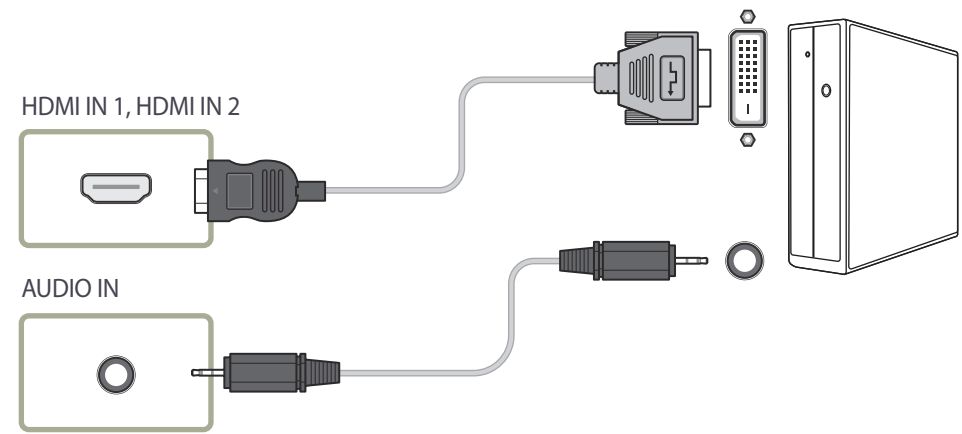
Connection using the D-SUB cable (Analogue type)



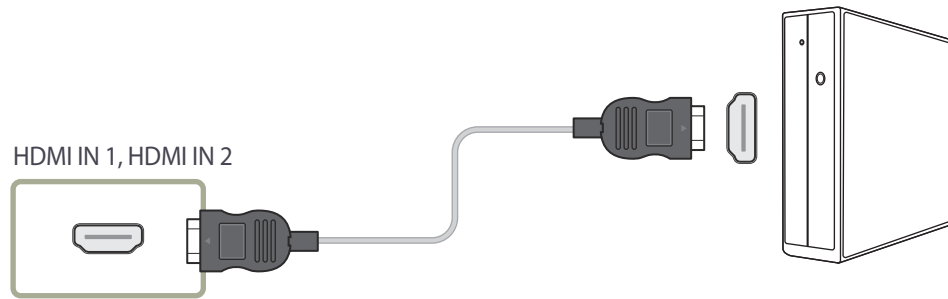
Connection using a DVI cable (Digital type)



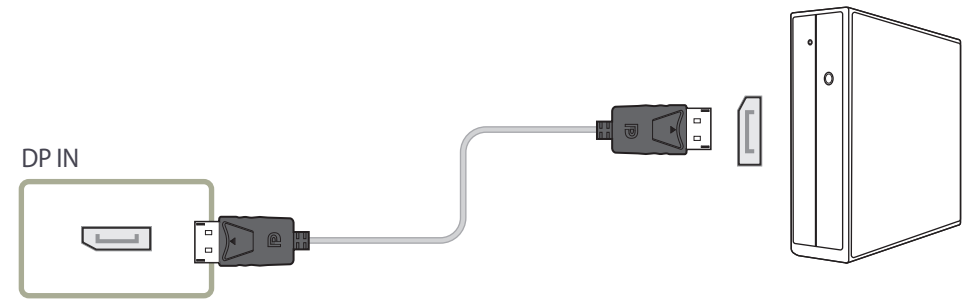
Connection Using an HDMI-DVI Cable



Connection Using an HDMI Cable



Connection Using a DP Cable



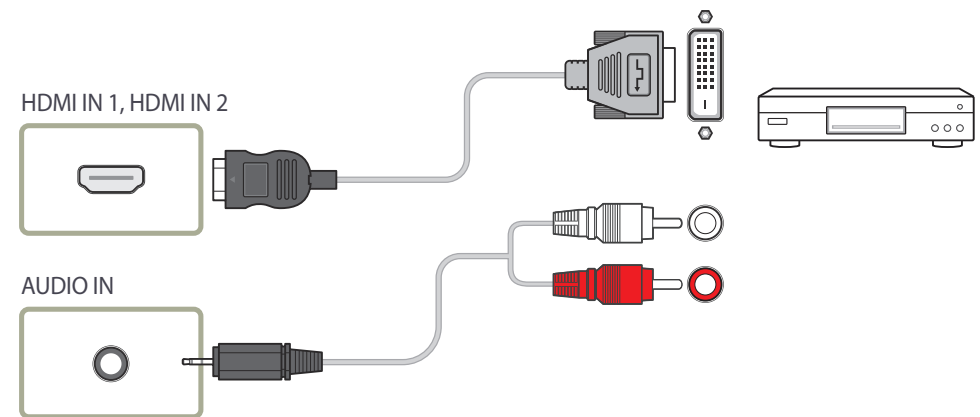
- Precautions for using DP
 - To increase the standby power capacity, the product stops DP communication when it is turned off or in power-saving mode.
 - If the product in dual monitor mode is turned off or goes into power-saving mode, monitor setting changes may not be updated. As a result, screen output may not be displayed properly.
 - In the occurrence of this issue, set **Max. Power Saving** to **Off** before using the product.
 - Some graphics cards that are not compliant with the DP standard may prevent the Windows Booting/Bios screen from being displayed when the product is in power-saving mode. If this is the case, make sure to turn on the product first before turning on your PC.
 - The DisplayPort interface (**DP IN**) on the product and the provided DP cable are designed based on the VESA standards. Using a DP cable that is not VESA compliant may cause the product to function improperly. Samsung Electronics shall not be held responsible for any issues from using a cable that is not VESA compliant.
Make sure to use a DP cable that is VESA compliant.

Connecting to a Video Device

- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- You can connect a video device to the product using a cable.
 - Connecting parts may differ in different products.
 - Press the **SOURCE** button on the remote control to change the source.

Connection Using an HDMI-DVI Cable

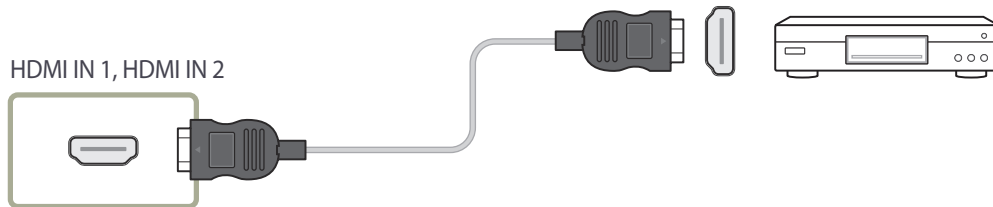
- Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. To resolve this, additionally connect an audio cable to the audio ports on the product and video device.
- Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.



Connection Using an HDMI Cable

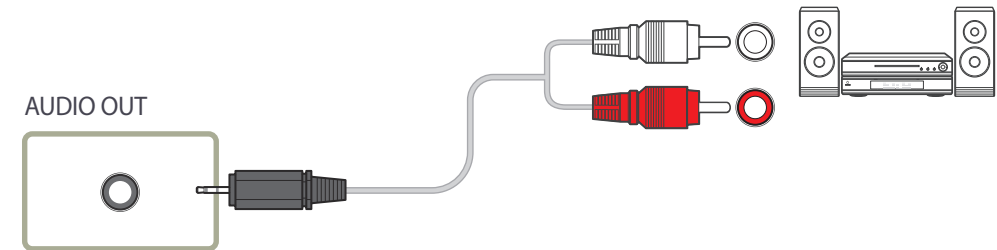
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
 - To connect the product to a digital device that does not support HDMI output, use an HDMI-DVI and audio cables.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the product. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended.
This product does not support the ethernet function via HDMI.



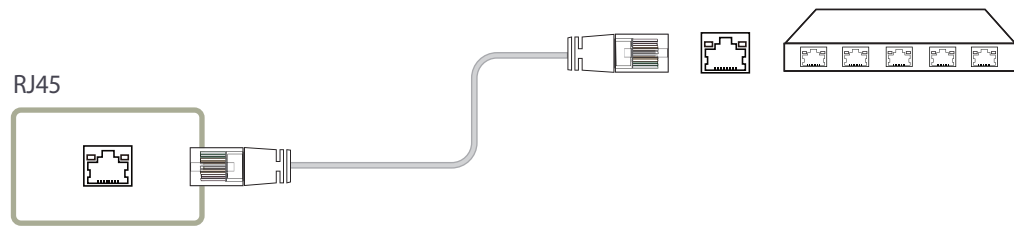
Connecting to an Audio System

— Connecting parts may differ in different products.



Connecting the LAN Cable

Connecting parts may differ in different products.



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

Connecting the Network box (Sold separately)

— For details on how to connect to a network box, refer to the user's manual provided with the network box upon purchase.

MagicInfo

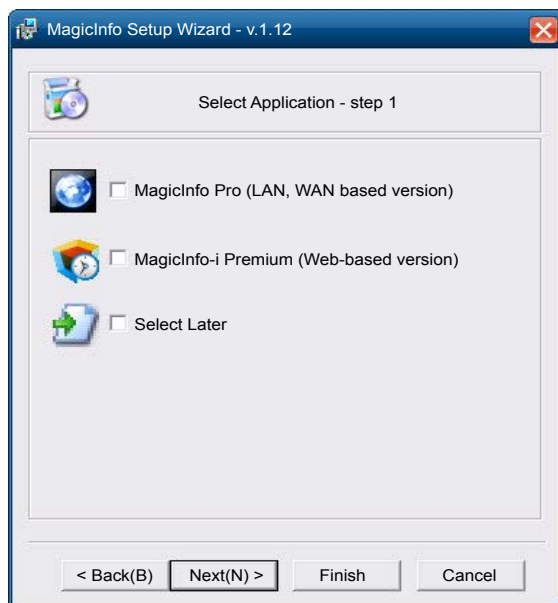
To use **MagicInfo**, a network box (sold separately) must be connected to the product.

— To change the MagicInfo settings, run "MagicinfoSetupWizard" on the desktop.

— For details on how to use **MagicInfo**, refer to the DVD provided with the network box.

— The information in this section is subject to change without notice for quality improvement.

