

Video Wall Installation Guide

UD**E-A/B/C (LH**UDEH*** / B*** / C***)

UH**F-E (LH**UHFH***)

UH**F5 (LH**UHFC***)








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Concept

Concept



	UHF-E	UDE-A	UDE-B	UHF5	UDE-C
MODEL					
Specific Needs	Premium video wall solution with extreme narrow bezels	Powerful and versatile video wall solution for various business needs		Designed for easy installation with the ultra compact design	Budget-friendly displays with standard features
Bezel Thickness	1.7mm	3.5mm		5.5mm	
Brightness	700nit		500nit	700nit	500nit
Screen Size	55"	46"/55"		46"	46"/55"
Operation Hour	24/7				

Specification

Concept



Model		UD22B	UD46E-B	UD55E-B	UD46E-C
Panel	Diagonal Size	Class 22"	46"	55"	46"
		Measured 21.6" / 54cm	45.9" / 116.8cm	54.6" / 138.7cm	45.9" / 116.8cm
	Resolution	960 x 960 (1:1 Aspect Ratio)	1920*1080	1920*1080	1920*1080
	Pixel Pitch(mm)	0.1345mm(H) * 0.1345mm(V)	0.53025mm(H)*0.53025mm(V)	0.63mm(H) * 0.63mm(V)	0.53025mm(H)*0.53025mm(V)
	Active Display Area(mm)	387.36 * 387.36 mm	1018.08mm*572.67mm	1209.6 * 680.4mm	1018.08mm*572.67mm
	Brightness	450 cd/m2	Max 500 cd/m2	Max 500 cd/m2	Max 500 cd/m2
	Contrast Ratio	4000:1	3500:1	4000:1	3500:1
	Viewing Angle(H/V)	178/178	178/178	178/178	178/178
	Response Time(G-to-G)	8ms	8ms	8ms	8ms
	Display Colors	8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M
	Color Gamut	72%	72%	72%	72%
Operation Hour	24/7	24/7	24/7	24/7	
Haze	44% (Outer Haze 11%)	44% (Outer Haze 11%)	44% (Outer Haze 11%)	44% (Outer Haze 11%)	
Display	Dynamic C/R	9000:1	MEGA DCR	MEGA DCR	MEGA DCR
Connectivity	INPUT	RGB	DVI-D, Display Port	Analog D-SUB, DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2
		VIDEO	HDMI 1.4 (1)	HDMI 2.0 (2)	HDMI 2.0 (2)
		HDCP	HDCP 1.4	HDCP 2.2	HDCP 2.2
		AUDIO	N/A	Stereo mini Jack	Stereo mini Jack
	OUTPUT	USB	N/A	Only F/W upgrade	Only F/W upgrade
		RGB	DVI-D(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)
		VIDEO	N/A	N/A	N/A
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
	EXTERNAL CONTROL	Power Out	N/A	N/A	N/A
	EXTERNAL CONTROL	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45
EXTERNAL SENSOR	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	
Power Consumption	Max[W/h]	71.50	143	198	143
	Typical[W/h]	67	87 (120 China)	136	93 (108 China)
Mechanical Spec	Dimension (mm)	Set	393.3*393.3*81.5	1022.1x 576.6 x 97.4	1213.5 * 684.3 * 96.6
		Package	473.0*473.0*187	1160 X 715 X 280	1355 X 809 X 320
	Weight (kg)	Set	6.5kg	18.0Kg	21.5kg
		Package	7.7kg	22.4kg	29kg
	VESA Mount	300*300mm	600 * 400 (mm)	600 * 400 (mm)	600 * 400 (mm)
Bezel Width (mm)	3.7mm(U/L), 1.8mm(R/B)	2.3mm(U/L), 1.2mm(R/B)	2.3mm(U/L), 1.2mm(R/B)	3.7mm(U/L), 1.8mm(R/B)	
Operation	Operating Temperature	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
	Humidity	10~80%	10~80%	10~80%	10~80%
optional	Mount	WMN22UDPD	WMN-46VD	WMN-55VD	WMN-46VD
	Specialty	N/A	MID-UD46DS	MID-UD55DS	MID-UD46FS
Media Player Option Type		N/A	SBB(Slide In), Signage player box	SBB(Slide In), Signage player box	SBB(Slide In), Signage player box

Concept



Model		UD55E-S	UD46E-P	UD55E-P	UD46E-A	
Panel	Diagonal Size	Class 55"	46"	55"	46"	
		Measured 54.6" / 138.7cm	45.9" / 116.8cm	54.6" / 138.7cm	45.9" / 116.8cm	
	Resolution	1920*1080	1920*1080	1920*1080	1920*1080	
	Pixel Pitch(mm)	0.63mm(H) * 0.63mm(V)	0.53025mm(H)*0.53025mm(V)	0.63mm(H) * 0.63mm(V)	0.53025mm(H)*0.53025mm(V)	
	Active Display Area(mm)	1209.6 * 680.4mm	1018.08mm*572.67mm	1209.6 * 680.4mm	1018.08mm*572.67mm	
	Brightness	Max 700 cd/m2	Max 700 cd/m2	Max 700 cd/m2	Max 700 cd/m2	
	Contrast Ratio	4000:1	3500:1	4000:1	3500:1	
	Viewing Angle(H/V)	178/178	178/178	178/178	178/178	
	Response Time(G-to-G)	8ms	8ms	8ms	8ms	
	Display Colors	8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M	
	Color Gamut	65%	72%	72%	72%	
	Operation Hour	24/7	24/7	24/7	24/7	
Haze	44% (Outer Haze 11%)	44% (Outer Haze 11%)	44% (Outer Haze 11%)	25% (Outer Haze 23%)		
Display	Dynamic C/R	MEGA DCR	MEGA DCR	MEGA DCR	MEGA DCR	
Connectivity	INPUT	RGB	Analog D-SUB, DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2
		VIDEO	HDMI 1.4 (2) Component(CVBS Common)	HDMI 1.4 (2) Component(CVBS Common)	HDMI 1.4 (2) Component(CVBS Common)	HDMI 2.0 (2)
		HDCP	HDCP 1.4	HDCP 1.4	HDCP 1.4	HDCP 2.2
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		USB	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	Only F/W upgrade
	OUTPUT	RGB	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)
		VIDEO	N/A	N/A	N/A	N/A
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		Power Out	N/A	N/A	N/A	N/A
	EXTERNAL CONTROL	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45	
EXTERNAL SENSOR	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)		
Power Consumption	Max[W/h]	297	187	297	187	
	Typical[W/h]	217	135	217	128 (168 China)	
Mechanical Spec	Dimension (mm)	Set	1213.5 * 684.3 * 96.6	1022.1x 576.6 x 97.4	1213.5 * 684.3 * 96.6	1022.1x 576.6 x 97.4
		Package	1355 X 809 X 320	1160 X 715 X 280	1355 X 809 X 320	1160 X 715 X 280
	Weight (kg)	Set	21.5kg	16.2kg	21.5kg	16.2kg
		Package	29kg	22.4kg	29kg	22.6kg
	VESA Mount	600 * 400 (mm)	600 * 400 (mm)	600 * 400 (mm)	600 * 400 (mm)	
Bezel Width (mm)	2.3mm(U/L), 1.2mm(R/B)	2.3mm(U/L), 1.2mm(R/B)	2.3mm(U/L), 1.2mm(R/B)	2.3mm(U/L), 1.2mm(R/B)		
Operation	Operating Temperature	0°C~ 40°C	0°C~ 40°C	0°C~ 40°C	0°C~ 40°C	
	Humidity	10~80%	10~80%	10~80%	10~80%	
optional	Mount	WMN-55VD	WMN-46VD	WMN-55VD	WMN-46VD	
	Specialty	MID-UD55DS	MID-UD46DS	MID-UD55DS	MID-UD46DS	
Media Player Option Type		SBB(Slide In), Signage player box	SBB(Slide In), Signage player box	SBB(Slide In), Signage player box	SBB(Slide In), Signage player box	

