LCD Panel FHD551-W

User Manual

020-100996-01



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- g. Direct exposure to sunlight.

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O CD incluído com o impresso livro contém um eletrônico cópia em Português. Por favor lido todas as instruções antes de usar ou prestando serviço esse resultado.

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El DC incluido con este manual impreso contiene una copia electrónica en español. Por favor, lea todas las instrucciones antes de usar o dar servicio a este producto.

Компакт диск, що постачається з цим друковане керівництво містить електронну копію українською мовою. Будь ласка, прочитайте всі інструкції перед використанням або обслуговуванням цього продукту.

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Important Safety Information

Read this information thoroughly and completely before installing, adjusting, or operating the LCD panel FHD551-W.

General Safety Precautions

A DANGER

- This product is designed and manufactured to operate within defined design limits. Misuse may result in electric shock or fire.
- Improper installation can result in death or serious injury! Make sure that the supports, mount, and hardware used for the LCD panel installation are adequately designed to hold the required weight and that they are installed correctly.
- Fire or electrical shock hazard! Although the LCD panel meets IP56 weatherproof standards, it is not engineered to protect against continuous liquid immersion. Do not submerge the LCD panel in any type of liquid.
- Never push any object into an opening at the back of the LCD panel.
- Do not place objects on top of the LCD panel.

- This is a class A product. In a domestic environment, this product may cause radio interference for which the user may be required to contain.
- To avoid electric shock or component damage, disconnect the LCD panel from AC power before connecting other components to the LCD panel.
- Fire or electrical shock hazard! Avoid condensation; do not use the LCD panel immediately after moving it from a lower to a higher temperature environment.
- Do not touch the liquid from a broken LCD panel. If you have contact with the liquid, wash the area with clean water and seek medical attention immediately.
- Watch for pinch points. Do not place your fingers between moving parts.
- Two people are required to safely lift and install the LCD panel.

ACAUTION

- Do not push or shake the LCD panel. This may cause damage or injury.
- Do not apply pressure to the front of the LCD panel. This may cause damage or injury.
- If smoke or an unidentified odor comes from the LCD panel, remove the power plug from the outlet immediately and contact your dealer immediately. Do not try to repair the product yourself.

NOTICE

- Do not block LCD panel ventilation openings.
- During installation, provide a minimum of 2 in. (5 cm) spacing from the wall and 2 in. (10 cm) spacing from the ceiling and sides, to allow proper ventilation.

Power Safety

A DANGER

- DO NOT attempt operation if the AC supply and cord are not within the specified voltage and power range.
- Disconnect power from the LCD panel before moving it or opening any enclosure.
- Position all cables where they cannot contact hot surfaces, be pulled, or tripped over.
- Do not overload power outlets and extension cords.
- Do not operate if the LCD panel power cord or power outlet appear damaged.

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Introduction

The LCD Panel FHD551-W provides high-definition resolution at 1920 x 1080 with a weather-resistant design, to allow for outdoor installation. This user manual provides data about the LCD panel, installation instructions, operation, care, and troubleshooting tips.

Features

- High brightness (700 nits, typ.)¹
- High contrast ratio (4000:1, typ.)¹
- Full HD 1920 x 1080 resolution
- Optically bonded screen
- Weatherproof IP56/NEMA 4 rating
- Ruggedized design
- Portrait or landscape orientation
- DACS cooling and filtration system
- On Screen Display (OSD) menu controls
- Built-in speakers
- Image retention frame motion (IRFM)

^{1.} Brightness and contrast may be slightly reduced due to the protective covering on the glass of the LCD panel.

What's In The Box?

NOTICE

Always use the accessories recommended by Christie Digital, for compatibility.

Verify that you have all these items before installing the LCD panel.



Controls and Indicators

This section describes the LCD panel FHD551-W controls and indicators.

LCD Panel Controls

The LCD panel controls are located at the back of the LCD panel. Remove the exterior and interior I/O panels for access.

Button	Description
Power	Turns the LCD panel ON and OFF.
SOURCE	Toggles between sources.
•	Navigates right or increases a setting value in the OSD menu.
•	Navigates left or decreases a setting value in the OSD menu.
•	Navigates up in the OSD menu.
•	Navigates down in the OSD menu.
MENU/EXIT	Opens the OSD menu or selects the previous menu if the OSD menu is already open.