— If a problem occurs after installing an operating system other than the one provided with the network box, restoring the previous version of the operating system, or installing software that is not compatible with the operating system provided, you will not be able to benefit from technical support and will be charged a fee for a visit from a service technician. A product exchange or refund will also not be available.



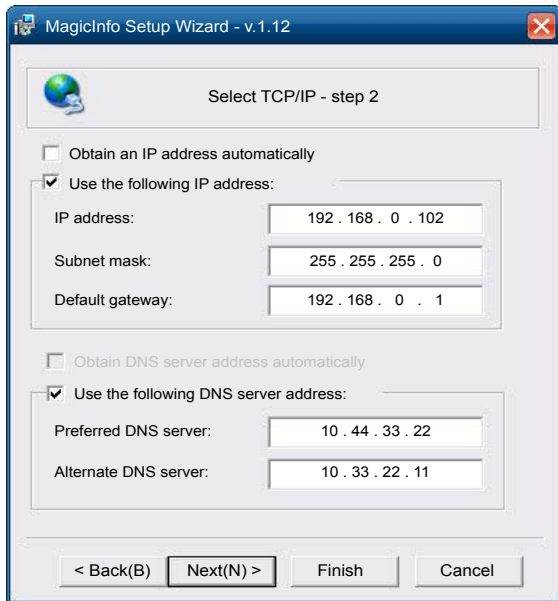
Entering MagicInfo mode

1 After installing and connecting the network box (sold separately) to the product, power on the product.

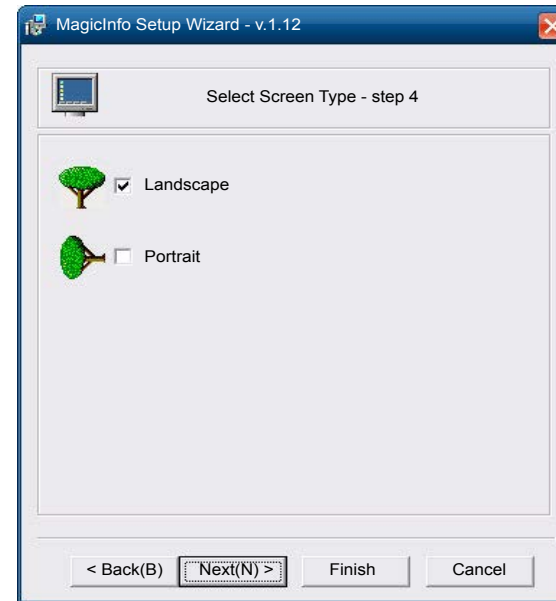
2 Press **SOURCE** on the remote control, and select **MagicInfo**.

— Connecting the network box to the **DVI IN (MAGICINFO)** port on the product will change **Source** from **DVI** to **MagicInfo**.

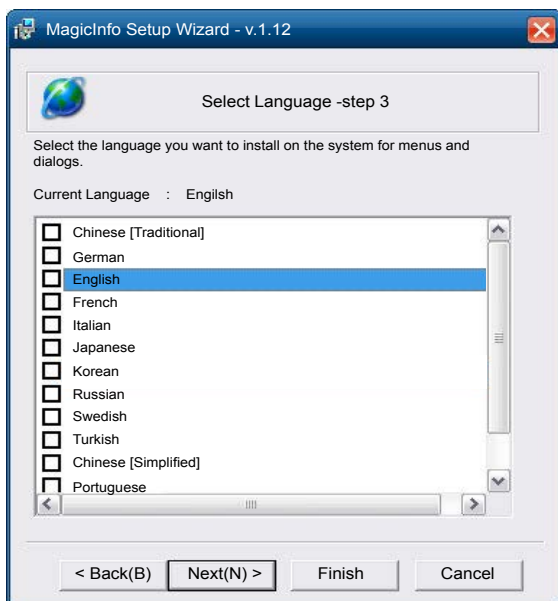
3 Select the default application you want to run when MagicInfo starts.



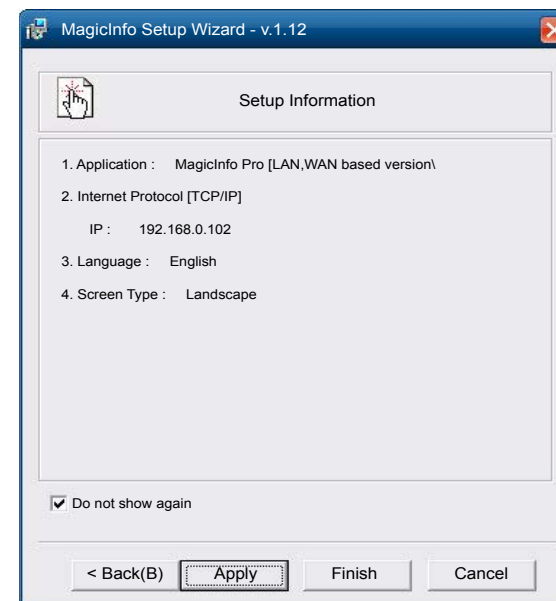
4 Enter the IP information.



6 Select a display mode.



5 Select a language. (The default language is **English**.)



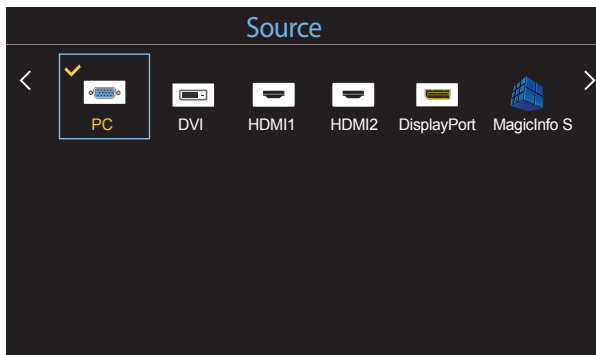
7 Double-check the settings you have just configured.

— If the execution icon does not appear, double-click the **MagicInfo** icon on the desktop. The icon will appear at the bottom right of the screen.

Changing the Input source

Source

SOURCE → Source



– The displayed image may differ depending on the model.

Source allows you to select a variety of sources and change source device names.

You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

– The input source can also be changed by using the **SOURCE** button on the remote control.

– The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

Edit Name

SOURCE → Source → TOOLS → Edit Name → ENTER ↵

Sometimes the screen will not display properly unless the name of a source device is specified in **Edit Name**.

In addition, it is best to rename the source device in **Edit Name** to obtain optimal picture quality.

– The list can include the following source devices. **Source** devices on the list differ depending on the selected source.

VCR / DVD / Cable STB / HD STB / Satellite STB / AV Receiver / DVD Receiver / Game / Camcorder / DVD Combo / DHR / PC / DVI PC / DVI Devices

– Available settings in the **Picture** menu depend on the current source and settings made in **Edit Name**.

- When connecting a PC to the **HDMI IN 1, HDMI IN 2** port, set **Edit Name** to **PC**. In other cases, set **Edit Name** to AV devices.
- When connecting a PC to the **HDMI IN 1, HDMI IN 2** port with HDMI cable, you should set the product to **PC** mode under **Edit Name**.
- When connecting a PC to the **HDMI IN 1, HDMI IN 2** port with HDMI to DVI cable, you should set the product to **DVI PC** mode under **Edit Name**.
- When connecting an AV devices to the **HDMI IN 1, HDMI IN 2** port with HDMI to DVI cable, you should set the product to **DVI Devices** mode under **Edit Name**.

Chapter 04

Using MDC

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC. For details on how to use the MDC programme, refer to Help after installing the programme. The MDC programme is available on the website.

After you press the **On** button following the **Off** button, the product checks its status for about a minute. To run a command, try it after a minute.

MDC Programme Installation/Uninstallation

Installation

— MDC installation can be affected by the graphics card, mother board and network conditions.

- 1 Click the **MDC Unified** installation programme.
- 2 Select a language for installation. Next, click "**OK**".
- 3 When the "**Welcome to the InstallShield Wizard for MDC_Unified**" screen appears, click "**Next**".
- 4 In the "**License Agreement**" window displayed, select "**I accept the terms in the license agreement**" and click "**Next**".
- 5 In the displayed "**Customer Information**" window, fill out all the information fields and click "**Next**".
- 6 In the displayed "**Destination Folder**" window, select the directory path you want to install the programme in and click "**Next**".

— If the directory path is not specified, the programme will be installed in the default directory path.

- 7 In the displayed "**Ready to Install the Program**" window, check the directory path to install the programme in and click "**Install**".
- 8 Installation progress will be displayed.
- 9 Click "**Finish**" in the displayed "**InstallShield Wizard Complete**" window.
 - Select "**Launch MDC Unified**" and click "**Finish**" to run the MDC programme immediately.
- 10 The **MDC Unified** shortcut icon will be created on the desktop after installation.
 - The MDC execution icon may not be displayed depending on the PC system or product specifications.
 - Press F5 if the execution icon is not displayed.