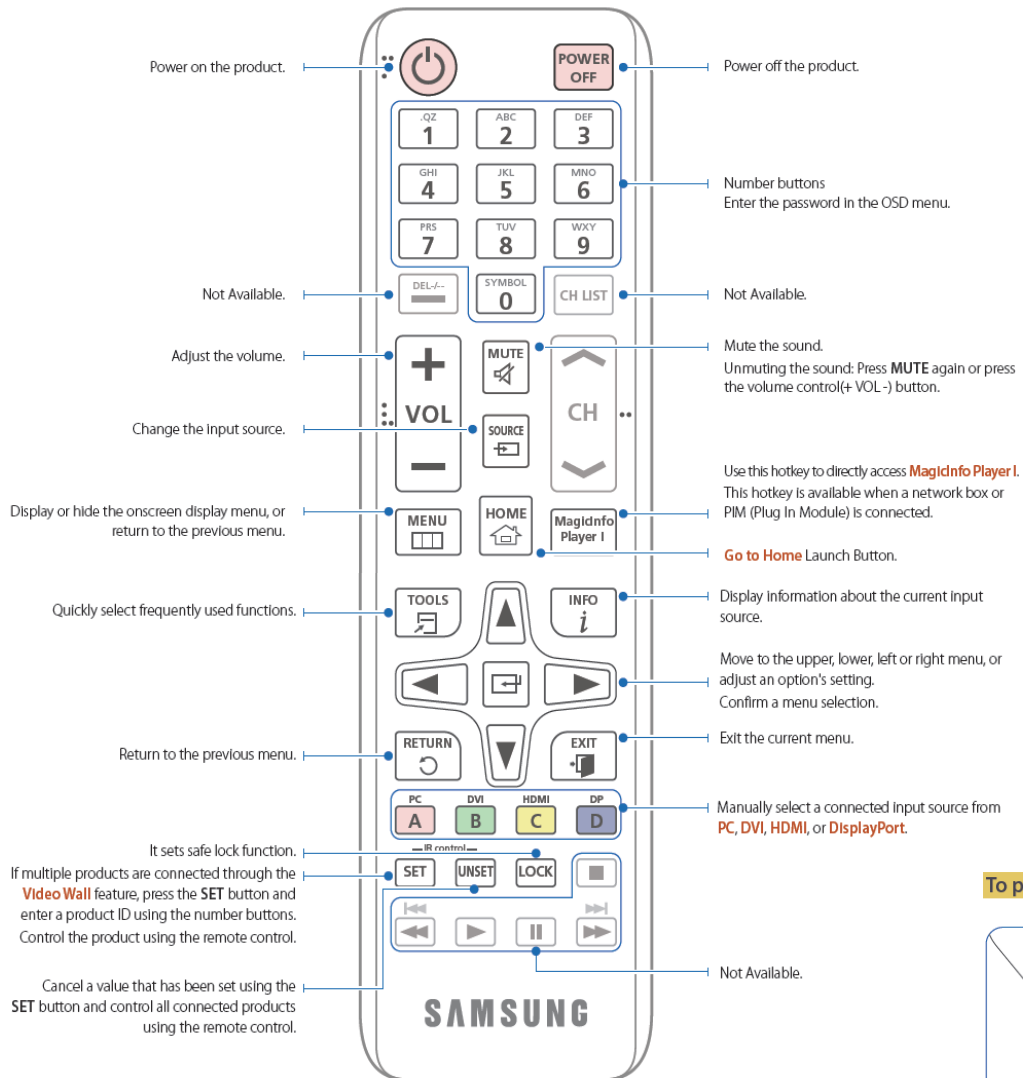
Concept



Model		UD55E-A	UH55F-E	UH46F5	UD55E-A	
Panel	Diagonal Size	Class 55"	55"	46"	55"	
		Measured 54.6" / 138.7cm	54.6" / 138.7cm	45.9" / 116.8cm	54.6" / 138.7cm	
		Resolution 1920*1080	1920*1080	1920*1080	1920*1080	
		Pixel Pitch(mm) 0.63mm(H) * 0.63mm(V)	0.63mm(H) * 0.63mm(V)	0.53025 (H) x 0.53025(W)	0.63mm(H) * 0.63mm(V)	
		Active Display Area(mm) 1209.6 * 680.4mm	1209.6 * 680.4mm	1018.08(H) x 572.67(V)	1209.6 * 680.4mm	
		Brightness Max 700 cd/m2	Max 700 cd/m2	Max 700 cd/m2	Max 700 cd/m2	
		Contrast Ratio 4000:1	4000:1	4000:1	4000:1	
		Viewing Angle(H/V) 178/178	178/178	178/178	178/178	
		Response Time(G-to-G) 8ms	8ms	8ms	8ms	
		Display Colors 8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M	8 bit - 16.7M	
		Color Gamut 72%	72%	72%	72%	
	Operation Hour 24/7	24/7	24/7	24/7		
	Haze 25% (Outer Haze 23%)	25% (Outer Haze 23%)	11%	25% (Outer Haze 23%)		
Display	Dynamic C/R	MEGA DCR	MEGA DCR	MEGA DCR	MEGA DCR	
Connectivity	INPUT	RGB	Analog D-SUB, DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2	DVI-D, Display Port 1.2	Analog D-SUB, DVI-D, Display Port 1.2
		VIDEO	HDMI 2.0 (2)	HDMI 2.0 (2)	HDMI 2.0 (2)	HDMI 2.0 (2)
		HDCP	HDCP 2.2	HDCP 2.2	HDCP 2.2	HDCP 2.2
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
	OUTPUT	USB	Only F/W upgrade	Only F/W upgrade	Only F/W upgrade	Only F/W upgrade
		RGB	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)
		VIDEO	N/A	N/A	N/A	N/A
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		Power Out	N/A	N/A	N/A	N/A
		EXTERNAL CONTROL	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45	RS232C(in/out), RJ45
	EXTERNAL SENSOR	Detachable type(IR, Ambient)	Detachable type(IR, Ambient)	Detachable type(IR)	Detachable type(IR, Ambient)	
Power Consumption	Max[W/h]	297	297	132	297	
	Typical[W/h]	180	180	98	180	
Mechanical Spec	Dimension (mm)	Set	1213.5 * 684.3 * 96.6	1211.6 x 682.4 x 96.3	1023.8 x 578.4 x 47.9	1213.5 * 684.3 * 96.6
		Package	1355 X 809 X 320	1355 x 809 x 320	1171x734x277	1355 X 809 X 320
	Weight (kg)	Set	21.5Kg	21.0kg	13.2kg	21.5Kg
		Package	29kg	28.2kg	19.2kg	29kg
		VESA Mount	600 * 400 (mm)	600 * 400 (mm)	400 * 400 (mm)	600 * 400 (mm)
	Bezel Width (mm)	2.3mm(U/L), 1.2mm(R/B)	1.15mm(U/L), 0.55mm(R/B)	3.4mm(U/L), 2.0mm(R/B)	2.3mm(U/L), 1.2mm(R/B)	
Operation	Operating Temperature	0°C~ 40°C	0°C~ 40°C	0°C~ 40°C	0°C~ 40°C	
	Humidity	10~80%	10~80%	10~80%	10~80%	
optional	Mount	WMN-55VD	WMN-55VD	WMN-46VD	WMN-55VD	
	Specialty	MID-UD55DS	N/A	N/A	MID-UD55DS	
	Media Player Option Type	SBB(Slide In), Signage player box	SBB(Slide In), Signage player box	SBB, Signage player box	SBB(Slide In), Signage player box	

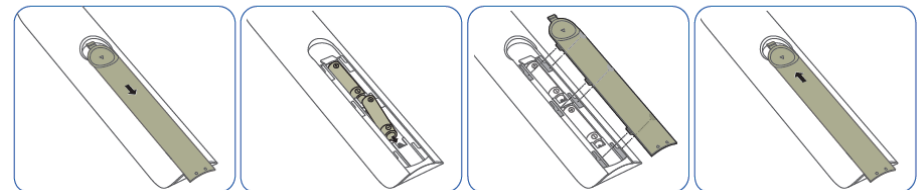
Installation Guide

Installation Guide (Accessory)



- CODE : BN59-01180A

To place batteries in the remote control



Installation Guide (Accessory)



Accessory

Components

— Components may differ in different locations.



Quick Setup Guide



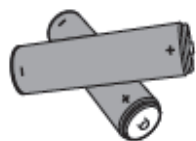
Warranty card
(Not available in some locations)



Regulatory guide



Power cord



Batteries
(Not available in some locations)



Remote Control



DP cable

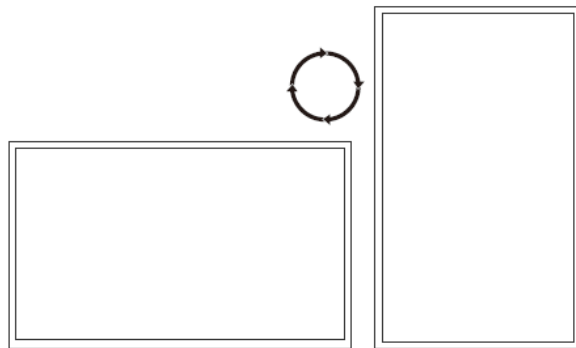


RS232C(IN) adapter



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

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 authorised 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.

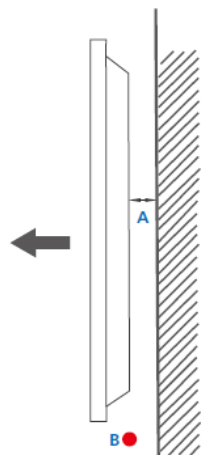


Figure 1.1 Side view

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.

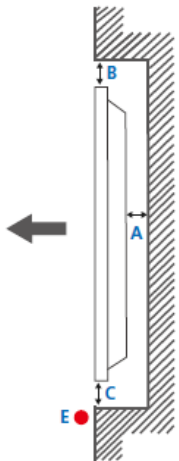
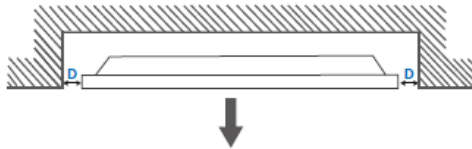


Figure 1.2 Side view

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

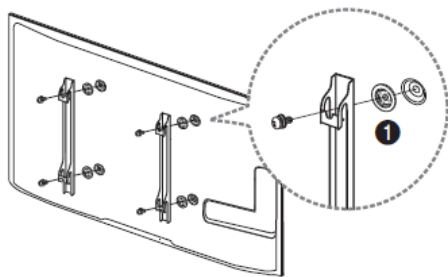
C Minimum 50 mm

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.

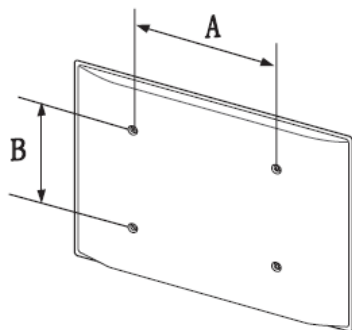
Installing the Wall Mount



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.



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.

- 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

VESA screw hole specs (A * B) in millimetres

Standard Screw

Quantity

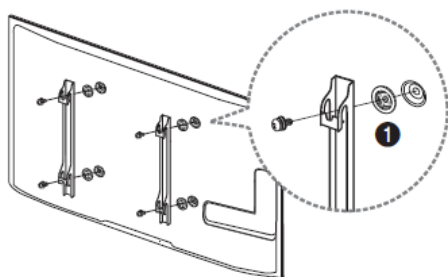
400 x 400

L20 ~ L22

4 EA

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

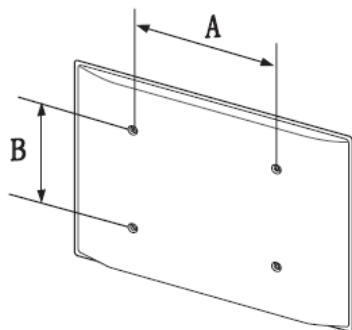
Installing the Wall Mount



Wall Mount Kit Specifications (VESA)

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- Standard dimensions for wall mount kits are shown in the table below.

Unit: mm

VESA screw hole specs (A * B) in millimetres

Standard Screw

Quantity

400 x 400

L20 ~ L22

4 EA

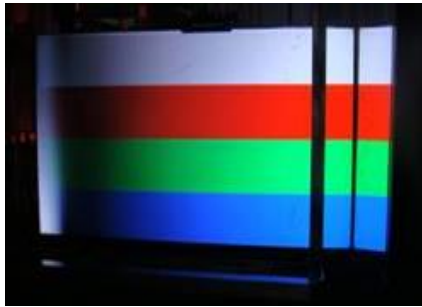
— Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.

Handling Issue

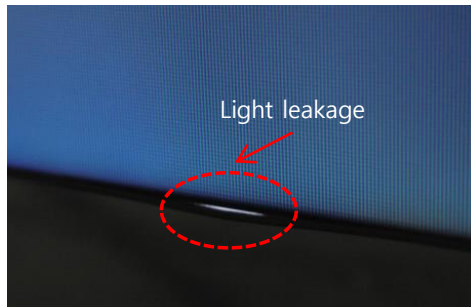
Caused by negligence, such as an external shock or vibration

The main symptoms

"Panel breakage", "Line / Block Defect", "Top-chassis variants", "tear tape burden" and so on.



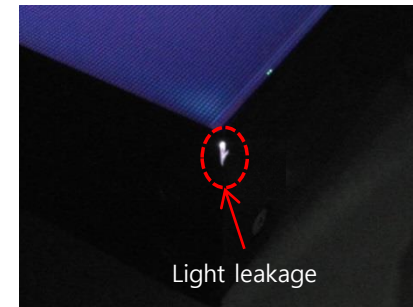
[Line/Block defect]



[Panel breakage]



[Top-chassis variants]



[tear tape burden]

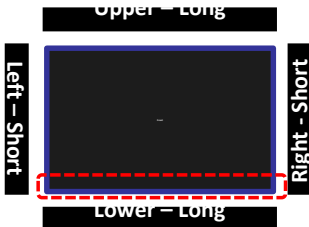

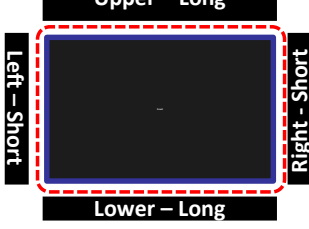

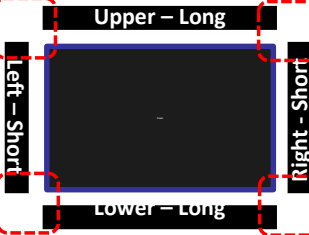
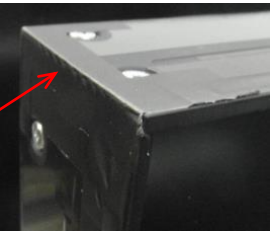
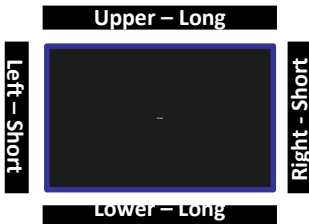
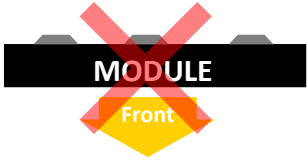
Installation Guide



Location	Picture	Notices	Issue
		<p>[Notice for Top-chassis parts pressure when handling]</p> <ul style="list-style-type: none"> ▶ Top-chassis parts are fixed with black tapes ▶ Be careful when opening the product 	<p>IC Defect, COF Lead Crack</p>
		<p>[Notice for Top-chassis parts pressure when handling]</p> <ul style="list-style-type: none"> ▶ Top-chassis parts are fixed with black tapes ▶ Be careful when opening the product 	<p>IC Defect, COF Lead Crack</p>
	<p>Top Chassis Long Side</p> <p>Top Chassis Short Side</p>	<p>[Caution for corner transform]</p> <ul style="list-style-type: none"> ▶ Be careful of modification due to the weight of edges of the Top chassis 	<p>Light Leakage, T/C Transformation</p>
		<p>[Top chassis Handling Precautions]</p> <ul style="list-style-type: none"> ▶ Be careful of handling panels and top chassis when installation (Causing light leakage and chassis deformation problems) 	<p>Light Leakage, T/C Transformation</p>

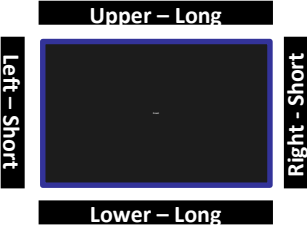
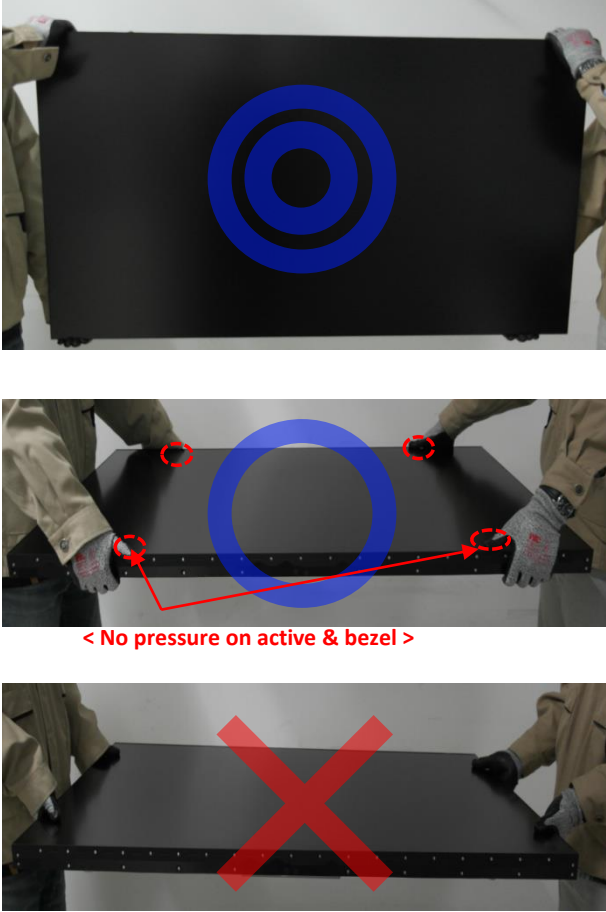
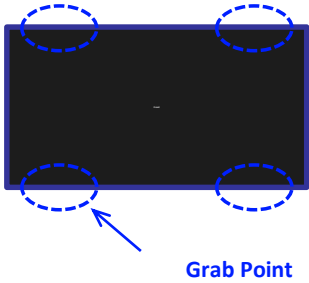
Installation Guide