Indicator Lights

The indicator lights are located at the back of the LCD panel, to the left of the LCD panel controls.

Light	Description
Green (solid)	Indicates that the LCD panel is operating normally.
Green (blinking)	Indicates that the LCD panel fan has failed.
Orange (solid)	Indicates that the LCD panel is in power saving mode.
Orange (blinking)	Indicates that the LCD panel is not receiving a signal.
None	Indicates that the LCD panel does not have power or is off.

Connection Panel

The connection panel is located at the back of the LCD panel. Remove the exterior and interior I/O panels for access.



Remote Control

NOTICE

The remote control is not waterproof.

Ref.	Button	Description
A	INFO	Provides source and resolution information.
В	СОМР	Selects the component source.
	AV	Selects the composite video source.
	HDMI2	Selects the HDMI 2 source.
С	PIP	Turns picture-in-picture on or off.
	S-V	Selects the S-video source.
	SDI2	Not available.
D	SWAP	Swaps between the main and PIP images.
E	ENTER	Selects the highlighted menu choices.
F	SCALING	Toggles between aspect ratios.
	FREEZE	Freezes the current source image.
	MUTE	Turns sound off.
	BRIGHT	Adjusts brightness.
	CONTRAST	Adjusts contrast.
	AUTO	Auto adjustments the VGA source.
	SOURCE	Toggles between sources.
	VOLUME-	Decreases the audio output level.
	VOLUME+	Increases the audio output level.
G	POWER	Turns the LCD panel ON and OFF.
Н	VGA	Selects the PC RGB source.
	DVI	Selects the PC DVI source.
	HDMI1	Selects the HDMI 1 source.
I	P-POSITION	Toggles between picture-in-picture positions.
	DISPLAYPORT	Selects the displayport source.
	SDI1	Not available.
J	P-SOURCE	Selects the secondary sub-source.
К	MENU and arrow keys	Opens the onscreen display (OSD) menu or selects the previous menu if already open. The arrows provide menu navigation and setting adjustment.
L	EXIT	Close the OSD menu.

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Installation

This section provides package handling and installation instructions.

Package Handling



Two people are required to safely lift and install the LCD panel.



Transport the LCD panel upright with the proper packaging. Do not place the LCD panel on its side.



Dropping the panel or applying unnecessary force to the sides of the bezel results in permanent damage.





Unpack the LCD Panel

WARNING

Two people are required to safely lift and install the LCD panel.



Save the LCD panel packaging, to move or ship the LCD panel in the future.

- 1. Set the LCD panel box in an upright position.
- 2. Remove the banding.
- 3. Remove the white lock handles.
- 4. Lift off the top of the carton.
- 5. Remove the top foam cushion.
- 6. Remove the packing bag.
- 7. With two people, lift the LCD panel out of the bottom foam cushion.
- 8. Remove the accessory bag.

Α	Top of the carton
В	Top foam cushion
С	LCD panel
D	Packing bag
Е	Accessory bag
F	Bottom foam cushion
G	Lock handle (1 of 6)



LCD Panel Setup

WARNING

Do not install the LCD panel near any heat sources (such as; radiators, heat registers, stoves, or other apparatus that produce heat). This may cause a fire or electric shock.

NOTICE

- Allow a minimum of 2 in. (5 cm) spacing from the wall and 4 in (10 cm) spacing from the ceiling and sides when installed.
- Do not install the LCD panel at a 180° angle (screen up or screen down).
- Install the LCD panel using M8 x 15 mm mounting screws. Do not install the LCD panel with screws that are longer than 15 mm or they may damage the LCD panel.
- Before connecting external devices, turn the LCD panel and any connected devices OFF. After all connections are made, turn the LCD panel on before external devices.
- Read the Operation Manuals of the video source equipment before making the connections.



Install the LCD panel in a shaded location, away from direct sunlight, for the best viewing experience.

- 1. Prepare the installation site.
- 2. Position the LCD panel in its permanent installation location.
- 3. If rotation is required, see *Rotate the LCD Panel* on page 12.
- 4. Open the LCD panel connections panel.

See Open the Connections Panel on page 12.

5. Connect components, and power to the LCD panel.

See Connect Power to the LCD Panel on page 13.