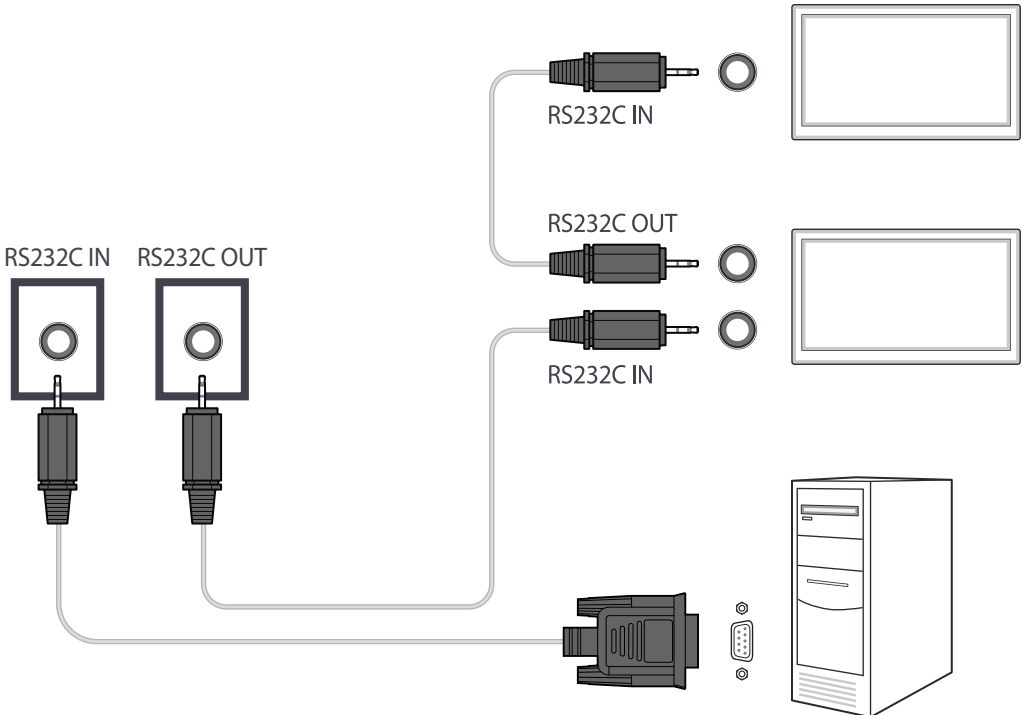
Uninstallation

- 1 Select **Settings > Control Panel** on the **Start** menu and double-click **Add/Delete Program**.
- 2 Select **MDC Unified** from the list and click **Change/Remove**.

Connecting to MDC

Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.

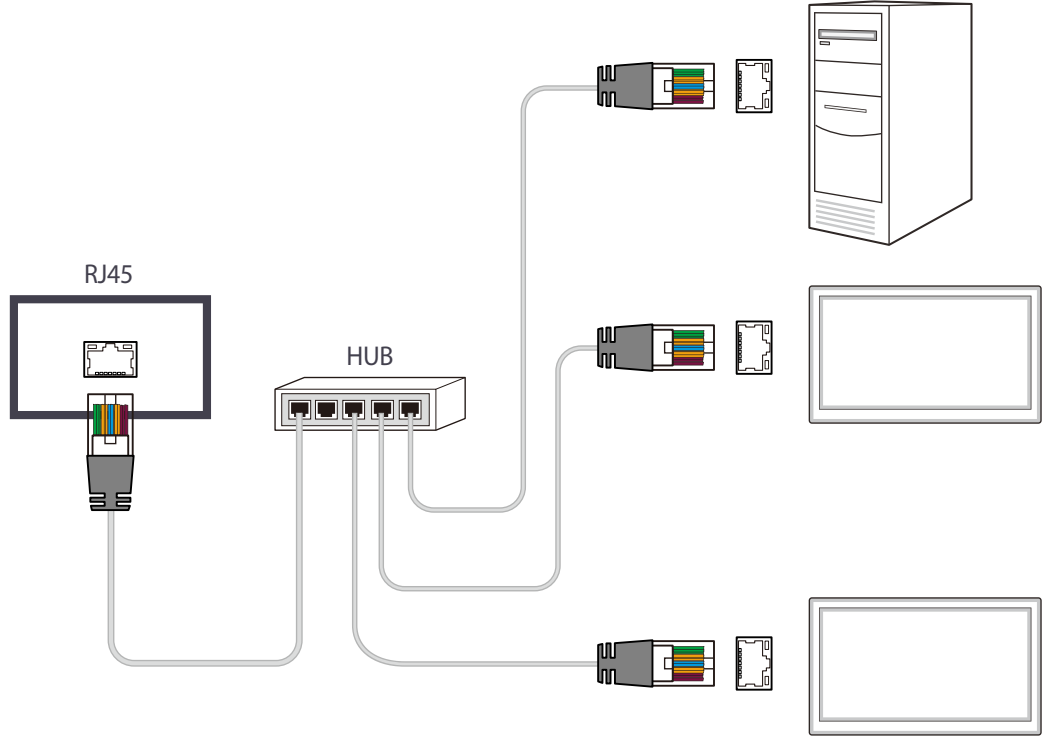


Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. Display devices can be connected to each other using a LAN cable.

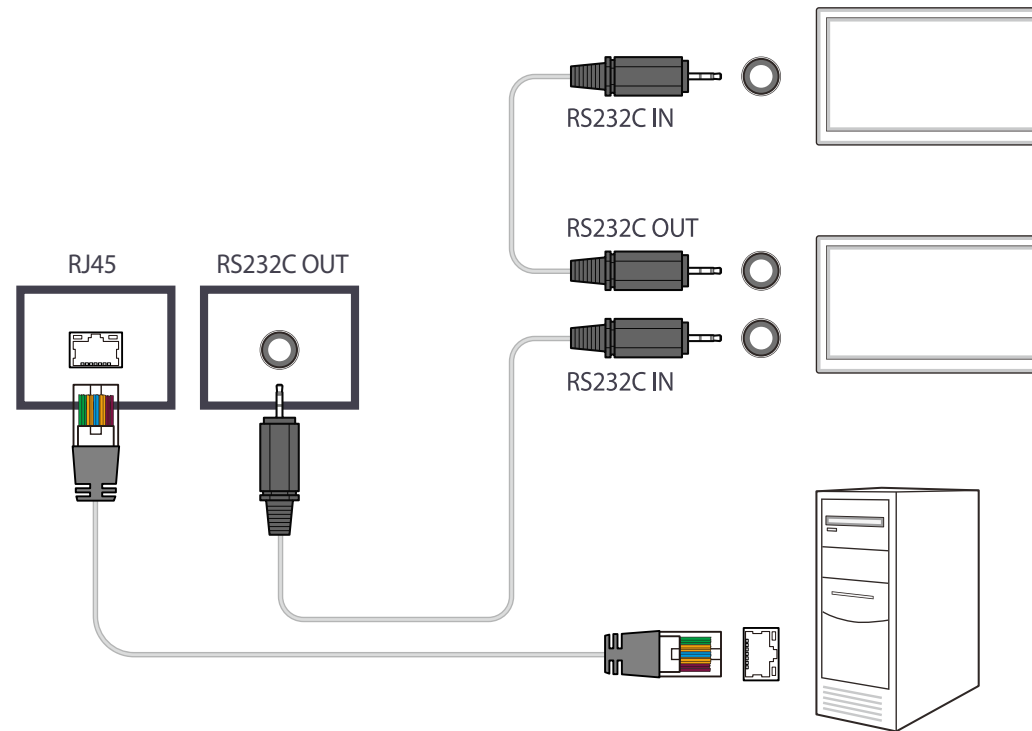
Connection using a direct LAN cable

Multiple products can be connected using the **RJ45** port on the product and the LAN ports on the HUB.



Connection using a cross LAN cable

Multiple products can be connected using the **RS232C IN / OUT** port on the product.



Chapter 05

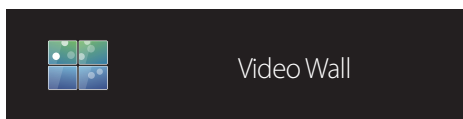
Home feature

This feature is provided in [Support](#) → [Go to Home](#).

Accessible using the **HOME** button on the remote control.

Video Wall

HOME  → **Video Wall** → **ENTER** 



— The displayed image may differ depending on the model.

Customize the layout of multiple displays that are connected to form a video wall.

In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays.

To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.

Video Wall

You can activate or deactivate **Video Wall**.

To organize a video wall, select **On**.

- **Off / On**

Horizontal x Vertical

This feature automatically splits a videowall display based on a videowall matrix configuration.

Enter the videowall matrix.

The videowall display is split based on the configured matrix. The number of vertical or horizontal display devices can be set within the range 1 and 15.

— A videowall display can be split into a maximum of 225 screens.

— The **Horizontal x Vertical** option is only enabled when **Video Wall** is set to **On**.

Screen Position

To rearrange split screens, adjust the number for each product in the matrix using the **Screen Position** feature.

Selecting **Screen Position** will display the videowall matrix with the numbers assigned to the products that form the videowall.

To change the order of a display device, change the device number and press the  button.

— A maximum of 255 displays can be arranged in **Screen Position**.

— The **Screen Position** option is only enabled when **Video Wall** is set to **On**.

— To use the function, make sure **Horizontal x Vertical** is configured.

Format

Select how to display images on the videowall display.

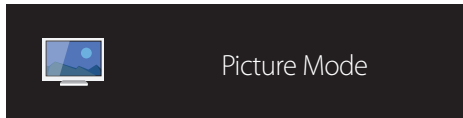
- **Full**: Display images in full screen.
- **Natural**: Display images in the original aspect ratio.

— The **Format** option is only enabled when **Video Wall** is set to **On**.

— When using **Video Wall** mode, a resolution of 1280x720P, 1920x1080P or 3840x2160P is recommended.

Picture Mode

HOME  → **Picture Mode** → ENTER 



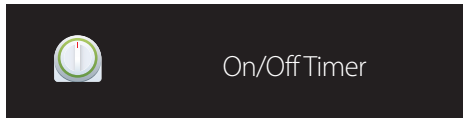
– The displayed image may differ depending on the model.

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used.

- **Shop & Mall**
Suitable for shopping malls.
 - Select either **Video/Image** or **Text** depending on the picture mode.
- **Office & School**
Suitable for offices and schools.
 - Select either **Video/Image** or **Text** depending on the picture mode.
- **Terminal & Station**
Suitable for bus terminals and train stations.
 - Select either **Video/Image** or **Text** depending on the picture mode.
- **Video Wall**
Suitable for environments where videowall display are used.
 - Select either **Video/Image** or **Text** depending on the picture mode.
- **Calibration**
In this mode, the brightness, colour, gamma and uniformity settings customized using the colour calibration programme **Advanced Color Management** are applied.
 - To apply the **Calibration** mode properly, make sure you configure the picture quality settings, such as brightness, colour, gamma and uniformity, using the colour calibration programme **Advanced Color Management**.
 - To download the **Advanced Color Management** programme, visit www.samsung.com/displaysolutions.

On/Off Timer

HOME  → On/Off Timer → ENTER 



– The displayed image may differ depending on the model.

— You must set the clock before you can use **Clock Set**.