Location	Picture	Cautions	Estimated Failure Issue
		<p>[Note the Vibration and Falling]</p> <p>▶ Attention the breakage of panel when the panel get damaged</p>	<p>T/C Deformation T/C Light leakage (junction between long-side T/C and short-side T/C)</p>
		<p>▶ Lay the product down to handle it as shown in the image.</p>	<p>T/C Deformation, T/C Light leakage (junction between long-side T/C and short-side T/C)</p>
	<p>Corner tape to protect light leakage</p> 	<p>[Tear off the corner tape]</p> <p>▶ Attention the corner tape for preventing light leakage (Tearing, peeling, etc.)</p>	<p>Light leakage at the T/C corner</p>
		<p>[Note that the direction of tilting panel side]</p> <p>▶ Do not set down the product on its front; The screen may become damaged.</p>	<p>Dislocation of panel</p>

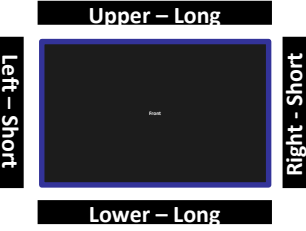

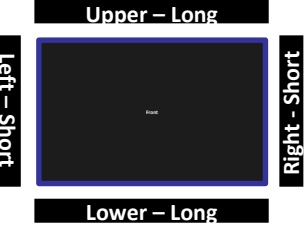
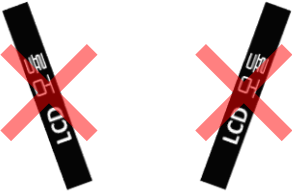


Installation Guide



Location	Picture	Cautions	Estimated Failure Issue
		<p>[Module variants]</p> <ul style="list-style-type: none"> ▶ It is the best way to move the LCD upright ▶ If it is impossible, you can move the module by laying as you shown in the picture ▶ It is much safe to move with holding short side 	<p>T/C Light Leakage T/C deformation</p>

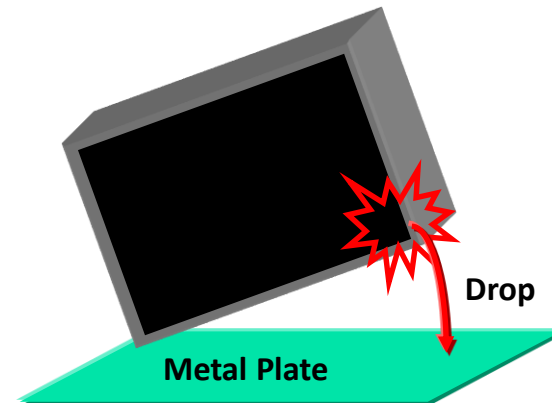
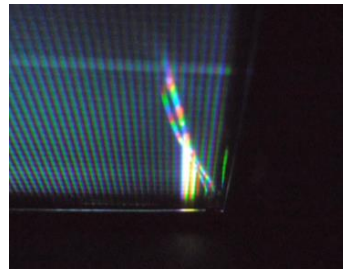
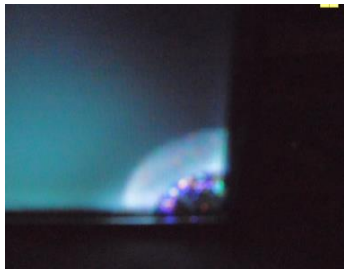
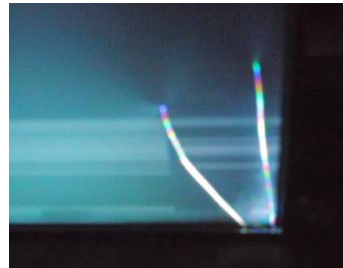
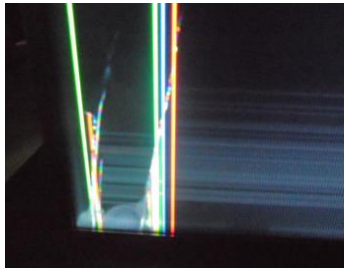
Installation Guide



Location	Picture	Cautions	Estimated Failure Issue
	 <p>Pic 1. No pressure on active & bezel</p> <p>LCD Module</p>	<p>[Module variants]</p> <ul style="list-style-type: none"> ▶ Shaking panel up and down results in a deformation of the product ▶ It should take care while pressing the panel may cause damage. 	<p>Module Damage T/C Light Leakage T/C Deformation</p>
		<p>[Module variants]</p> <ul style="list-style-type: none"> ▶ Don't tilt the panel 	<p>T/C Light Leakage T/C Deformation Panel(Cell) Dislocation</p>
		<p>[Module variants and Damage]</p> <ul style="list-style-type: none"> ▶ Module can be damage by the shock aroused by suddenly being torn shielding bag 	<p>T/C Deformation Module Damage (Module can be damage by the shock aroused by suddenly being torn shielding bag)</p>

Caution Falling

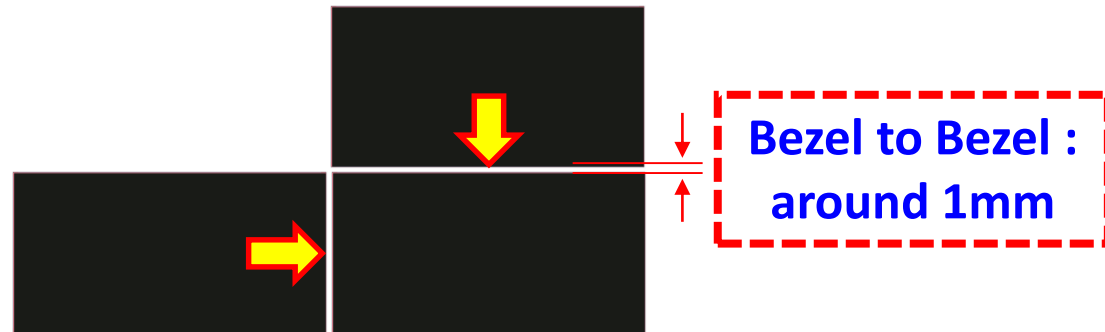
- If falling of LCD module results in damage to panel
 - Damage : Panel Damage, Line/Block Defect
 - An appropriate storage area need : need to go through such safekeeping cart, pad or cushion



Installation Guide

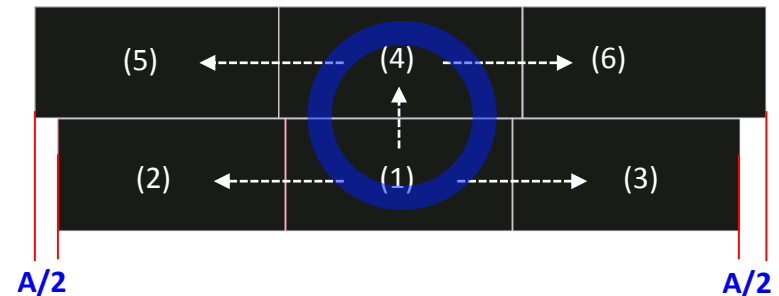
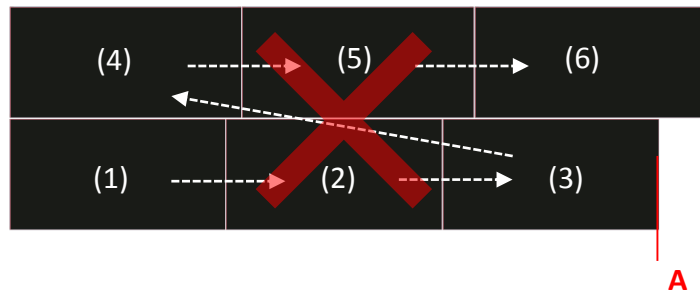
- Keep a distance between 1mm bezel

- The module may expand in high temperature conditions
- The product should be installed with about 1mm gap based on customer's circumstances



- In a multi-vision settings, middle set always located among other things, then installing right and left sets

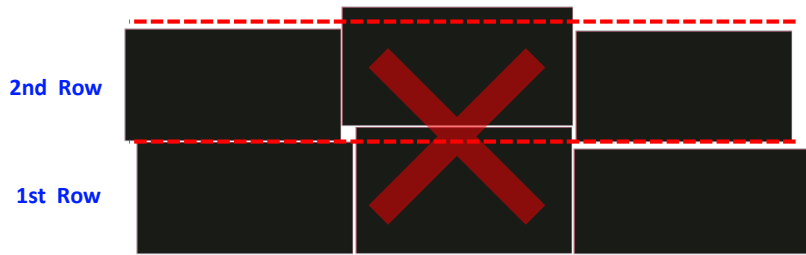
-Split desired size and variation



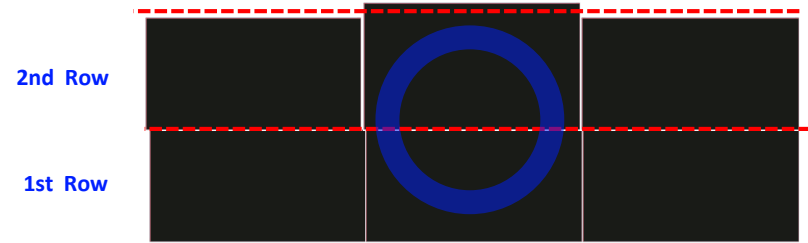
Installation Guide



- We recommend that you should place the same sized-products in a line (when) installing video wall.



[Random set-up]

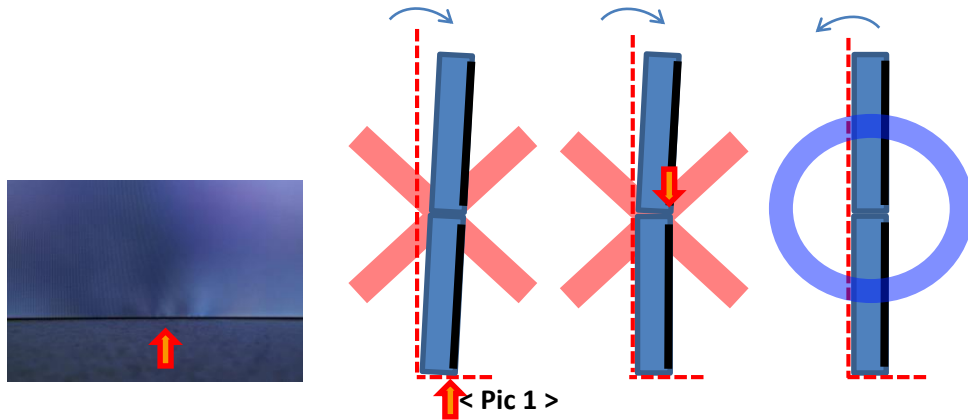


[Same module outside at bottom line]

(Note 1)

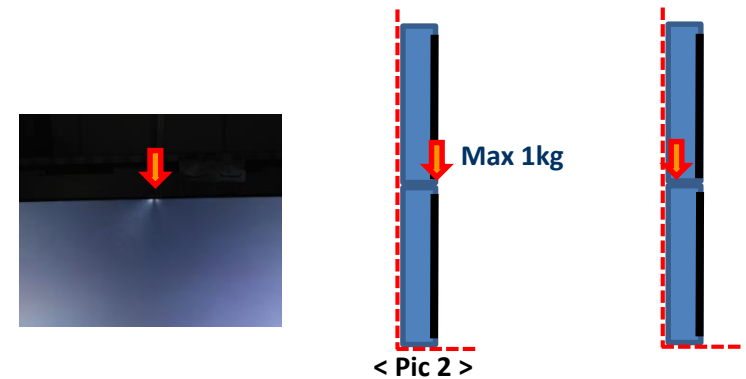
Don't tilt the panel down.