See Connect a Video Source to the LCD Panel on page 13.

6. Close the LCD panel connections panel.

See Close the Connections Panel on page 13.

7. Install the remote control batteries

See Connect Power to the LCD Panel on page 13.

Rotate the LCD Panel

NOTICE

Improper ventilation may shorten the operational life of the LCD panel.

Rotate the LCD panel in the correct direction for a landscape or portrait orientation. Reference the arrow labels on the back of the LCD panel for the proper rotation.









Open the Connections Panel



To avoid risk of electric shock, do not touch the power cable with wet hands and avoid handling the power cord during electrical storms.

- 1. Rest the LCD panel on a soft surface with the screen down.
- 2. Remove 4 screws from the exterior input and output (I/O) cover.



- 3. Remove the external I/O cover.
- 4. Remove the internal I/O cover.



Connect Power to the LCD Panel

To avoid risk of electric shock, do not touch the power cable with wet hands and avoid handling the power cord during electrical storms.

1. Insert the female end of the power cable through the plastic opening of the interior I/O cover.



- Plug the female end of the power cable into the AC IN connector. See *Connection Panel* on page 6.
- 3. Press the power switch to the ${\bf I}$ position.

Connect a Video Source to the LCD Panel



The infrared extender cable does not work in direct sunlight.

- 1. Insert the video source cable through the plastic opening of the interior I/O cover.
- Plug the video source cable into the appropriate connector location. See *Connection Panel* on page 6.

Close the Connections Panel

To avoid risk of electric shock, do not touch the power cable with wet hands and avoid handling the power cord during electrical storms.

- 1. Hold the interior I/O cover against the LCD panel and guide the cables (power and video source) into the cable bracket.
- 2. Place the exterior I/O cover over the interior I/O cover and secure it with 4 screws. Insert the male end of the power cable into an AC wall socket.

Install the Remote Control Batteries



To install the batteries, follow the instructions provided in the remote control battery compartment. Incorrect polarities may cause operator injury, battery damage, and contamination of the remote controller.

Use approved AAA batteries and do not mix different battery types or strengths.



The remote control is not waterproof.



To lock or unlock the remote, press **Enter**, **Enter**, **Exit**, **Exit**, **Enter**, **Exit**.

- 1. Remove the battery cover, by lifting the tab of the battery cover.
- 2. Insert two AAA batteries into the remote control.

Correctly align the polarity of each battery with the polarity markings inside the remote control.

3. Close the battery cover.



Disconnect Power from the LCD Panel

A DANGER

- Hold the power connector when removing the power cable. Removing the power cable by the cord can damage the wires inside the cable and cause fire or electric shock.
- To avoid risk of electric shock, do not touch the power cable with wet hands.



Do not disconnect the AC power cord when Winter Mode is set to Enable. See *Advanced Settings* on page 26.

- 1. If the LCD panel is on, press **Power OFF** on the remote control.
- 2. Unplug the power cable.
- 3. Remove 4 screws (M6x30mm) from the exterior I/O cover.
- 4. Remove the external I/O cover
- 5. Remove the internal I/O cover.
- 6. Press the power switch to the **O** position.
- 7. Unplug the power cable and remove the cable from the interior I/O cover.
- 8. Hold the interior I/O cover against the LCD panel.
- 9. Place the exterior I/O cover over the interior I/O cover and secure in position using 4 screws.

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Operation

NOTICE

- Do not send a static (non-moving) image to this LCD panel for long periods of time because it may cause image burn-in or image retention.
- Turn the power off for 6 consecutive hours after 18 hours of usage, to avoid image retention.

This section provides procedures and information for operating the LCD panel.

Turn Power On

- Verify that power is connected to the LCD Panel. See Open the Connections Panel on page 12.
- 2. Press **Power ON** on the remote control.

Turn Power Off

Press Power OFF on the remote control.

Select the Input Source

- 1. Press **MENU** on the remote control.
- 2. Press to navigate to the **Display Settings** menu.
- 3. Press → and then to select **Select Source**.
- 4. Press ▶.
- 5. Press to select an input source:

Α	VGA	Е	DisplayPort
в	HDMI 1	F	Composite Video
С	HDMI 2	G	S-Video
D	DVI	н	Component

- 6. Press **ENTER** to save changes.
- 7. Press **EXIT** to exit the OSD menu.