On Timer

Set **On Timer** so that your product turns on automatically at a time and on a day of your choosing.

The power is turned on with the specified volume or input source.

On Timer: Set the on timer by making a selection from one of the seven options. Ensure you set the current time first.

(**On Timer 1 ~ On Timer 7**)

- **Setup:** Select **Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun** or **Manual**.
If you select **Manual**, you can choose the days you want **On Timer** to turn on your product.
 - The check mark indicates days you've selected.
- **Time:** Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- **Volume:** Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source:** Select the input source of your choice.


Off Timer

Set the off timer (**Off Timer**) by making a selection from one of the seven options. (**Off Timer 1 ~ Off Timer 7**)

- **Setup:** Select **Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun** or **Manual**.
If you select **Manual**, you can choose the days you want **Off Timer** to turn off your product.
 - The check mark indicates days you've selected.
- **Time:** Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

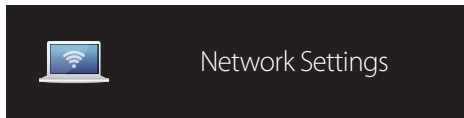
Holiday Management

Timer will be disabled during a period specified as a holiday.

- **Add Holiday:** Specify the period you want to add as a holiday.
Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the **Save** button.
The period will be added to the list of holidays.
 - **Start:** Set the start date of the holiday.
 - **End:** Set the end date of the holiday.
- **Edit:** Select a holiday item and then change the date.
- **Delete:** Delete selected items from the list of holidays.
- **Set Applied Timer:** Set the **On Timer** and **Off Timer** to not activate on public holidays.
 - Press  to select the **On Timer** and **Off Timer** settings you do not want to activate.
 - The selected **On Timer** and **Off Timer** will not activate.

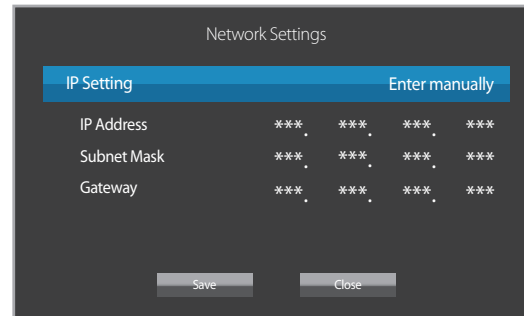
Network Settings

HOME  → Network Settings → ENTER 



– The displayed image may differ depending on the model.

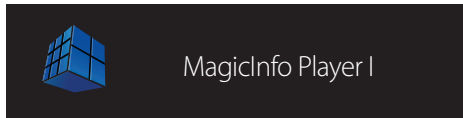
View the network settings.



- **IP Setting:** Obtain automatically, Enter manually
- **IP Address:** Manually enter the **IP Address** if **IP Setting** is set to **Enter manually**.
- **Subnet Mask:** Manually enter the **Subnet Mask** if **IP Setting** is set to **Enter manually**.
- **Gateway:** Manually enter the **Gateway** if **IP Setting** is set to **Enter manually**.

MagicInfo Player I

HOME  → **MagicInfo Player I** → ENTER 



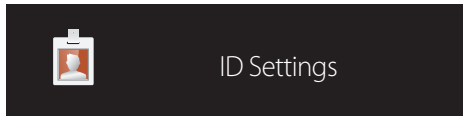
Change source to **MagicInfo Player I**.

MagicInfo Player I publishes and plays a variety of content, including created content and multimedia content (images, videos and audio content), from the server or a connected device.

- The displayed image may differ depending on the model.

ID Settings

HOME  → ID Settings → ENTER 



— The displayed image may differ depending on the model.

Assign an ID to a set.

Press ▲/▼ to select a number, and press .

ID Settings

Enter the ID number of the product connected to the input cable for input signal reception. (Range: 0~224)

— Enter the number you want using the number buttons on the remote control.

Device ID Auto Set

— Assign ID number automatically for all connected products.

PC Connection Cable

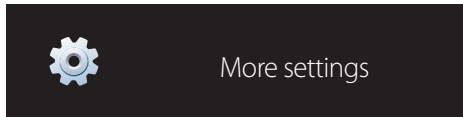
Select a method to connect to MDC to receive the MDC signal.

- **RS232C cable**
Communicate with MDC via the RS232C-stereo cable.
- **RJ45(LAN) cable**
Communicate with MDC via the RJ45 cable.

More settings

The picture settings menu appears.

HOME  → More settings → ENTER 



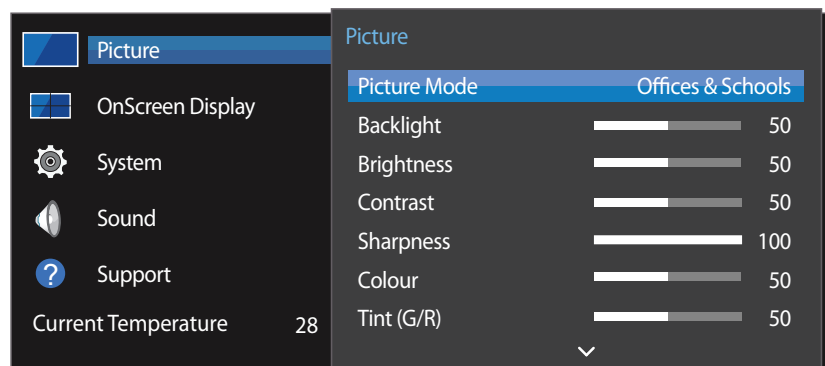
- The displayed image may differ depending on the model.

Chapter 06

Screen Adjustment

Configure the **Picture** settings (**Backlight**, **Color Tone**, etc.).

The layout of the **Picture** menu options may vary depending on the product.



– The displayed image may differ depending on the model.

Picture Mode

MENU → **Picture** → **Picture Mode** → **ENTER**

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used.

- **Shops & Malls**
Suitable for shopping malls.
 - Select either **Videos/Images** or **Text** depending on the picture mode.
- **Offices & Schools**
Suitable for offices and schools.
 - Select either **Videos/Images** or **Text** depending on the picture mode.
- **Terminals & Stations**
Suitable for bus terminals and train stations.
 - Select either **Videos/Images** or **Text** depending on the picture mode.
- **Video Wall**
Suitable for environments where videowall display are used.
 - Select either **Videos/Images** or **Text** depending on the picture mode.
- **Calibration**
In this mode, the brightness, colour, gamma and uniformity settings customized using the colour calibration programme **Advanced Color Management** are applied.
 - To apply the **Calibration** mode properly, make sure you configure the picture quality settings, such as brightness, colour, gamma and uniformity, using the colour calibration programme **Advanced Color Management**.
 - To download the **Advanced Color Management** programme, visit www.samsung.com/displaysolutions.

Backlight / Brightness / Contrast / Sharpness / Colour / Tint (G/R)

MENU  → **Picture** → ENTER 

Your product has several options for adjusting picture quality.

| Picture Mode | Picture Mode settings | Adjustable options |
|---|-----------------------|--|
| Shops & Malls, Offices & Schools, Terminals & Stations, Video Wall | Videos/Images | Backlight / Brightness / Contrast / Sharpness / Colour / Tint (G/R) |
| | Text | Backlight / Brightness / Contrast / Sharpness |
| Calibration | | Backlight |

— When you make changes to **Backlight, Brightness, Contrast, Sharpness, Colour** or **Tint (G/R)**, the OSD will be adjusted accordingly.

— You can adjust and store settings for each external device you have connected to an input on the product.

— Lowering picture brightness reduces power consumption.

Colour Temperature

MENU  → **Picture** → **Colour Temperature** → ENTER 

Adjust the colour temperature. (Range: 2800K–16000K)

— If **Picture Mode** is set to **Calibration**, **Colour Temperature** is disabled.



White Balance

MENU  → **Picture** → **White Balance** → ENTER 

Adjust the colour temperature for a more natural picture.

- **R-Gain / G-Gain / B-Gain**: Adjust each colour's (red, green, blue) brightness.
- **Reset**: Suitable for environments where videowall display are used.

Gamma

MENU  → **Picture** → **Gamma** → ENTER 

Adjust the primary colour intensity.

— If **Picture Mode** is set to **Calibration**, **Gamma** is disabled.

Calibrated Value

MENU  → **Picture** → **Calibrated Value** → ENTER 

Select whether to apply the brightness, colour, gamma and uniformity settings customized using the colour calibration programme **Advanced Color Management** to the Information and Advertisement modes.

- **Don't apply / Apply**

— To download the **Advanced Color Management** programme, visit www.samsung.com/displaysolutions.

— If **Picture Mode** is set to **Calibration**, **Calibrated Value** is disabled.

Picture Options

MENU  → Picture → Picture Options → ENTER 

| Picture Mode | Picture Mode settings | Adjustable options |
|--|-----------------------|---|
| Shops & Malls, Offices & Schools, Terminals & Stations, Video Wall | Videos/Images | Color Tone / HDMI Black Level / Dynamic Backlight / UHD COLOR |
| | Text | Color Tone / HDMI Black Level / Dynamic Backlight / UHD COLOR |
| Calibration | | Dynamic Backlight / UHD COLOR |

Color Tone

If **Picture Mode** is set to **Text**.

- **Off / Cool / Standard / Warm**

If **Picture Mode** is set to **Videos/Images**.

- **Off / Cool / Standard / Warm1 / Warm2**

— If **Picture Mode** is set to **Calibration**, **Color Tone** is disabled.

— Settings can be adjusted and stored for each external device connected to an input on the product.

HDMI Black Level

Selects the black level on the screen to adjust the screen depth.

- **Low / Normal**

— This option is not available if the input source is set to **PC**.

Dynamic Backlight

Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.

- **Off / On**

— The **Dynamic Backlight** is not available when the input source is set to **PC** while **Video Wall** is **On**.

UHD COLOR

- **HDMI1 : Off / On**
- **HDMI2 : Off / On**
- **DisplayPort : Off / On**

— To enable a UHD input source, set **UHD COLOR** to **On**.

— If monitors are connected through Loopout when a UHD resolution is in use, set **UHD COLOR** to **On** on all monitors.

— A maximum of 25 monitors can be connected through Loopout when using UHD resolution.