Tilting panel causes light leakage because of the pressure of the upper and lower side of the panel. If those symptoms appear, make sure the angle of the module.



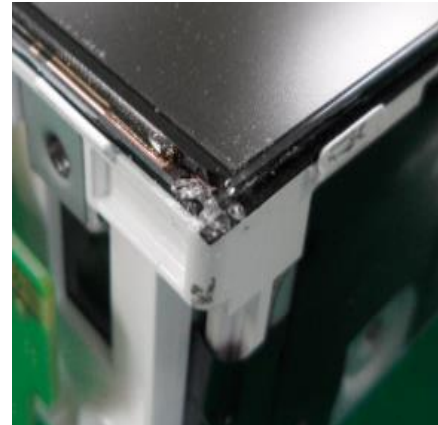
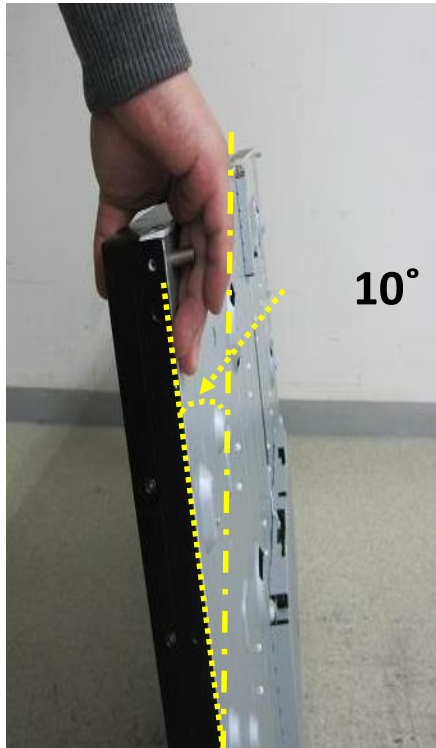
(Note 2)

Split specific point of panel with 1kg of the partial
If the light leakage occurs, make sure that the load is concentrated on the front panel module.



Tilt Specification

- Tilting the module causes panel broken, T/C deformation, panel(Cell) dislocation
- Max Tilt Spec. : Max. 10°



Maximum Pressure to Panel

- Active Bottom : Light leakage may occur when the panel is inclined to the front

Make sure that the bottom panel is made up of the 90 degree



- Active Top : The heavy weight or pressure causes light leakage

Warning that applying pressure more than 1kg on the part of less than 15mm causes light leakage as you see the below picture



Connection

External Feature – Front

SAMSUNG

Front



1. **Remote Control Sensor**
2. **Light sensor**
3. **Power Indicator**
4. **Power button**
5. **Source button**

1. **Remote Control Sensor** : Aim the remote control towards this spot on the LCD Display
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 tuned on. It will blink in power-saving mode
4. **POWER** : Use this button for turning the LCD Display on and off
5. **Source button**: Switches from PC mode to Video mode.

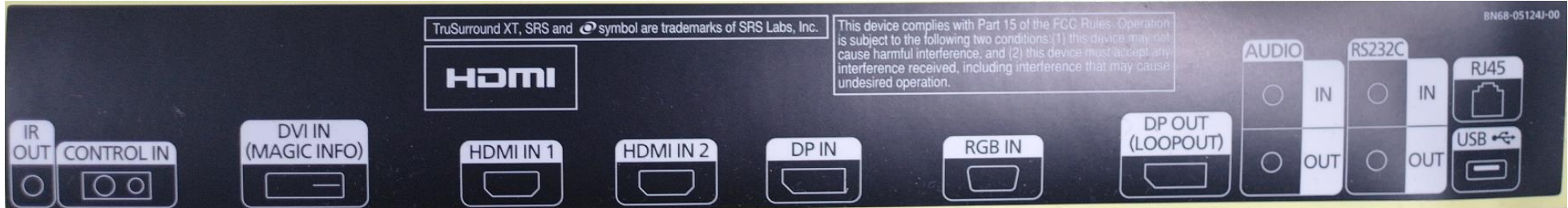
* source sequence
[PC] -> [DVI] -> [HDMI1] -> [HDMI2] -> [DISPLAYPORT] -> [MagicInfo]

External Feature – Rear



Rear

Connection Terminal



1	IR OUT
2	CONTROL IN
3	DVI IN (MAGIC INFO)
4	HDMI IN 1
5	HDMI IN 2

6	DP IN
7	RGB IN
8	DP OUT (LOOP OUT)
9	AUDIO IN
10	AUDIO OUT

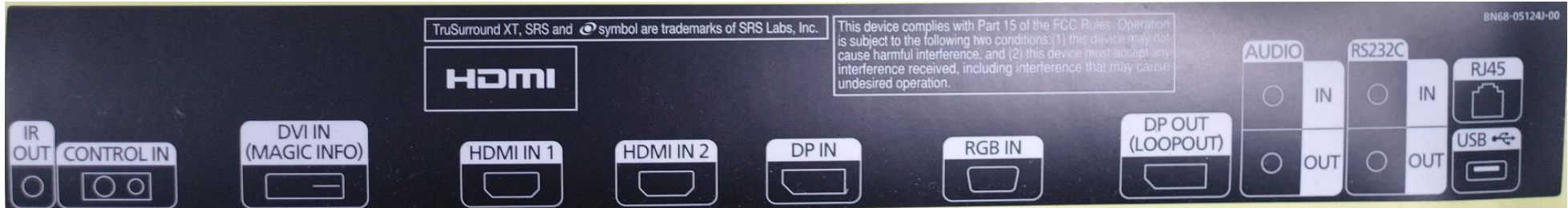
11	RS232C IN
12	RS232C OUT
13	RJ45
14	USB (Update Only)

External Feature – Rear



Rear

Connection Terminal



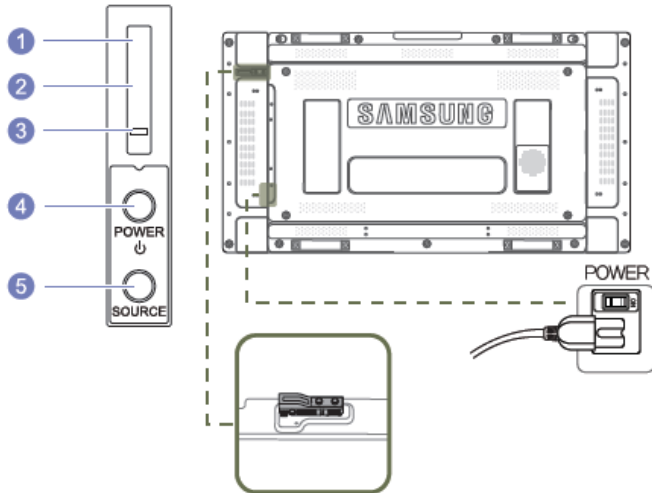
Ports	Description	Ports	Description
IR OUT	Receives the remote control signal via the external sensor board and outputs the signal via LOOP OUT.	RGB IN	Connects to a source device using a D-SUB cable.
CONTROL IN	Supplies power to the external sensor board or receives the light sensor signal.	AUDIO IN/OUT	Receives sound from a PC via an audio cable./Connects to the audio of a source device.
DP IN	Connects to a PC using a DP cable.	RJ 45	Connects to MDC using a LAN cable.
HDMI IN 1, 2	Connects to a source device using an HDMI cable.	USB	Connect to a USB memory device.
DP OUT (LOOP OUT)	Connects to another product using a DP cable.	RS232C IN/OUT	Connects to MDC using an RS232C cable.
DVI IN (MAGIC INFO)	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.		

Connection (External IR)



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

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.

Connection (Connecting D-SUB, PC)

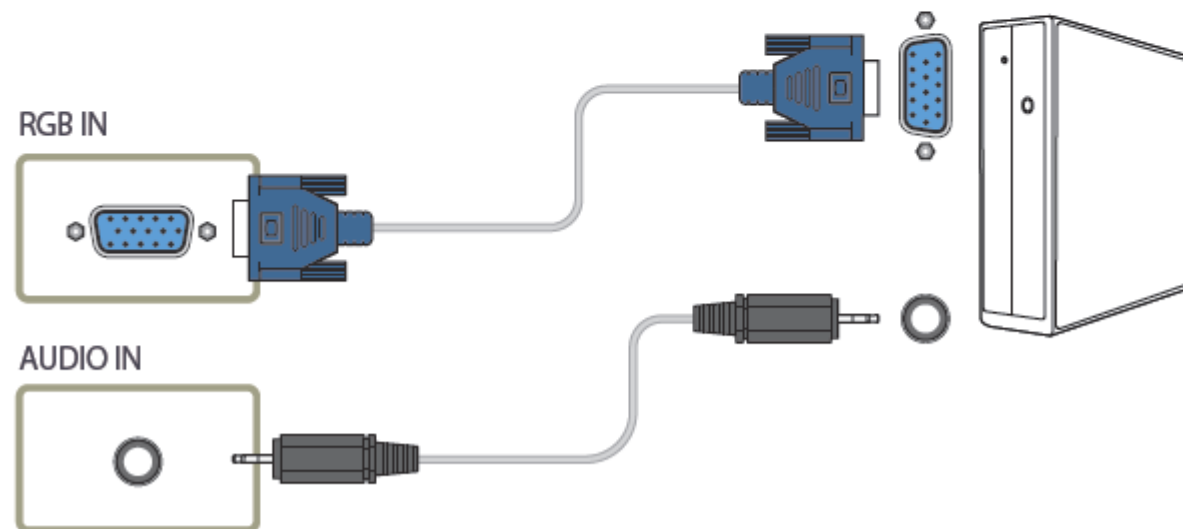
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Connecting to a PC

- 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.

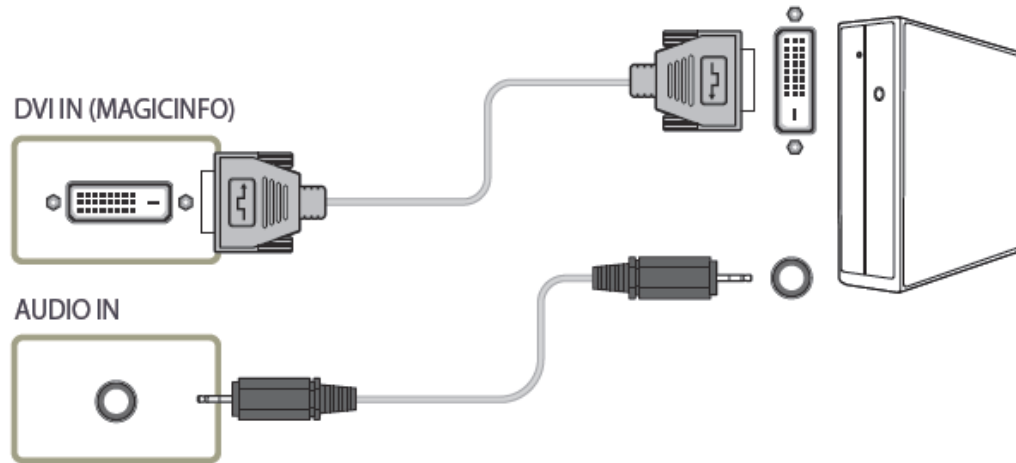
Connection using the D-SUB cable (Analog type)



Connection (Connecting DVI, PC)



Connection using a DVI cable (Digital type)



Connecting to a PC

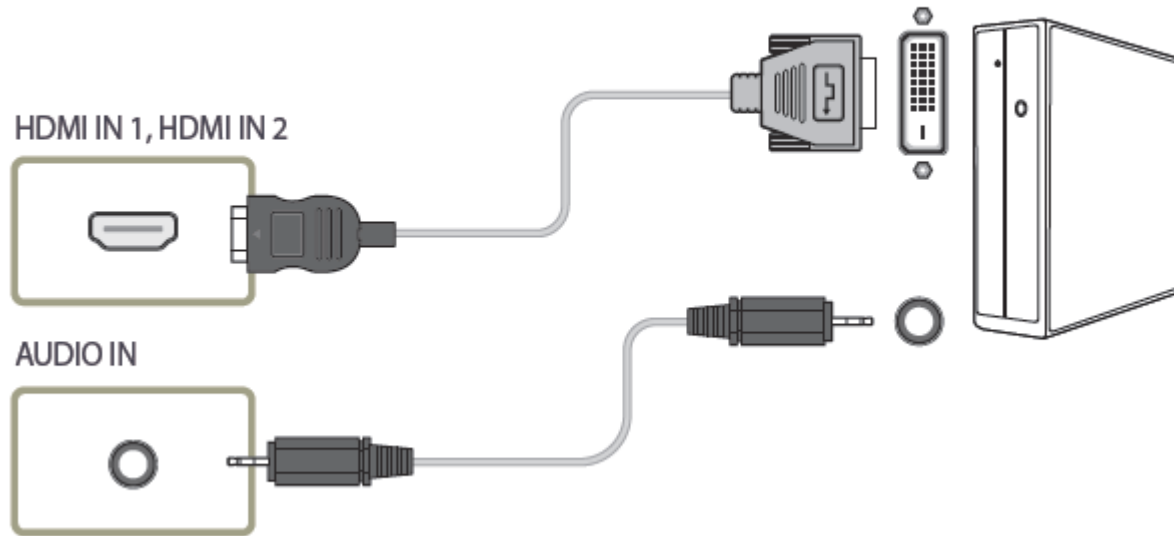
- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways. Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