PIP

Picture-in-picture (PIP) allows a second, smaller, image to play within the main image.

PIP Sources

Available picture-in-picture (PIP) source images are dependent on the source of the main image. For example, if your main screen is using a VGA source, you cannot use a VGA PIP source.

PIP	Main Screen Source							
Source	VGA	HDMI 1	HDMI 2	DVI	DisplayPort	Video	S-Video	Component
VGA	-	✓	~	~	\checkmark	~	~	✓
HDMI 1	\checkmark	-	-	-	\checkmark	\checkmark	~	\checkmark
HDMI 2	~	-	-	-	~	~	~	√
DVI	~	-	-	-	✓	~	~	√
DisplayPort	~	✓	~	~	-	~	~	~
Video	\checkmark	✓	~	\checkmark	\checkmark	-	-	\checkmark
S-Video	~	✓	~	~	~	-	-	~
Component	~	✓	~	~	~	~	~	-

Turn PIP On or Off

Press **PIP** on the remote control.

Adjust the PIP Source

1. Select the source for the main image:

Press the required source button on the remote control: VGA, DVI, HDMI 1, COMP, AV, HDMI 2, DISPLAYPORT, or S-V.

See Select the Input Source on page 15 for source types.

- 2. Press PIP.
- 3. Select the source for the PIP image:
 - a. Press **P-SOURCE**.
 - b. Press \checkmark or \checkmark to select the PIP source.
 - c. Press ENTER.

See *PIP Sources* on page 16 for information about main image and PIP image source compatibility

Adjust the PIP Mode

Picture-in-picture (PIP) mode adjusts the size of the PIP image that displays within the main image.

- 1. Press **MENU** on the remote control.
- 2. Press to navigate to the **Display Settings** menu.
- 3. Press → and then to select **PIP Mode**.
- 4. Press ▶.
- 5. Press to select the required PIP mode:

Α	Side-by-Side	С	Medium PIP
В	Large PIP	D	Small PIP

- 6. Press **ENTER** to save changes.
- 7. Press **EXIT** to exit the OSD menu.

Adjust PIP Position

Picture-in-picture (PIP) position adjusts the location of the smaller image within the main image.

There are two methods for adjusting the PIP position:

Method 1

Press **P-POSITION** on the remote control until the image moves to the desired location.

Method 2

- 1. Press **MENU** on the remote control.
- 2. Press to navigate to the **Display Settings** menu.
- 3. Press → and then to select **PIP Position**.
- 4. Press ▶.

Α	Top-Right	С	Bottom-Right
В	Top-Left	D	Bottom-Left



- 6. Press **ENTER** to save changes.
- 7. Press **EXIT** to exit the OSD menu.



Swap between the Main Image and the PIP Image

Press **SWAP** on the remote control.

Swap between the Main Audio and the PIP Audio

Press AUDIO on the remote control.

Turn IRFM On or Off

Use image retention frame motion (IRFM) mode to help avoid image retention from static images. This mode is recommended when static images are used for a long time.

- 1. Press **MENU** on the remote control.
- 2. Press to navigate to the **Advanced Settings** menu.
- 3. Press → and then to select **IRFM**.
- 4. Press > to set IRFM to **On** or **Off**.
- 5. Press **ENTER** to save changes.
- 6. Press **EXIT** to exit the OSD menu.

Adjust Volume

Press VOLUME- or VOLUME+ to increase or decrease the volume.

Press **MUTE** to temporarily turn off all sound. To restore the sound when muted, press **MUTE** again.

RS-232C Control

The LCD panel power and OSD menu can be controlled through recommended standard-232C.

See RS-232C Command Format on page 31, and RS-232C CMD Options on page 32.

Adjust Wake Up From Sleep



When **Wake Up From Sleep** is set to **VGA**, **Digital**, **RS232**; LCD panel power consumption is >0.5 W when the LCD panel is in power-saving (sleep) mode.

When set to **VGA**, **Digital**, **RS232**; **Wake Up From Sleep** sets the LCD panel to wake up when a digital signal (HDMI, DVI, DisplayPort, or RS-232C) is sent to the LCD panel.

1. Press **MENU** on the remote control.

The Image Settings menu displays.