— To use **UHD COLOR** mode over an HDMI cable, using an HDMI cable that is compatible with HDMI 2.0 is recommended. Make sure that the cable is shorter than 2m.

— Switching **UHD COLOR** between **On** and **Off** takes some time.

— If the HDMI/DP connector with **UHD COLOR** enabled is connected to a device that does not support UHD content, the device may not operate properly. Connect a device that supports UHD content.

Picture Size

MENU  → **Picture** → **Picture Size** → ENTER 

choose size and aspect ratio picture displayed on screen.

Picture Size

Different screen adjustment options are displayed depending on the current input source.

Available **Picture Size** options can vary depending on whether the **Picture Mode** is **Videos/Images** or **Text**.

- **16:9**: Sets the picture to **16:9** wide mode.
- **Zoom1**: Use for moderate magnification. Cuts off the top and sides.
- **Zoom2**: Use for a stronger magnification.
- **Smart View 1**: Reduces the **16:9** picture by 50%.
 - **Smart View 1** is enabled only in **HDMI1, HDMI2** mode.
- **Smart View 2**: Reduce the top and bottom margins of the **16:9** screen by 25%.
 - **Smart View 2** is enabled only in **HDMI1, HDMI2** mode.
- **Wide**: Enlarges the aspect ratio of the picture to fit the entire screen.
- **4:3**: Sets the picture to basic (**4:3**) mode.
 - Do not set your product to **4:3** format for a long time.
The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.
- **Screen Fit**: Displays the full image without any cut-off when **HDMI1, HDMI2** (720p / 1080i / 1080p) signals are inputted.
- **Custom**: Changes the resolution to suit the user's preferences.
- **Original**: Display images in the original picture quality.
 - Available ports may differ depending on the model.






Zoom/Position

Adjust the screen size and position.

This option can be configured if the input source supports 1080i or 1080p and the **Picture Size** is **Custom**.

— This option is not supported when a PC is connected.

— From the **Zoom/Position** screen, follow the steps below.

- 1 Press the  button to select **Zoom/Position**. Press the  button.
- 2 Select the **Zoom** or **Position**. Press the  button.
- 3 Press the  button to move the picture.
- 4 Press the  button.

— If you want to reset the picture to its original position, select **Reset** in the **Zoom/Position** screen.
The picture will be set to its default position.

Resolution

If the picture is not normal even when the resolution of the graphics card is one of the following, you can optimize the picture quality by selecting the same resolution for the product as the PC using this menu.

Available resolutions: **Off / 1024 x 768 / 1280 x 768 / 1360 x 768 / 1366 x 768**

Auto Adjustment

MENU  → **Picture** → **Auto Adjustment** → ENTER 

— Available in **PC** mode only.

Adjust frequency values/positions and fine tune the settings automatically.

PC Screen Adjustment

MENU  → **Picture** → **PC Screen Adjustment** → ENTER 

— Available in **PC** mode only.

- **Coarse / Fine**

Removes or reduces picture noise.

If the noise is not removed by Fine-tuning alone, use the **Coarse** function to adjust the frequency as best as possible (**Coarse**) and Fine-tune again. After the noise has been reduced, re-adjust the picture so that it is aligned with the Centre of screen.

- **Position**

To adjust the PC's screen position if it is not centred or does not fit the product screen.

Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.

- **Image Reset**

Resets the image to the default settings.

Picture Off

MENU  → **Picture** → **Picture Off** → ENTER 

Selecting **Picture Off** switches off the screen. The volume is not disabled.

To switch the screen on, press any button other than the volume button.

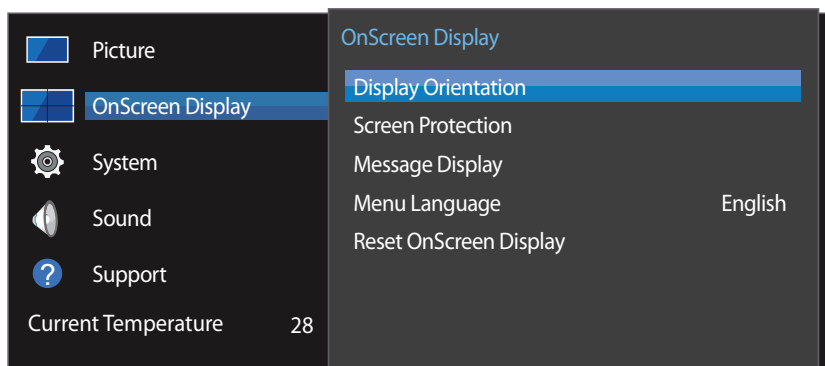
Reset Picture

MENU  → **Picture** → **Reset Picture** → ENTER 

Resets your current picture mode to its default settings.

Chapter 07

OnScreen Display



– The displayed image may differ depending on the model.

Display Orientation

MENU → OnScreen Display → Display Orientation → ENTER

Onscreen Menu Orientation

Set the menu screen orientation.

- **Landscape:** Display the menu in landscape mode (default).
- **Portrait:** Display the menu in portrait mode on the right side of the product screen.

Source Content Orientation

Set the orientation of content from external devices connected to the product.

- **Landscape:** Display the screen in landscape mode (default).
- **Portrait:** Display the screen in portrait mode.

— **Portrait** orientation mode is not supported when a UHD resolution is in use.

Aspect Ratio

Set the rotated screen to be either full screen or original.

- **Full Screen:** Display the rotated screen in full screen.
- **Original:** Display the rotated screen in the original aspect ratio.

— Available only when **Source Content Orientation** is set to **Portrait**.

Screen Protection

MENU  → OnScreen Display → Screen Protection → ENTER 

To reduce the possibility of screen burn, this unit is equipped with **Pixel Shift** screen burn prevention technology.

Pixel Shift moves the picture slightly on the screen.

The **Pixel Shift** time setting allows you to programme the time between movements of the picture in minutes.

Pixel Shift

Minimize image retention by finely moving pixels horizontally or vertically.

- **Pixel Shift (Off / On)**
 - **Horizontal, Vertical** and **Time** are enabled only when **Pixel Shift** is set to **On**.
- **Horizontal**: Sets how many pixels the screen moves horizontally.
- **Vertical**: Sets how many pixels the screen moves vertically.
- **Time**: Set the time interval for performing the horizontal or vertical movement, respectively.

Available Pixel Shift Settings and Optimum Settings.

| | Available Settings | Optimum Settings |
|----------------------------|--------------------|------------------|
| Horizontal (pixels) | 0 ~ 4 | 4 |
| Vertical (pixels) | 0 ~ 4 | 4 |
| Time (minute) | 1 min. ~ 4 min. | 4 min. |

— The **Pixel Shift** value may differ depending on the product size (inches) and mode.

— Displaying a still image or a **4:3** output for an extended period of time may cause image retention. This is not a defect in the product.

Timer

You can set the timer for **Screen Protection**.

The **Screen Protection** feature stops automatically after a specified period of time.

- **Timer (Off / Repeat / Interval)**
 - **Off**
 - **Repeat**: Display the anti-burn in pattern at a specified interval.
 - **Interval**: Display the anti-burn in pattern for a specified period of time (from the starting to finishing time).
 - When **Clock Set** is configured, **Interval** will be enabled.
 - **Period, Start Time** and **End Time** are enabled only when **Timer** is set to **Repeat** or **Interval**.
- **Period**: Specify the time interval to activate the **Screen Protection** function.
 - The option is enabled when **Repeat** is selected for **Timer**.
- **Start Time**: Set the start time to activate the screen protection function.
 - The option is enabled when **Interval** is selected for **Timer**.
- **End Time**: Set the end time to deactivate the screen protection function.
 - The option is enabled when **Interval** is selected for **Timer**.

Immediate Display

Select the screen saver you want to display immediately.



- **Off / Fading Screen**

Side Gray

When the screen is set to 4:3 aspect ratio, adjust the brightness of white margins on sides to protect the screen.

- **Off / Light / Dark**

Message Display

MENU  → OnScreen Display → Message Display → ENTER 

Source Info

Select whether to display the source OSD when the input source changes.

- Off / On

No Signal Message

Select whether to display the no-signal OSD when no signal is detected.

- Off / On

MDC Message

Select whether to display the MDC OSD when the product is controlled by the MDC.

- Off / On

Menu Language

MENU  → OnScreen Display → Menu Language → ENTER 

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.

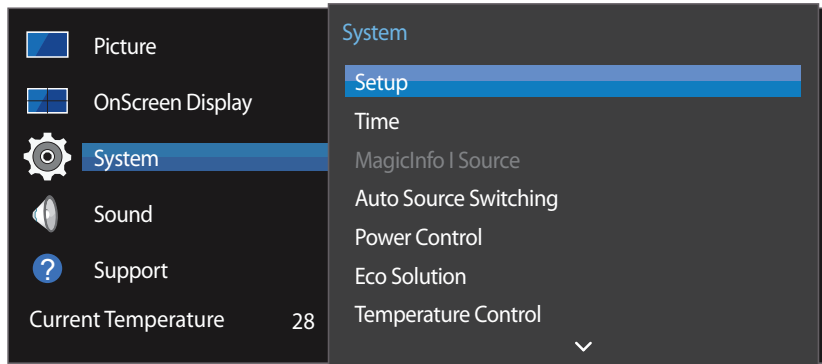
Reset OnScreen Display

MENU  → OnScreen Display → Reset OnScreen Display → ENTER 

This option returns the current settings under **OnScreen Display** to the default factory settings.

Chapter 08

System



– The displayed image may differ depending on the model.

Setup

MENU → **System** → **Setup** → **ENTER**

Change the initial settings that were configured when you first used the product. Press the button.

1 Language

Select your language to start the on screen setup.

2 Rotate Menu

Select menu display direction depending on the direction of installation.

– **Landscape / Portrait**

3 Network Settings

Set the IP settings, and then select **Next**.

4 Clock Set

Set the current date and time, and then select **Next**.

5 Complete

Congratulations! Setup is complete and you're ready to get started.

Time


MENU  → **System** → **Time** → ENTER 

You can configure **Clock Set** or **Sleep Timer**. You can also set the product to automatically turn on or off at a specified time using the **Timer** function.