Connection (Connecting HDMI-DVI, PC)



Connection Using an HDMI-DVI Cable



Connecting to a PC

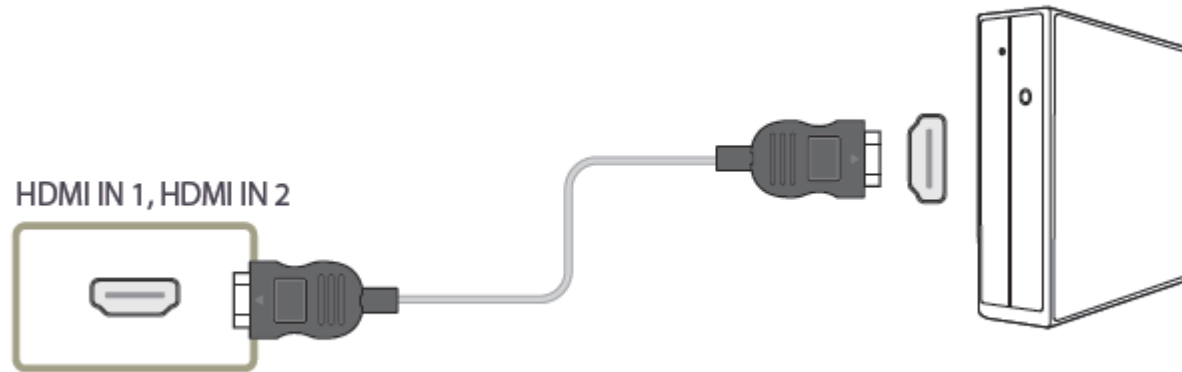
- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways. Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

Connection (Connecting HDMI, PC)

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Connection Using an HDMI Cable



Connecting to a PC

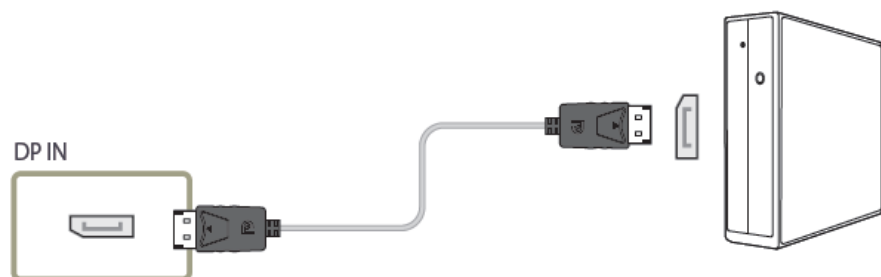
- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways. Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

Connection (Connecting DP, PC)

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Connection Using an 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 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 (Connecting HDMI-DVI, Video Device)

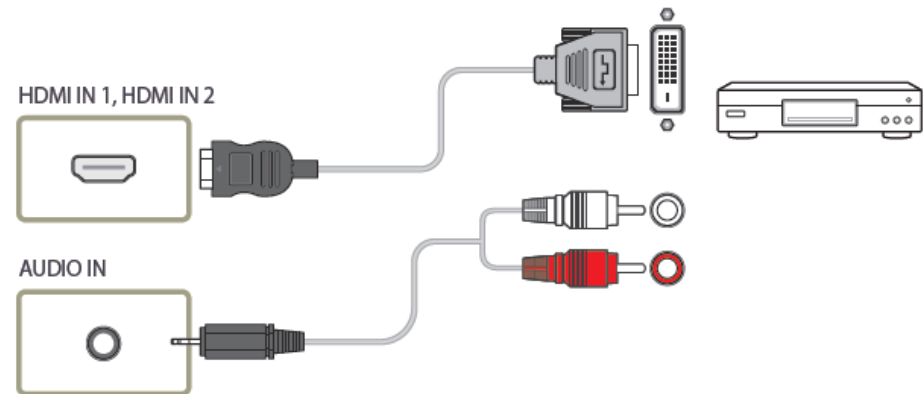
SAMSUNG

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.



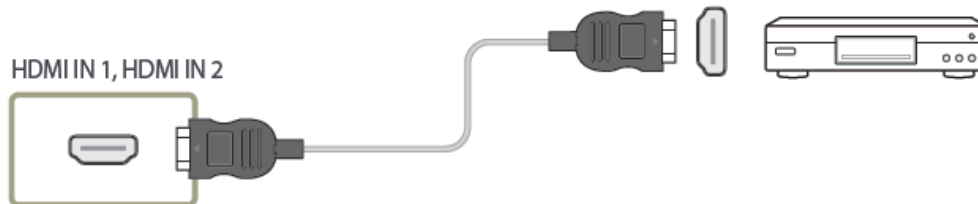
Connection (Connecting HDMI-DVI, Video Device)



Connection Using an HDMI Cable

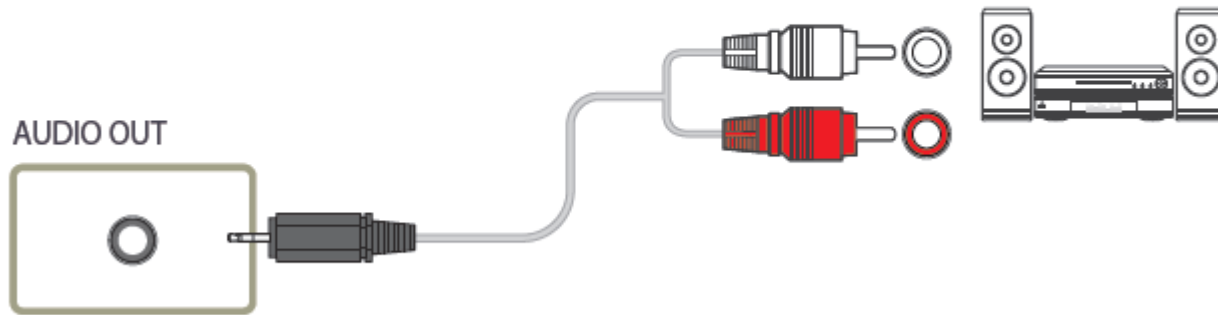
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- 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.

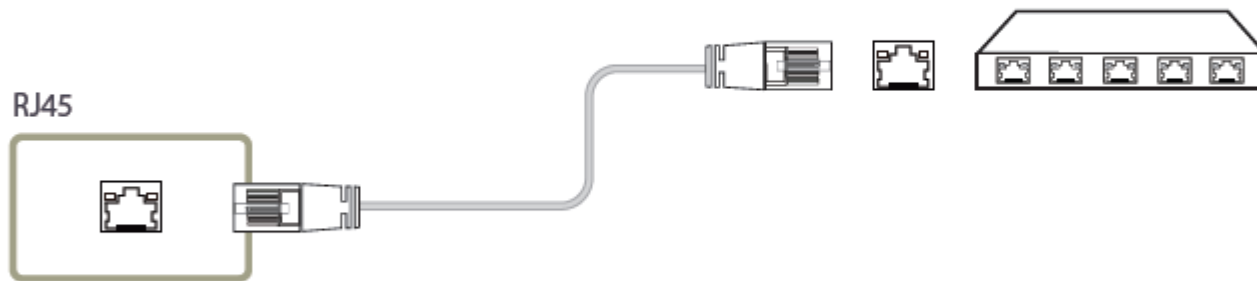


Connection (LAN Cable)



Connecting the LAN Cable

— Connecting parts may differ in different products.



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

Connection (Connecting IR Stereo Cable (Sold Separately))

SAMSUNG

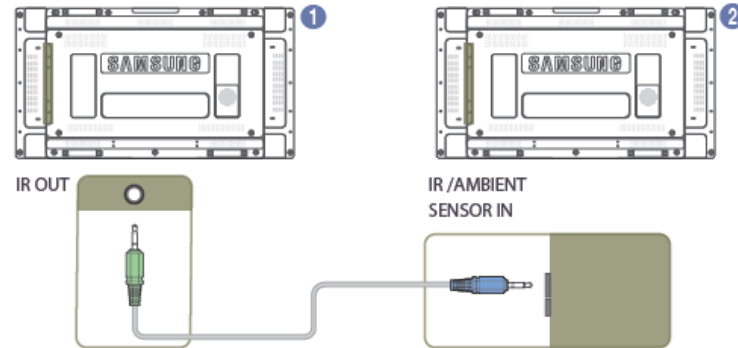
Connection Using an IR Stereo Cable (sold separately)

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.

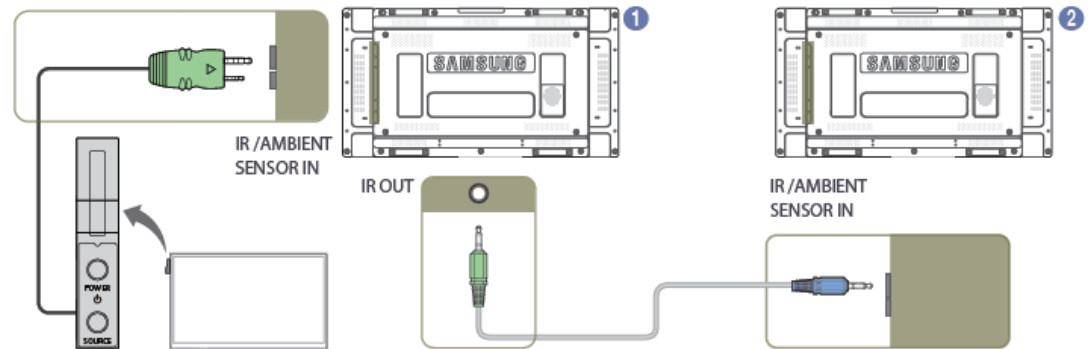
— The appearance may differ depending on the product.



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.



Connection (Connecting Network Box(Sold Separately))



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

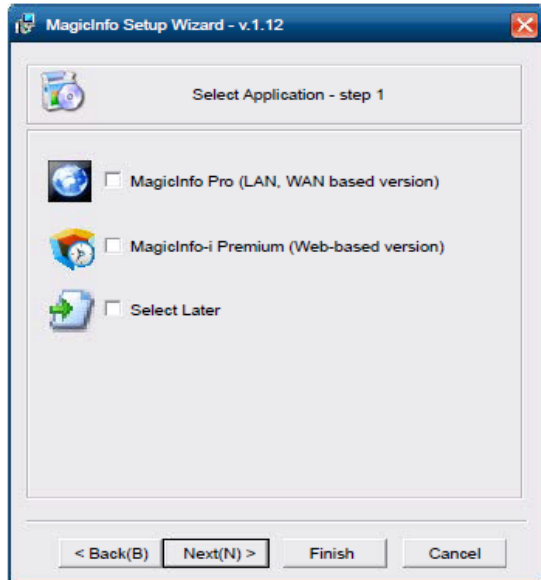
To use **MagicInfo**, a network box (sold separately) must be connected to the product.

— 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.

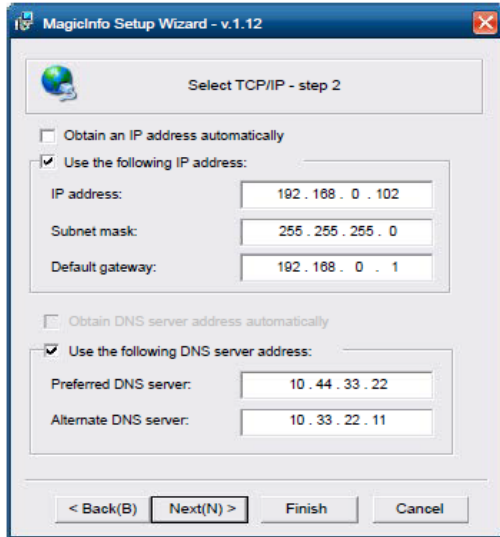
— If a problem occurs after installing an operating system other than the one provided with the network box, restoring the previous version of the operating system, or installing software that is not compatible with the operating system provided, you will not be able to benefit from technical support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



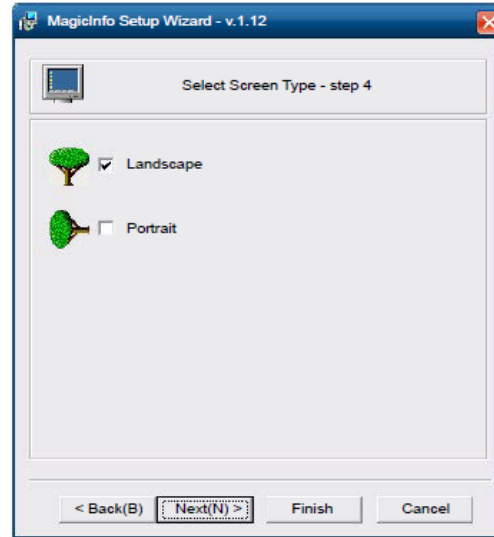
Entering MagicInfo mode

- 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 IN** port on the product will change **Source** from **DVI** to **MagicInfo**.
- 3 Select the default application you want to run when MagicInfo starts.