— Press the **INFO** button if you want to view the current time.

Clock Set

Select **Clock Set**. Select **Date** or **Time**, and then press .

Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press  when done.

— You can set the **Date** and **Time** directly by pressing the number buttons on the remote control.

DST

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


Off / On

- **Start Date:** Set the start date of Daylight Saving Time.
- **End Date:** Set the end date of Daylight Saving Time.
- **Time Offset:** Select the correct time offset your timezone.

Sleep Timer

Automatically shuts off the product after a preset period of time.

(**Off / 30 min. / 60 min. / 90 min. / 120 min. / 150 min. / 180 min.**)

— Use the up and down arrows to select a period of time, and then press . To cancel **Sleep Timer**, select **Off**.

Power On Delay

When connecting multiple products, adjust the power-on time for each product to prevent power overload (within the range 0–50 seconds).

MagicInfo I Source

MENU  → **System** → **MagicInfo I Source** → ENTER 

— The **MagicInfo I Source** feature is available if a network box (sold separately) is connected.

Pressing **MagicInfo Player I** on the remote control displays content connected to the network box (sold separately).

- **DVI / DisplayPort**

Auto Source Switching

MENU  → **System** → **Auto Source Switching** → ENTER 

Turning on the display with **Auto Source Switching On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

Auto Source Switching

When the **Auto Source Switching** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognized.

Secondary Source selection will become active, if no primary video source is available.

If both the primary and secondary input sources are not recognized, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.

Primary Source Recovery

Select whether to restore the selected primary input source when a primary input source is connected.

— The **Primary Source Recovery** function is disabled if **Primary Source** is set to **All**.

Primary Source

Specify **Primary Source** for the automatic input source.

Secondary Source

Specify **Secondary Source** for the automatic input source.

Power Control

MENU  → System → Power Control → ENTER 

Auto Power On

This feature automatically turns on the product as soon as it is plugged in. Pressing the power button is not needed.

- **Off / On**

PC Module Power

The PC module can be turned on/off separately from the LFD.

Synced Power-On

To turn off the LFD without turning off the PC module, select **Off**.

- **Off / On**

Synced Power-Off

To turn on the PC module without turning on the LFD, select **Off**.

- **Off / On**

Standby Control

You can set the screen standby mode to be applied when an input signal is received.

- **Auto**
Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
The message **No Signal** will appear if no source device is connected.
- **Off**
The message **No Signal** will appear if no input signals are detected.
 - If **No Signal** is displayed although a source device is connected, check the cable connection.
 - If **No Signal Message** is set to **Off**, the **No Signal** message does not appear.
If this is the case, set **No Signal Message** to **On**.
- **On**
Power-saving mode will activate if no input signals are detected.

Network Standby

This feature keeps the network power on when the product turns off.

- **Off / On**

Power Button

The power button can be set to either turn on the power or turn on/off the power.

- **Power On Only**: Set the power button to turn on the power.
- **Power On/Off**: Set the power button to turn on/off the power.

Eco Solution

MENU  → System → Eco Solution → ENTER 

Energy Saving

Reduce the power consumption by adjusting the screen brightness.

- Off / Low / Medium / High

Eco Sensor

To enhance your power savings, the picture settings will automatically adapt to the light in the room.

- Off / On

— Adjusting the **High** setting under **Picture** while **Eco Sensor** is on will disable the **Off**.

Min. Backlight

When **Eco Sensor** is **On**, you can manually adjust the minimum screen brightness. **Min. Backlight** is the darkest backlight mode. Make sure the **Min. Backlight** setting is lower than the **Backlight** setting.

— If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity.

Screen Lamp Schedule

The panel brightness is adjusted according to the **Screen Lamp Schedule**. A value closer to 100 makes the panel brighter.

— This option is enabled when **Clock Set** is configured.

- Off / On

No Signal Power Off

Save power by turning the device off when no signal is received from any source.

- Off / 15 min. / 30 min. / 60 min.

— Disabled when an attached PC is in power saving mode.

— The product will automatically power off at a specified time. The time can be changed as required.

Auto Power Off

The product will automatically turn off if you don't press a button on the remote or touch a button on product front panel within select hours to prevent overheating.

- Off / 4 hours / 6 hours / 8 hours

Temperature Control

MENU  → System → Temperature Control → ENTER 

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 77°C.

Recommended temperature for **Temperature Control** is 75°C~ 80°C (provided that the surrounding temperature is 40°C).

— The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

Change PIN

MENU  → System → Change PIN → ENTER 

The **Change PIN** screen will appear.

Choose any 4 digits for your PIN and enter it in **Enter a new PIN..** Reenter the same 4 digits in **Enter the PIN again..**

When the Confirm screen disappears, press the **Close** button. The product has memorised your new PIN.

— Default password: 0 - 0 - 0 - 0

General

MENU  → System → General → ENTER 

Security

Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".

If you want to change the PIN number, use the **Enter PIN** function.

Safety Lock

It sets safe lock function.

- **Off / On**

All the menus and buttons of the product and remote control, except for the **LOCK** button on the remote control, will be locked by the **Safety Lock** function.

To unlock the menus and buttons, press the **LOCK** button and then enter the password (default password: 0 - 0 - 0 - 0).

Button Lock

This menu can be used to lock the buttons on the product.

Only the remote control can control the product if **Button Lock** is set to **On**.

- **Off / On**

HDMI Hot Plug

This feature is used to activate the time delay to turn on a DVI/HDMI source device.

- **Off / On**

Reset System

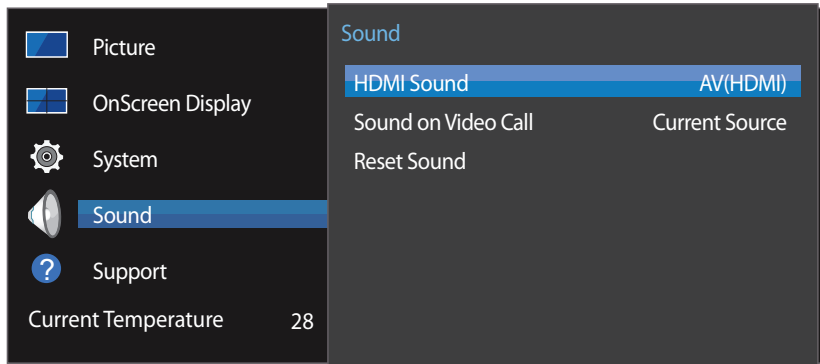
MENU  → System → Reset System → ENTER 

This option returns the current settings under system to the default factory settings.

Chapter 09

Sound Adjustment

Configure the sound (**Sound**) settings for the product.



- The displayed image may differ depending on the model.

HDMI Sound

MENU → **Sound** → **HDMI Sound** → **ENTER**

Select whether to hear from **AV(HDMI)** or **PC(DVI)**.

- **AV(HDMI) / PC(DVI)**

Sound on Video Call

MENU → **Sound** → **Sound on Video Call** → **ENTER**

Select sound output to listen to during a video call.

- **Current Source / Video Call**

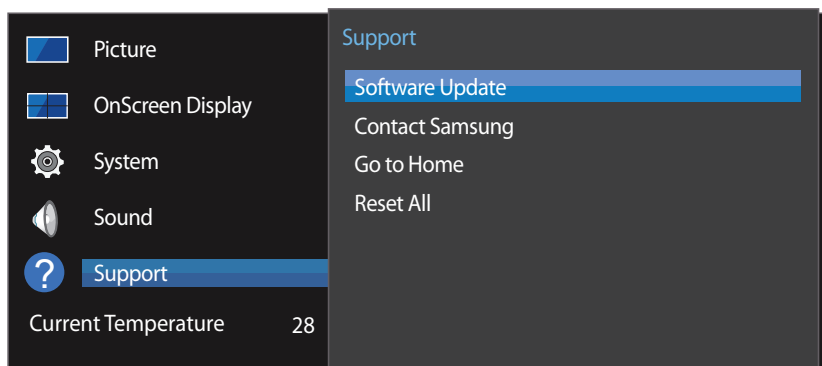
Reset Sound

MENU → **Sound** → **Reset Sound** → **ENTER**

The displayed image may differ depending on the model. Reset all sound settings to the factory defaults.

Chapter 10

Support



– The displayed image may differ depending on the model.

Software Update

MENU  → **Support** → **Software Update** → **ENTER** 

The **Software Update** menu lets you upgrade your product software to the latest version.

- Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade.
- When you upgrade software, all video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

Contact Samsung

MENU  → **Support** → **Contact Samsung** → **ENTER** 

View this information when your product does not work properly or when you want to upgrade the software.

You can find information regarding our call centres and how to download products and software.

- **Contact Samsung** and find the product **Model Code** and **Software Version**.

Go to Home

Accessible using the **HOME**  button on the remote control.

MENU  → **Support** → **Go to Home** → **ENTER** 

Refer to the "Home feature" chapter for details on sub-menu items.

Go to Home to play a variety of content from a memory device or a connected network.

Video Wall

Customize the layout of multiple displays that are connected to form a video wall.

In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays.

To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.

Picture Mode

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used.

On/Off Timer

— You must set the clock before you can use **On/Off Timer**.

Set **On Timer** so that your product turns on automatically at a time and on a day of your choosing.

The power is turned on with the specified volume or input source.

Network Settings

View the network settings.

MagicInfo Player I

Change source to **MagicInfo Player I**.

MagicInfo Player I publishes and plays a variety of content, including created content and multimedia content (images, videos and audio content), from the server or a connected device.

ID Settings

Assign an ID to a set.

Press **▲/▼** to select a number, and press .

More settings

The picture settings menu appears.

Reset All

MENU  → **Support** → **Reset All** → **ENTER** 

This option returns all the current settings for a display to the default factory settings.

Chapter 11

Troubleshooting Guide

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

If the screen remains blank, check the PC system, video controller and cable.

Requirements Before Contacting Samsung Customer Service Centre

Testing the Product

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

- 1 Power off both the PC and product.
- 2 Disconnect all the cables from the product.
- 3 Power on the product.
- 4 If **No Signal** is displayed, the product is operating normally.