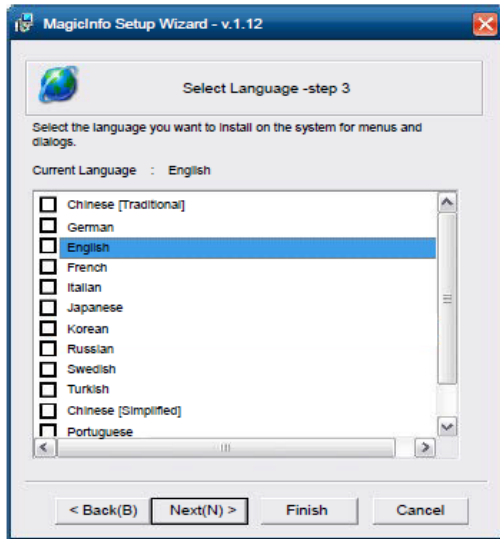
Connection (Connecting Network BOX(Sold Separately))



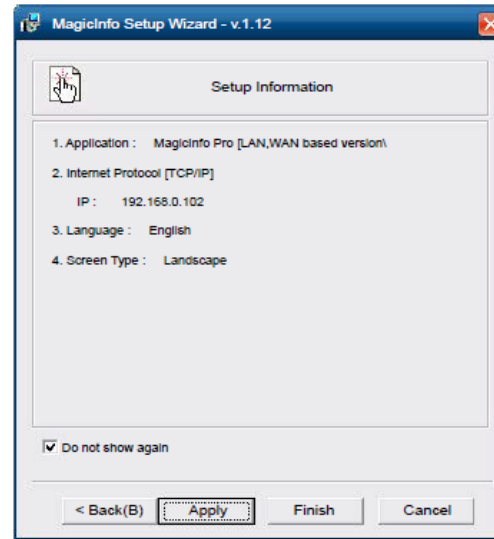
4 Enter the IP information.



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.

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 program, refer to Help after installing the program. The MDC program 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 Program Installation/Uninstallation

Installation

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

- 1 Click the **MDC Unified** installation program.
- 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 program in and click **"Next"**.

— If the directory path is not specified, the program 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 program 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 program 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**.

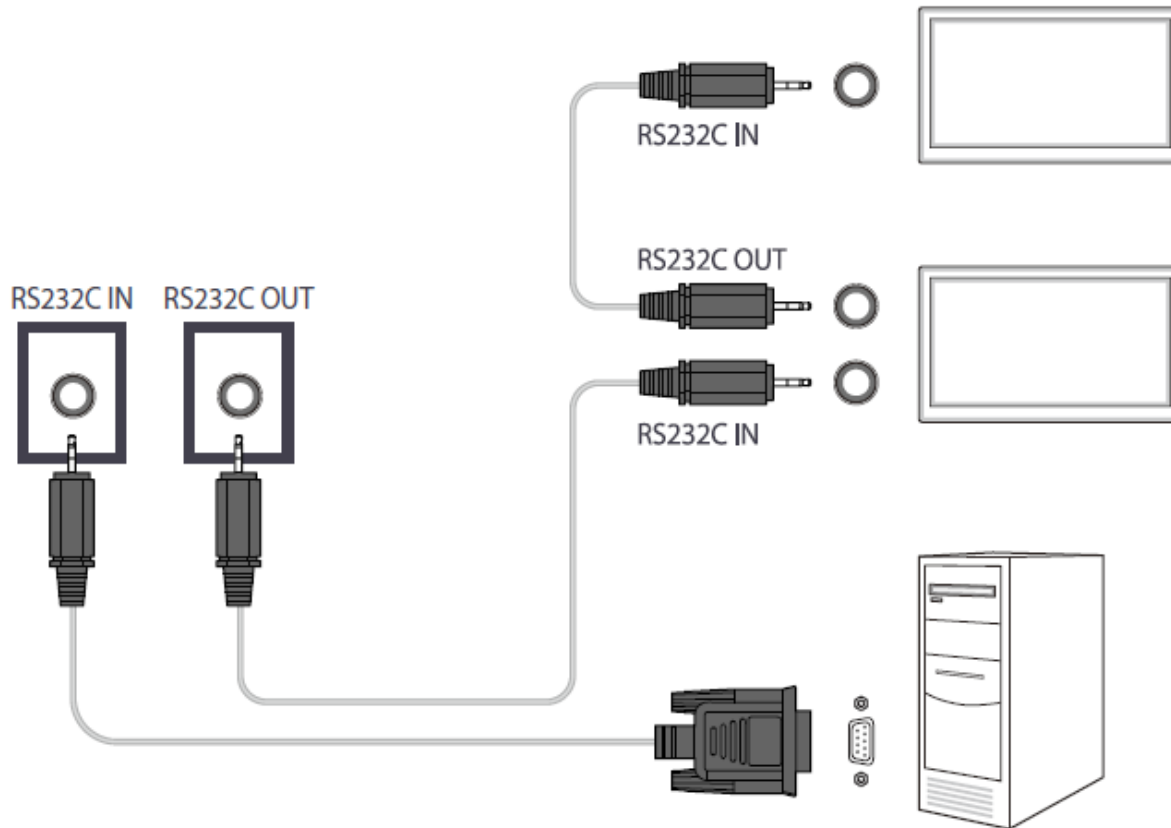
Connection (MDC)



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.



Connection (MDC)

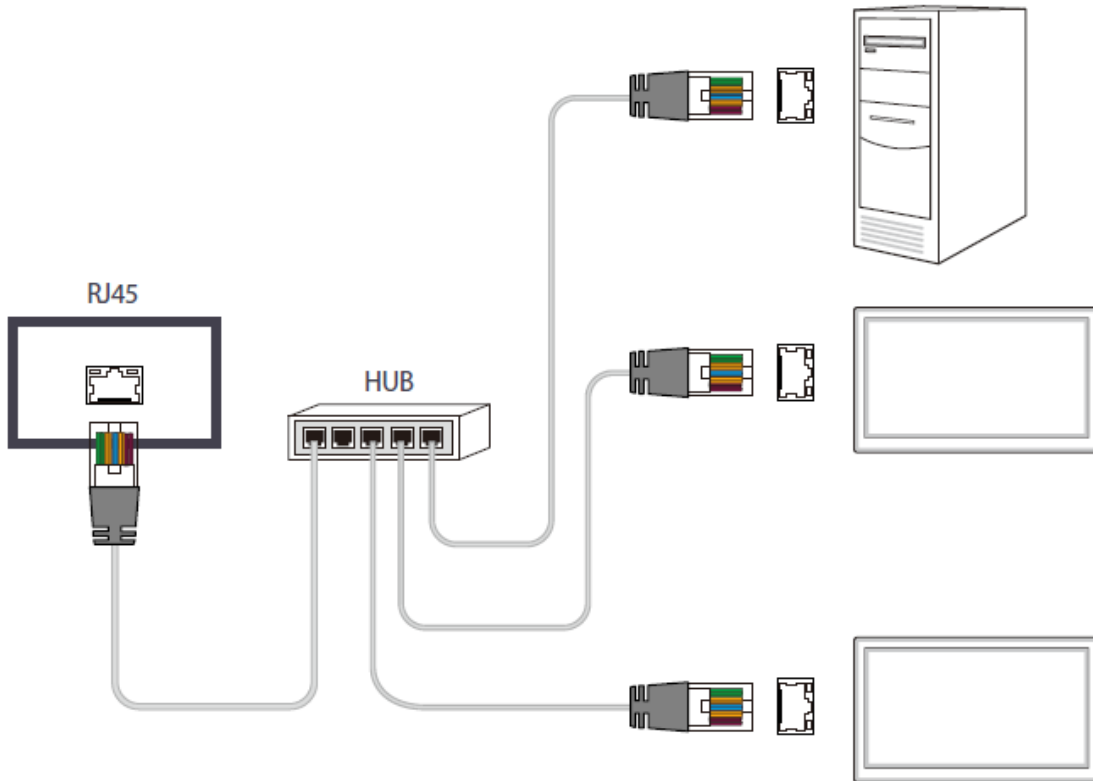


Using MDC via Ethernet

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.

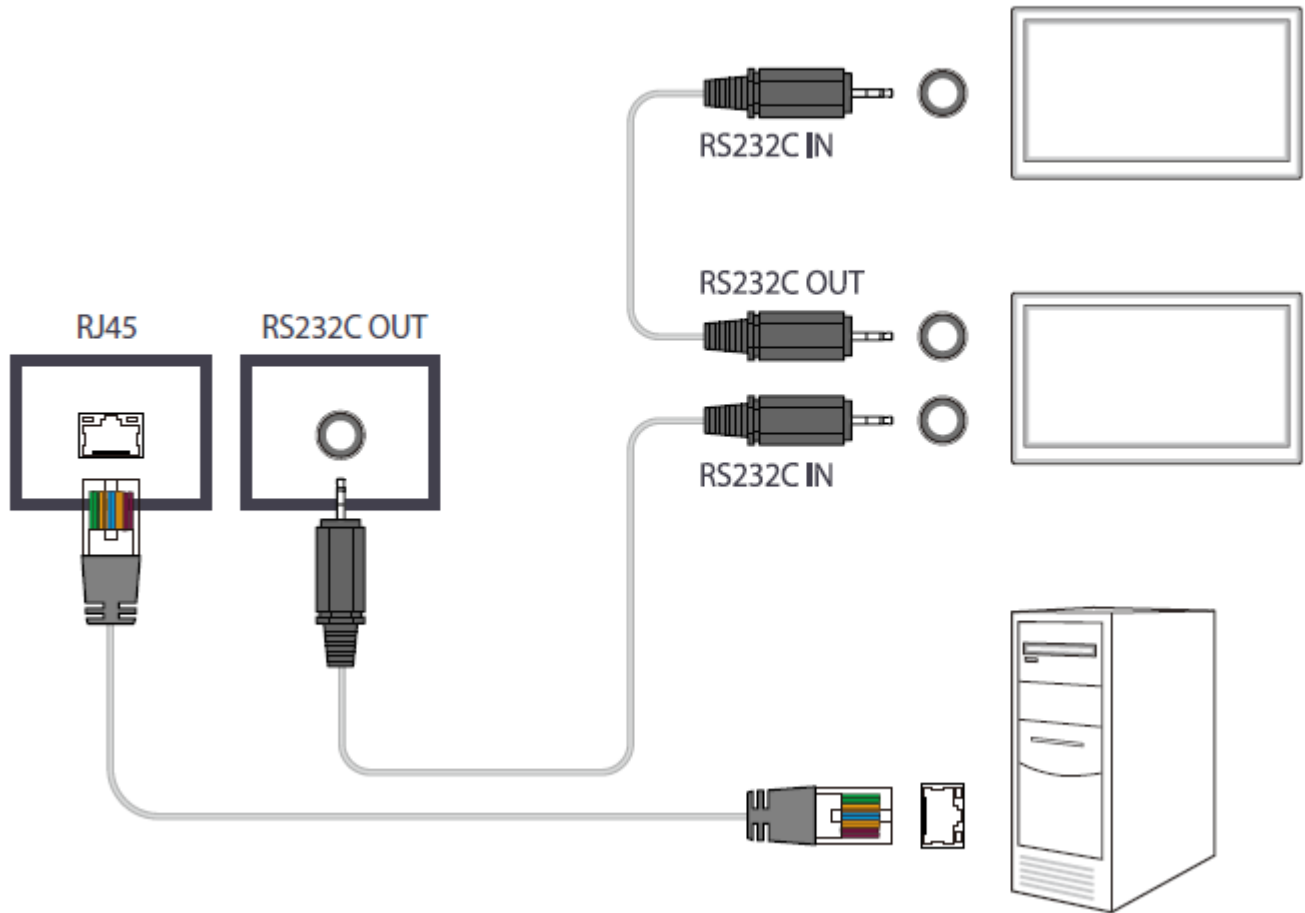


Connection (MDC)



Connection using a cross LAN cable

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

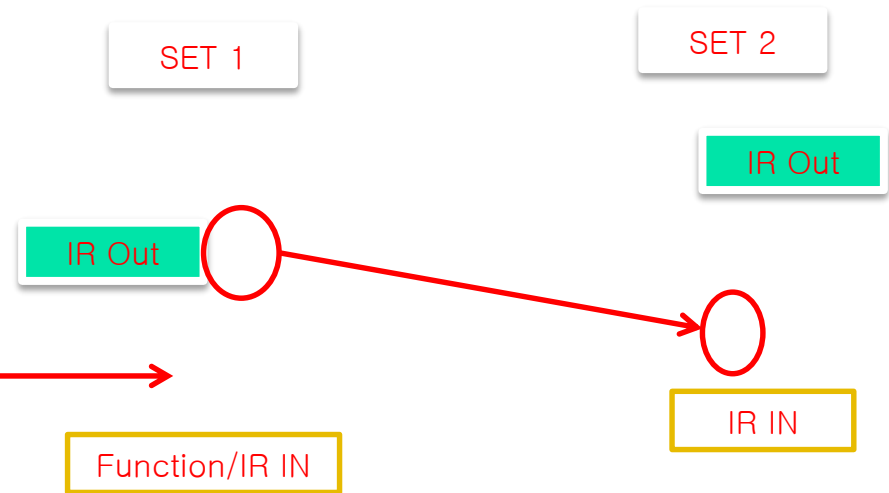


Product Differencing Point



■ Function Board

The model is adjusted to a removable Function Ass'y, the brightness of the screen is automatically adjusted by a sensor.