Checking the Resolution and Frequency

Not Optimum Mode will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).

Check the followings.

Installation issue (PC mode)

The screen keeps switching on and off.

Check the cable connection between the product and PC, and ensure the connection is secure.

Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI 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 computer manufacturer for further details about how to adjust the screen settings.)

PC is shown in Source when a PC is not connected.

PC is always shown in **Source** irrespective of whether or not a PC is connected.

Screen issue

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

Make sure that the power cord is connected.

No Signal is displayed on the screen.

Check that the product is connected correctly with a cable.

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

Not Optimum Mode is displayed.

This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.

Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.

The images on the screen look distorted.

Check the cable connection to the product.

Screen issue

The screen is not clear. The screen is blurry.

Adjust **Coarse** and **Fine**.

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.

Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.

There are shadows or ghost images left on the screen.

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

Adjust **Brightness** and **Contrast**.

White does not really look white.

Go to **Picture** and adjust the **White Balance** settings.

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

The product is in power-saving mode.

Press any key on the keyboard or move the mouse to return to the previous screen.

The product will turn off automatically.

Go to **System** and make sure **Sleep Timer** is set to **Off**.

If a PC is connected to the product, check the power status of the PC.

Make sure the power cable is connected properly to the product and power outlet.

If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.

Picture quality of the product is different from the dealer shop where it was purchased.

Use an HDMI cable to obtain high-definition (HD) picture quality.

The screen display does not look normal.

Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.

Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.

A cell phone within a distance of one-meter radius may cause static on analogue and digital products.

Screen issue

The brightness and colour do not look normal.

Go to **Picture** and adjust the screen settings such as **Picture Mode, Color, Brightness** and **Sharpness**.

Go to **System** and adjust the **Energy Saving** settings.

Reset the screen settings to the default settings.

Broken lines are displayed on the edges of the screen.

If **Picture Size** is set to **Screen Fit**, change the setting to **16:9**.

Lines (red, green or blue) are displayed on the screen.

These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Centre to resolve the issue.

The display looks unstable and then freezes.

The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.

The screen cannot be displayed in full screen.

A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.

A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.

Change the screen size setting to full screen on the product or source device.

Sound issue

There is no sound.

Check the connection of the audio cable or adjust the volume.

Check the volume.

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.

If an HDMI cable is connected, check the audio output settings on the PC.

If a source device is used

- Make sure the audio cable is properly connected to the audio input port on the product.
- Check the audio output settings for the source device.
(For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)

If a DVI-HDMI cable is used, a separate audio cable is required.

If the product has a headphone port, make sure nothing is connected to it.

Reconnect the power cable to the device and then reboot the device.

There is static coming from the speakers.

Check the cable connection. Make sure a video cable is not connected to an audio input port.

Check the signal strength after connecting a cable.

Low signal level can cause corrupted sound.

There is audible sound when the volume is muted.

Adjust the volume for the external speakers.

Audio settings for main speakers are separate from the internal speakers on the product.

Changing or muting the volume on the product does not affect an external amplifier(decoder).

Remote control issue

The remote control does not work.

Make sure that the batteries are correctly in place (+/-).

Check if the batteries are flat.

Check for power failure.

Make sure that the power cord is connected.

Check for any special lighting or neon signs switched on in the vicinity.

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.

Other issue

The product smells like plastic.

The plastic smell is normal and disappears over time.

The monitor appears tilted.

Remove and then attach the stand again to the product.

Audio or video cuts out intermittently.

Check the cable connection and connect it again if required.

Using a very hard or thick cable may corrupt audio and video files.

Make sure cables are flexible enough to ensure durability. When mounting the product onto a wall, it is recommended to use right-angle cables.

Small particles are found on the edges of the product.

The particles are part of the product design. The product is not defective.

When I try to change the PC resolution, a message "Mode not Supported" appears.

The message "**Mode not Supported**" appears if the input source resolution exceeds the maximum resolution of the display.

To resolve the issue, change the PC resolution to a resolution supported on the display.

There is no sound from the speakers in HDMI mode when a DVI-HDMI cable is connected.

DVI cables do not transmit sound data.

Make sure to connect the audio cable to the correct input jack to enable audio.

HDMI Black Level is not functioning properly on an HDMI device with YCbCr output.

This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.

There is no sound in HDMI mode.

Displayed picture colours may not look normal. Video or sound may not be available. This can occur if a source device that only supports an older version of the HDMI standard is connected to the product.

If these issues occur, connect an audio cable along with the HDMI cable.

Some PC graphics cards may not automatically recognize HDMI signals that do not include sound. In this case, manually select a sound input.

| | Sound input | Screen mode |
|--------|-------------------------|-------------|
| PC | Auto | PC settings |
| DVI PC | Audio In (Stereo ports) | PC settings |

Other issue

HDMI-CEC does not work.

This product does not support the HDMI-CEC feature.

To use several external devices compatible with the HDMI-CEC feature that are connected to the HDMI1, HDMI2 and HDMI3 ports on the product, turn off the HDMI-CEC features on all the external devices. External devices include Blu-ray and DVD players.

Operating an external device when its HDMI-CEC feature is enabled may automatically stop other external devices.

To change HDMI-CEC settings, refer to the device user guide or contact the device manufacturer for assistance.

The IR sensor is not functioning.

Make sure the sensor light turns on when a button is pressed on the remote control.

-
- If the sensor light does not turn on, turn the power switch off and then on again on the back of the product.
(The power LED lights up red when the screen is switched off.)
If the sensor light still does not turn on after the power switch is turned off and then on again, an internal jack may be disconnected.
Contact your nearest service Centre to have the product serviced.

 - If the sensor light that is on does not flash red when a button is pressed on the remote control, the IR sensor may be defective.
Contact your nearest service Centre to have the product serviced.

 - This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.

When booting the PC with the input source set to **DisplayPort** the BIOS and booting screens do not appear.

-
- Boot the PC when the set is turned on or when the input source is not **DisplayPort**.

Q & A

Question

How can I change the frequency?

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

Answer

Set the frequency on your graphics card.

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.

How can I change the resolution?

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution.
 - Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution.
 - Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution.
 - Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
 - Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
-

Question

How do I set powersaving mode?

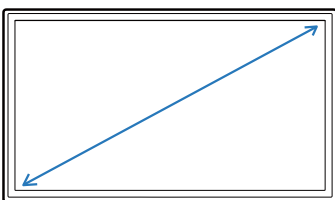
Answer

- Windows XP: Set power-saving mode in **Control Panel** → **Appearance and Themes** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows ME/2000: Set power-saving mode in **Control Panel** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows Vista: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 8: Set power-saving mode in **Settings** → **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
-

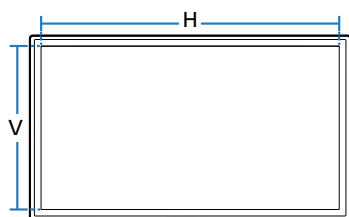
Chapter 12

Specifications

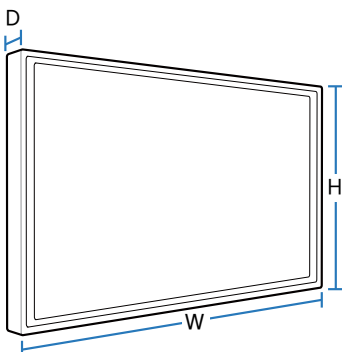
Size



Display area



Dimensions (W x H x D)



General

Model Name

UD46E-A

UD46E-C

| Panel | Size | 46 CLASS (45.9 inches / 116.8 cm) | 46 CLASS (45.9 inches / 116.8 cm) |
|-------|------------------------|---|---|
| | Display area | 1018.08 mm (H) x 572.67 mm (V) 40.1 inches (H) x 22.5 inches (V) | 1018.08 mm (H) x 572.67 mm (V) 40.1 inches (H) x 22.5 inches (V) |
| | Dimensions (W x H x D) | 1022.1 x 576.6 x 97.4 mm 40.2 x 22.7 x 3.8 inches | 1024 x 578.6 x 113.6 mm 40.3 x 22.8 x 4.5 inches |
| | Weight (without stand) | 18 kg / 39.7 lbs | 18.3 kg / 40.3 lbs |

Model Name

UD46E-B

UD55E-B

| Panel | Size | 46 CLASS (45.9 inches / 116.8 cm) | 55 CLASS (54.6 inches / 138.7 cm) |
|-------|------------------------|---|---|
| | Display area | 1018.08 mm (H) x 572.67 mm (V) 40.1 inches (H) x 22.5 inches (V) | 1209.6 mm (H) x 680.4 mm (V) 47.6 inches (H) x 26.8 inches (V) |
| | Dimensions (W x H x D) | 1022.1 x 576.6 x 97.4 mm 40.2 x 22.7 x 3.8 inches | 1213.5 x 684.3 x 96.6 mm 47.8 x 26.9 x 3.8 inches |
| | Weight (without stand) | 18 kg / 39.7 lbs | 23.3 kg / 51.4 lbs |

Power Supply

AC 100 to 240 VAC (+/- 10%), 60 / 50 Hz ± 3 Hz

Refer to the label at the back of the product as the standard voltage can vary in different countries.

Environmental considerations **Operating**

Temperature : 32 °F - 104 °F (0 °C - 40 °C)

Humidity : 10 % - 80 %, non-condensing

Storage

Temperature : -4 °F - 113 °F (-20 °C - 45 °C)

Humidity : 5 % - 95 %, non-condensing

Plug-and-Play

This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings.

Monitor installation takes place automatically. However, you can customize the installation settings if desired.

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

This device is a Class A digital apparatus.

PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the colour of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

| PowerSaver | Normal Operation | | | Power saving mode (SOG Signal : Not Support the DPM Mode) | Power off | Power off (Power Switch) |
|--------------------------|------------------|---------|-------|---|-----------------|-----------------------------|
| | Rating | Typical | Max | | | |
| Power Indicator | Off | | | Blinking | On | Off |
| Power Consumption | UD46E-A | 170 W | 128 W | 187 W | Less than 0.5 W | Less than 0.5 W |
| | UD46E-C | 130 W | 93 W | 143 W | | |
| | UD46E-B | 130 W | 87 W | 143 W | | |
| | UD55E-B | 180 W | 136 W | 198 W | | |

— The displayed power consumption level can vary in different operating conditions or when settings are changed.