How to connect the IR IN / OUT of SET1 and SET2

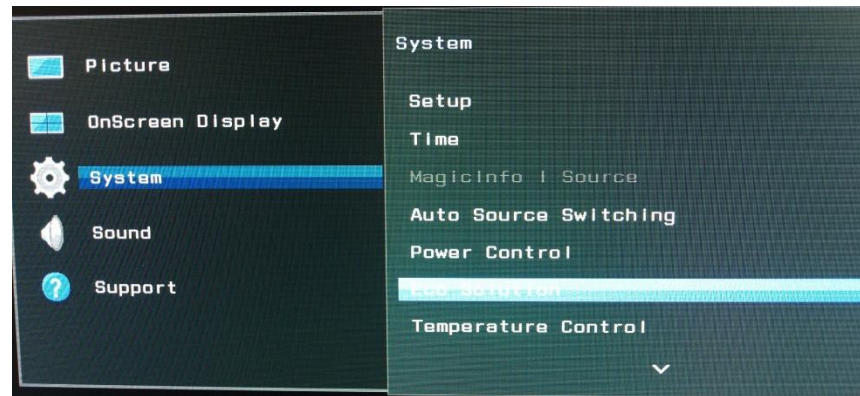
Connection (Feature)



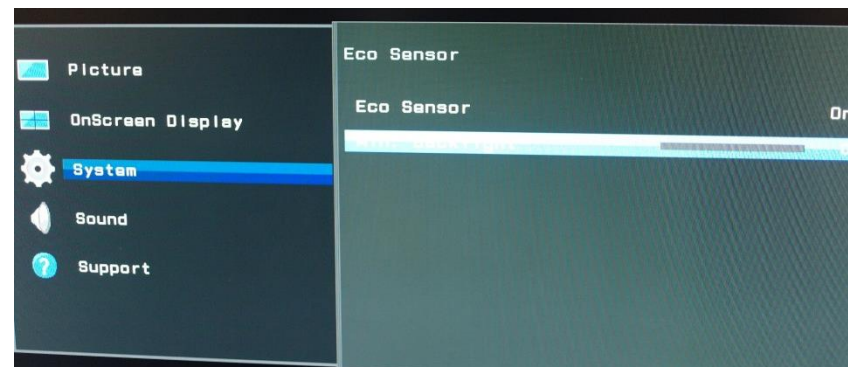
Eco Sensor

○ Reduce the power consumption by adjusting the screen brightness.

1. Menu → System → Eco solution → Eco Sensor



2. When Eco Sensor is On, you can manually adjust the minimum screen brightness.



Connection (Feature)

Network Connection

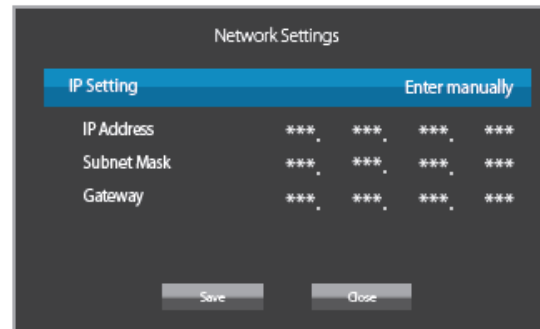
Network Settings

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**.

Trouble Shooting

Requirements Before Contacting Samsung Customer Service Center

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).

Trouble Shooting

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.

Trouble Shooting



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 analog and digital products.

Trouble Shooting



Screen issue

The brightness and color 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 Center 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.

Trouble Shooting

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 program.

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).

Trouble Shooting



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.

Trouble Shooting

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 colors 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

Trouble Shooting

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 center 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 center 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

Answer

How can I change the frequency?

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.
-

Trouble Shooting

Question

Answer

How do I set powersaving mode?

- 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.
-

Check SW version

Src:PC

Option

Sub Setting

ADC/WB

WB Movie

Picture 2D

WCE

EDID

SVC

SE15HV

Audio

Spread Spectrum

Panel Info

CheckSum

EEPROM Reset

Main:L-UDEMWWAC-0817.0

STM32:0009

MAC:FE-42-0B-2F-0B-2F

EDID:Success

Timer Status:OK

BR Sensor Status:OK

FLASH SELECT :B

0000

USB Download

4-5-2. How to Upgrade SW and Micom

Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the set. Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The Set will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version).

When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

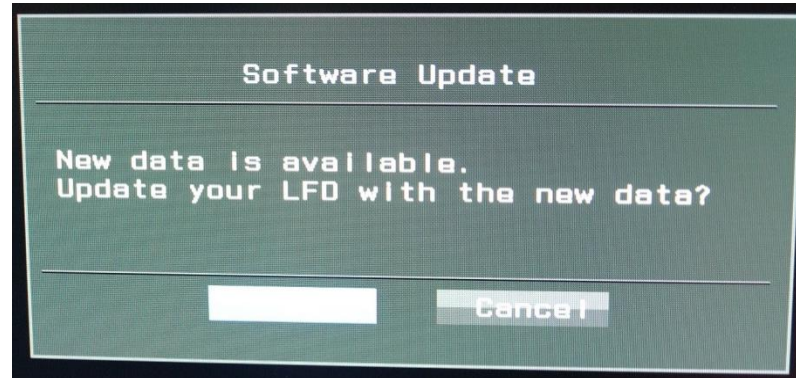
USB Download

- Click the “MENU” key in remote controller
- Select “Support” menu
- Locate the menu cursor “ Software Upgrade” menu

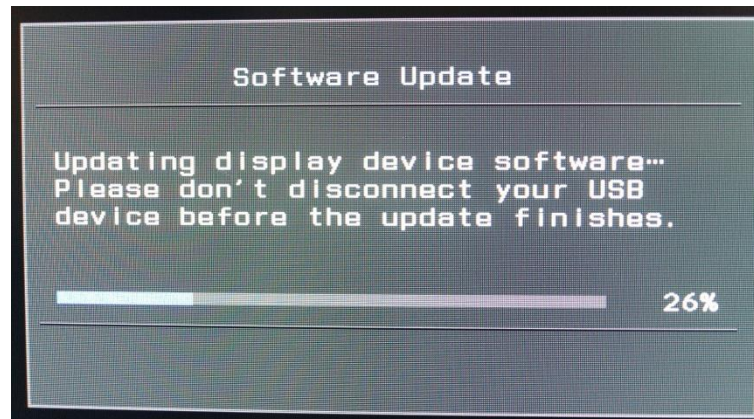


- Click the “Enter” key.
- You can upgrade by USB

USB Download



- Press the "Enter" key



- Wait until upgrade complete

Thermal Guide

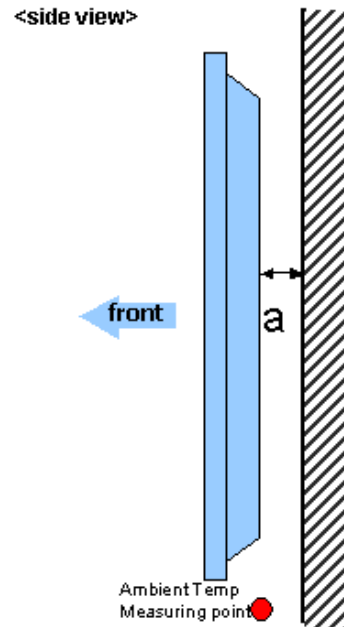
1. Applicable products

- All the indoor LFD products
- All thermal installation guides are applied to landscape/portrait display

2. Recommendation

- Ambient temperature : less than 40°C (non-condensing condition)
less than 35°C (when LFD is installed in an enclosure)
- Minimum 15mm distance from a wall (LED model less than 65")
40mm for other models

1. Vertical wall mount condition



$a: \geq 15\text{mm}$ (LED BLU less than 55")
40mm (other LFD models)

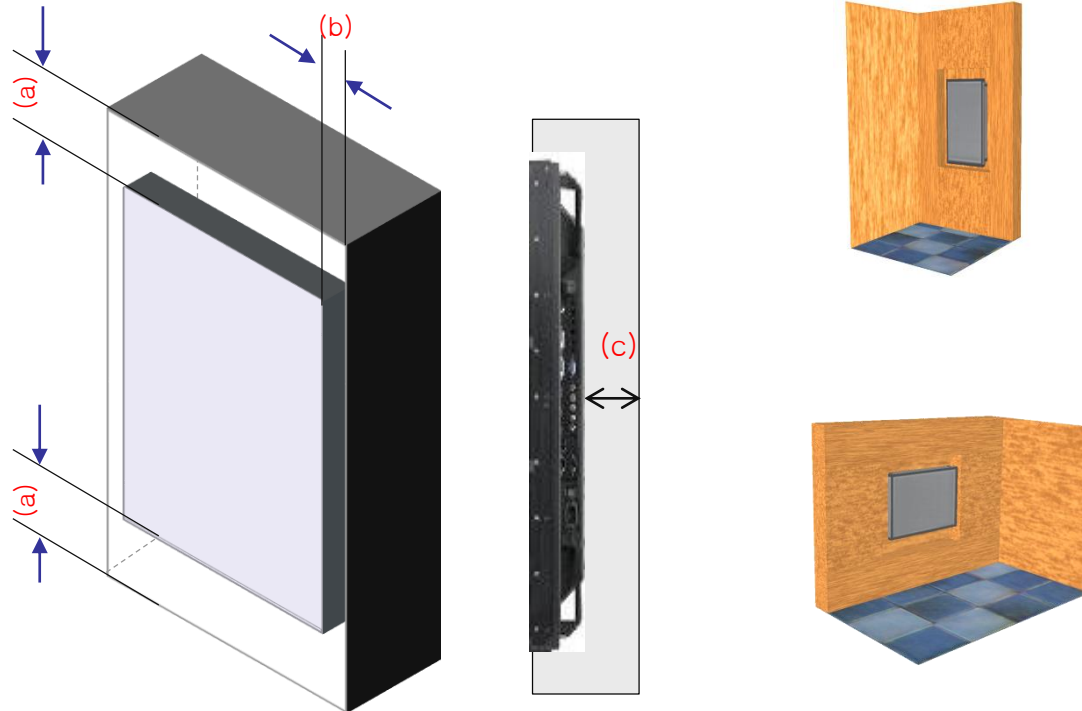
Ambient temperature $\leq 35^\circ\text{C}$

- Proper thermal management is applied in commercial model.
- No additional consideration is not necessary with ambient temperature under 35C.

Thermal management guide



2. Embedded Mount guide



For LED-BLU models (less than 65")

Operating temperature	(a)	(b)	(c)
0~35°C	> 25mm	> 0 mm	> 15mm
0~30°C	> 10mm	> 0 mm	> 15mm

For other models

Operating temperature	(a)	(b)	(c)
0~35°C	> 50mm	> 30 mm	> 40mm

3. Enclosure guide

- Normal operation temperature is 0~40°C, but it is limited by installation condition.