— SOG (Sync On Green) is not supported.

— To reduce the power consumption to 0, turn off the switch at the back or disconnect the power cord. Disconnect the power cable if you will not be using the product for an extended period of time (during vacation, etc.).

Preset Timing Modes

- 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.
- Check the frequency when you exchange a CDT product (connected to a PC) for an LCD product. If the LCD product does not support 85 Hz, change the vertical frequency to 60 Hz using the CDT product before you exchange it with the LCD product.

– 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

The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

Model Name **UD46E-A / UD46E-C / UD46E-B / UD55E-B**

| | | |
|------------------------|-----------------------------|---|
| Synchronization | Horizontal Frequency | 30 – 81 kHz, 30 – 134 kHz (DisplayPort), 30 – 90 kHz (HDMI) |
|------------------------|-----------------------------|---|

| | | |
|--|---------------------------|---|
| | Vertical Frequency | 48 – 75 Hz, 56 – 75 Hz (DisplayPort), 24 – 75 Hz (HDMI) |
|--|---------------------------|---|

| | |
|-------------------|--|
| Resolution | RGB Analogue, DVI (Digital Visual Interface) Compliant Digital RGB |
|-------------------|--|

| | | |
|--|---------------------------|---------------------|
| | Optimum resolution | 1920 x 1080 @ 60 Hz |
|--|---------------------------|---------------------|

| | | |
|--|---------------------------|---|
| | Maximum resolution | 1920 x 1080 @ 60 Hz, 3840 x 2160 @ 60 Hz (HDMI1, HDMI2, DP) |
|--|---------------------------|---|

| | |
|----------------------------|--|
| Maximum Pixel Clock | 148.5 MHz (Analogue, Digital), 594 MHz (Displayport, HDMI) |
|----------------------------|--|

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

| 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/IBM, 640 x 480 | 31.469 | 59.940 | 25.175 | -/- |
| MAC, 640 x 480 | 35.000 | 66.667 | 30.240 | -/- |
| MAC, 832 x 624 | 49.726 | 74.551 | 57.284 | -/- |
| MAC, 1152 x 870 | 68.681 | 75.062 | 100.000 | -/- |
| VESA, 640 x 480 | 37.861 | 72.809 | 31.500 | -/- |
| VESA, 640 x 480 | 37.500 | 75.000 | 31.500 | -/- |
| 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 | +/+ |
| 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 | +/+ |
| 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 | +/+ |

| Resolution | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock (MHz) | Sync Polarity (H/V) |
|-------------------|-----------------------------------|--------------------------------|--------------------------|----------------------------|
| VESA, 1366 x 768 | 47.712 | 59.790 | 85.500 | +/- |
| 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 | +/- |
| CEA, 3840 x 2160 | 67.500 | 30.000 | 297.000 | +/+ |
| CEA, 3840 x 2160 | 54.000 | 24.000 | 297.000 | +/+ |
| CEA, 3840 x 2160 | 56.250 | 25.000 | 297.000 | +/+ |
| CEA, 3840 x 2160 | 112.500 | 50.000 | 594.000 | +/+ |

Chapter 13

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 gives 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 customer requests instructions on how to use because of 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-authorized 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.

WEEE

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

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

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

Correct disposal of batteries in this product



(Applicable in countries with separate collection systems)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66.

If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1 ppm) may be brighter or darker on the panel. This does not affect product performance.
 - The number of sub-pixels by panel type: 6,220,800
- Run **Auto Adjustment** to improve the picture quality. If noise is still found even after auto adjustment, adjust **Coarse** or **Fine**.
- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
 - Activate power-saving mode or a dynamic screen saver if you will not be using the product for an extended period of time.

Prevention of Afterimage Burn-in

Setting the anti-screen burn-in pattern

The anti-screen burn-in pattern automatically operates in standby mode.

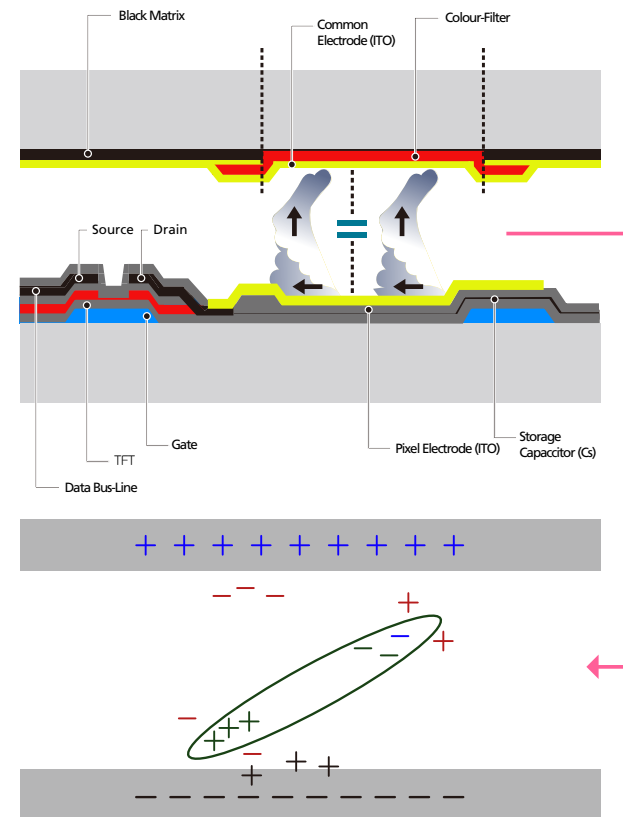
- Disabling the anti-screen burn-in pattern
On the remote control, press 2 → 2 → 7 → CH▼ → 0.
 If the remote control sensor blinks once, the pattern is disabled.
 - Enabling the anti-screen burn-in pattern
On the remote control, press 2 → 2 → 7 → CH▲ → 0.
 If the remote control sensor blinks twice, the pattern is enabled.
- When the screen is turned off, the anti-screen burn-in pattern will operate for two hours.
- Keeping the anti-screen burn-in pattern on requires extra power consumption.

What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time (more than 12 hours), a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes. To prevent this, the accumulated voltage difference should be reduced.

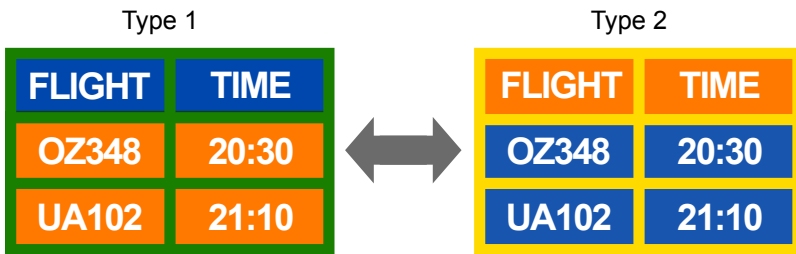
— Afterimage burn-in should not occur when an LCD panel is operating in proper conditions.



Preventing afterimage burn-in

The best way to protect the product from afterimage burn-in is switching the power off or setting the PC or system to run a screen saver when not in use. Also, Warranty service may be limited depending on instruction guide.

- Powering Off, Screen Saver and Power Saving Mode
 - Power off the product for 2 hours after using it for 12 hours.
 - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
 - Using a screen saver is recommended.
It is best to use a single-colour or moving-image screen saver.
- Regular colour Change
 - Use 2 colours
Switch between 2 colours every 30 minutes as shown above.



- Avoid combinations of a text colour and background colour of contrasting brightness.
(Brightness: refers to the lightness or darkness of a colour which varies depending on the amount of light emitted.)

Avoid using grey as it may contribute to afterimage burn-in.

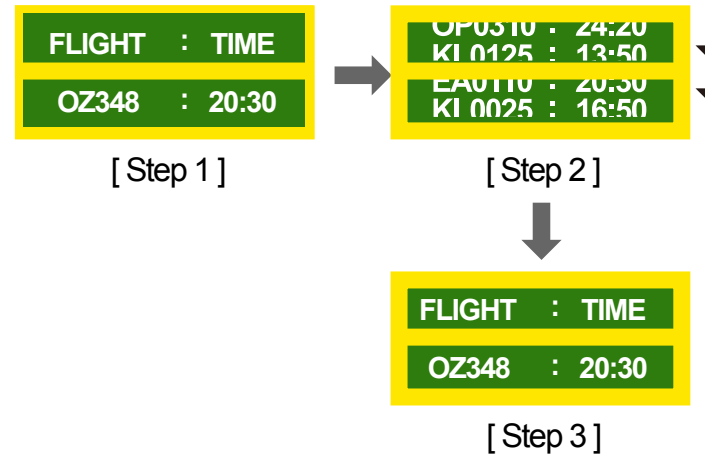
Avoid using colours of contrasting brightness (black and white; grey).



- Regular Text colour Change
 - Use bright colours of similar brightness.
Interval: Change text colour and background colour every 30 minutes



- Move and change text every 30 minutes as shown below.



- Regularly display a moving image along with a logo.
Interval: Display a moving image along with a logo for 60 seconds after using for 4 hours.

Licence



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Terminology

480i / 480p / 720p / 1080i /

1080p Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- Progressive

In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- Interlaced

In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

Non-interlace Mode and Interlace

Mode Non-interlace mode (progressive scan) displays a horizontal line from the top to the bottom of a screen progressively. Interlace mode displays the odd number lines first and the even number lines next. Non-interlace mode is mainly used in monitors as it produces screen clarity and interlace mode is mainly used in TVs.

Dot Pitch The screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same colour. Dot pitch is measured in millimeters.

Vertical Frequency The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz. E.g. 60Hz refers to a single image being displayed 60 times in one second.

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.

Source Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

Plug & Play Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

Resolution Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously. E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

DVD (Digital Versatile Disc) DVD refers to a CD-sized mass storage disk where you can save multimedia (audio, video or game) applications using MPEG-2 video compression technology.

HDMI (High Definition Multimedia Interface) It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

Multiple Display Control (MDC) MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.