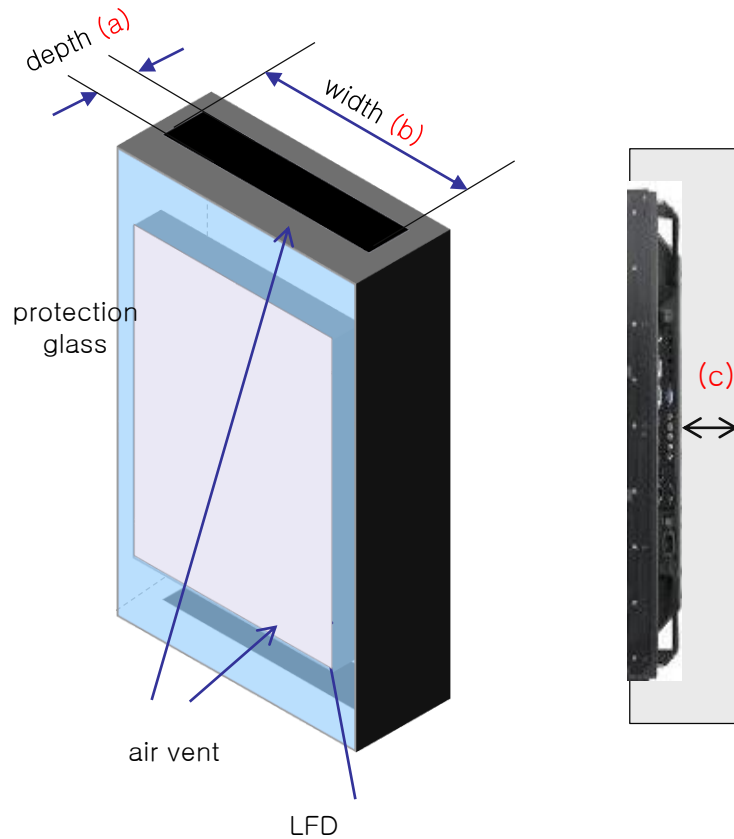


Table . size of air vent & required space from each sides

Operating temperature	(a)	(b)	(c)
0~35°C	> 25mm	width of the set	> 15mm (LED model less than 65") >40mm (etc)
	or total vent hole area > 30% of area of top & bottom side		
0~30°C	> 10mm	width of the set	> 15mm (LED model less than 65") >40mm (etc)
	or total vent hole area > 15% of area of top & bottom side		

Thermal management guide



3. Enclosure guide (2 units in 1 enclosure)

- Normal operation temperature is 0~40°C, but it is limited by installation condition.

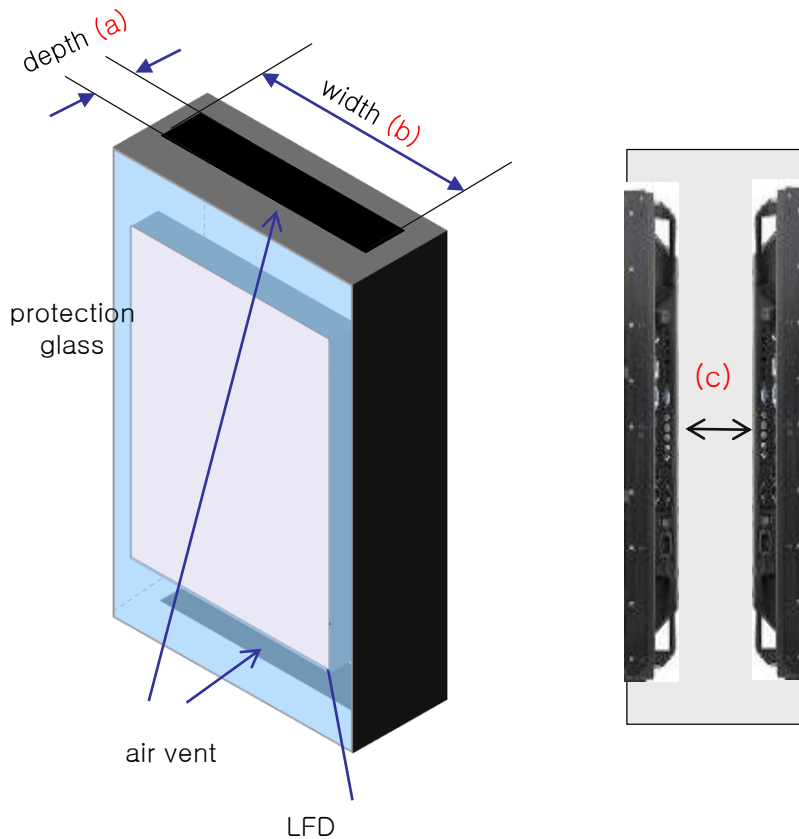


Table . size of air vent & required space from each sides

Operating temperature	(a)	(b)	(c)
0~35°C	> 50mm	width of the set	> 30mm (LED model less than 65") >80mm (etc)
	or total vent hole area > 30% of area of top & bottom side		
0~30°C	> 20mm	width of the set	> 30mm (LED model less than 65") >80mm (etc)
	or total vent hole area > 15% of area of top & bottom side		

Thermal management guide

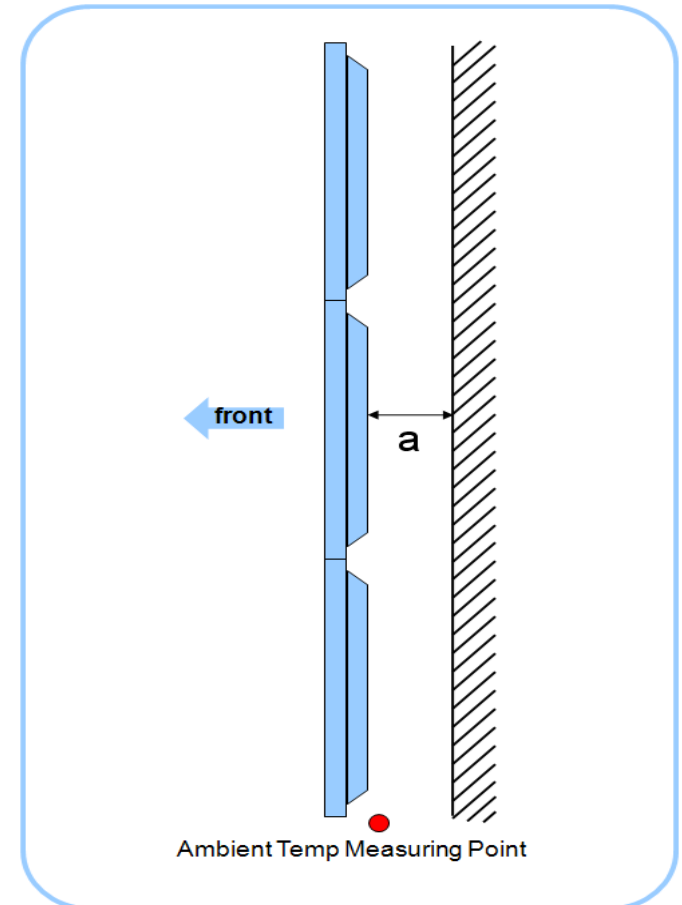
4. Wall Mount Condition (in case of 46" model)

- It is strongly recommended that ambient temperature is under 30 °C for video-wall installation.
 - Considerable amount of heat is added to the upper units.
- internal T of uppermost unit is 5 ~ 10 °C higher than the lowest unit.
(Even there is adequate distance from the wall)

a : distance from the wall (recommended)

Configuration	1 x 1	2 x 2	3 x 3	4 x 4	5 x 5
a [mm]	40	80	120	160	200

※ For more than 6 rows, auxiliary air conditioning system will be required.

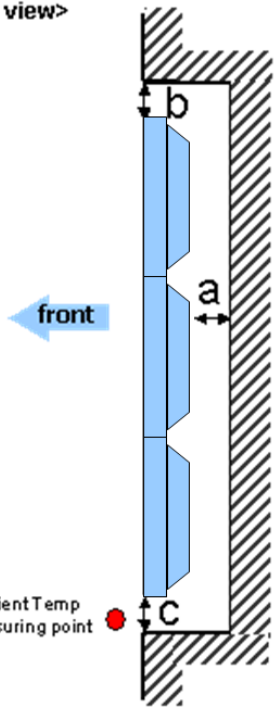


Thermal management guide

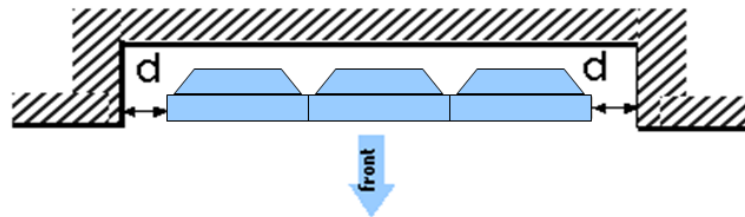


4. Wall Mount Condition (in case of 46" model)

<side view>



<top view>



a : same as vertical installation

b = c = d : identical gap

- Ambient temperature under 30 °C is also recommended for embedded video-wall.

- Distance from the rear wall is same as vertical wall mount case.

Recommended distances

Configuration	1 x 1	2 x 2	3 x 3	4 x 4	5 x 5
a [mm]	40	80	120	160	200
b (= c = d) [mm]	50	100	150	200	250

※ Additional fans are required in order to decrease side gaps(b, c, d) For aesthetic purpose

Support

Support (Resolution)



해상도	Golf-S(UDE-P/S)	etc.	Resolution	SE15HV(UDE-A/B/C, UHF-E, UHF5)	
	Video Wall			Video Wall	etc.
720x400@70Hz	O		720x400@70Hz	X	
640x480@60Hz	O		640x480@60Hz	O	
640x480@67Hz	O		640x480@67Hz	X	
640x480@72Hz	O		640x480@72Hz	X	
640x480@75Hz	O		640x480@75Hz	X	
800x600@60Hz	O		800x600@60Hz	O	
800x600@72Hz	O		800x600@72Hz	X	
800x600@75Hz	O		800x600@75Hz	X	
832x624@75Hz	O		832x624@75Hz	X	
1024x768@60Hz	O		1024x768@60Hz	O	
1024x768@70Hz	O		1024x768@70Hz	X	
1024x768@75Hz	O		1024x768@75Hz	X	
1280x1024@75Hz	O		1280x1024@75Hz	X	
1152x870@75Hz	O		1152x870@75Hz	X	
1152x864@75Hz	O		1152x864@75Hz	X	
1280x720@60Hz	O				
1280x800@60Hz	O		1280x800@60Hz	X	
1280x1024@60Hz	O		1280x1024@60Hz	X	
1440x900@60Hz	O		1440x900@60Hz	X	
1600x900@60Hz	O		1600x900@60Hz	X	
1680x1050@60Hz	O		1680x1050@60Hz	X	
1920x1080p@60Hz	O		1920x1080p@60Hz	O	
1920x1080p@50Hz	O		1920x1080p@50Hz	O	
1280x720p@60Hz	O		1280x720@60Hz	O	
1280x720p@50Hz	O		1280x720@50Hz	O	
1920x1080i@60Hz	O	up to max 5x5	1920x1080i@60Hz	O	up to max 5x5
1920x1080i@50Hz	O	up to max 5x5	1920x1080i@50Hz	O	up to max 5x5
720x480p@60Hz	O		720x480p@60Hz	X	
720x576p@50Hz	O		720x576p@50Hz	X	
1920x1080p@24Hz	O		1920x1080p@24Hz	O	
1920x1080p@25Hz	O		1920x1080p@25Hz	O	
1920x1080p@30Hz	O		1920x1080p@30Hz	O	
3840x2160P 24HZ	O		3840x2160P 24HZ	O	
3840x2160P 25HZ	O		3840x2160P 25HZ	O	
3840x2160P 30HZ	O		3840x2160P 30HZ	O	
3840x2160P 50HZ	O		3840x2160P 50HZ	O	
3840x2160P 60HZ	O		3840x2160P 60HZ	O	
720x480i@60Hz	X		720x480i@60Hz	X	
720x576i@50Hz	X		720x576i@50Hz	X	

Support (Resolution)



Note :

- You can use **Gamma** calibration without ACM12 IC for some specific models.
- **Apply to All/Current Source** means, you can copy the calibrated result to other input source when you select **All source** option in the setting tab.
- For only the models marked by 'O' for the "**Internal Patterns**", LFD screens can be adjusted without the input source.
- Color Expert will help you to adjust the screen for your custom target value through "ColorExpert_Config.xml" file.
To use it correctly, Please check the other sheet, named "BroadCasting Mode".
- Please check the memo like a **G23** in this sheet. Specific information are wrote in the memo to help you.

Model Name		ACM12 IC	Gamma	Uniformity	White Balance	Broadcasting Mode	Apply to All/Current Source	Use Internal Patterns	Latest FW version - 29, DEC, 2016
UDE	UD46E-B	O	O	O	O	O	O	O	L-UDEMWWAC-1018.1
	UD55E-B								
	UD46E-C								
	UD46E-P	O	O	O	O	O	O		
	UD55E-P								
	UD55E-S								
UHF	UH55F-E	O	O	O	O	O	O	O	L-UDEMWWAC-1018.1
UHF5	UH46F5	O	O	O	O	O	O	O	L-UHFMWWAC-1002.0