- 2. Press to navigate to the **Advanced Settings** menu.
- 3. Press → and then to select Wake Up From Sleep.
- 4. Press > to adjust Wake Up From Sleep:
 - **VGA Only** the LCD panel wakes up from power saving mode when it receives an active video signal from its VGA (analog) input. This is the default setting.
 - VGA, Digital, RS232 the LCD panel wakes up when it receives an active signal from the VGA, HDMI, DisplayPort, DVI inputs, or an RS-232C command.
 - **Never Sleep** the LCD panel never goes to sleep.
- 5. Press **ENTER** to save changes.
- 6. Press **MENU** to return to the previous menu or **EXIT** to exit the OSD menu.

OSD Menu

The OSD menu automatically determines whether a graphics source or video source is provided. Some menu options (such as saturation or hue) are not available when a graphics source is provided because changing these options would degrade the picture quality.

The onscreen display (OSD) menu provides adjustment settings for the LCD screen.

OSD Menu Controls

Use the remote control to access the onscreen display (OSD) menu:

- 1. Press MENU.
- 2. Press \blacktriangle or \checkmark to scroll up and down the menu.
- 3. Press \triangleleft or \rightarrow to adjust a selected setting.
- 4. Press **ENTER** to save changes.
- 5. Press **MENU** to return to the previous menu or **EXIT** to exit the OSD menu.

Image Settings

Use the Image Settings menu to make common image adjustments; such as contrast and sharpness.

See OSD Menu Controls on page 20 for OSD menu control information.



Menu Item	Description
Scheme	Adjusts the image scheme. Options include: User, Vivid, Cinema, Game and Sport. The default is User. This option is unavailable when in Graphics mode.

Menu Item	Description
Brightness	Adjusts the picture brightness. Brightness values range from $0 \sim 100$. The default is 50.
Contrast	Adjusts the picture contrast. Contrast values range from $0\sim100$. The default setting is 50.
Sharpness	Adjusts the picture sharpness. Sharpness values range from $0\sim24$. The default is 12.
Saturation	Adjusts brilliance and brightness when operating in VIDEO mode. Saturation values range from $0\sim100$. The default is 50. This option is unavailable when in Graphics mode.
Hue	Adjusts the green hue when operating in VIDEO mode. Hue values range from $0\sim100$. The default is 50. This option is unavailable when in Graphics mode.
Backlight	Adjusts the backlight. Backlight values range from $0\sim100$. The default is 80.
Color Temperature & Gamma	Expands the Image Settings menu. See <i>Image Settings (continued)</i> on page 21.

Image Settings (continued)

11	Gamma	2.2	•
	Color Temperature	5000K	٠
-24	Red Gain		256
0	Green Gain		256
	Blue Gain		256
Rel	Red Offset		0
. He'	Green Offset		0
	Blue Offset		0

Menu Item	Description
Gamma	Adjusts gamma. Options include: OFF and 2.2. The default is 2.2.
Color Temperature	Adjusts the color temperature. Options include: User, 5000K, 6500K, 7500K, and 9300K. The default is 9300K.
Red, Green, and Blue Gain	Adjusts the color gain. To adjust this setting, set the Color Temperature to User first. Values range from 128~383. The default is 256.
Red, Green, and Blue Offset	Adjusts the color offset. The Color Temperature must be set to User to adjust these settings. Values range from $-50 \sim 50$. The default is 0.

Display Settings

Use the Display Settings menu to make common source adjustments; such as, zoom or PIP. See *OSD Menu Controls* on page 20 for OSD menu control information.

11	Main		
erg	Aspect Ratio	Full Screen	•
	Zoom		•
	Auto Scan	Off	•
5	Select Source	•	
	PIP		
5	PIP Mode	Side By Side	•
1235	PIP Position	Top-Left	
Mar F	Aspect Ratio	Full Screen	•
bd-	Side By Side Scale	•	
	Auto Scan	Off	•
	Select source	•	

Menu Item	Description
Aspect Ratio	Adjusts the picture aspect ratio. Options include: Full Screen, Pillar Box, Letter Box, and Native. The default is Full Screen.
Zoom	Adjusts the picture zoom. The zoom ranges from $0 \sim 10$. The default is 0.
Auto Scan (Main)	Adjusts whether auto scan is on or off. When auto scan is on, the order is: VGA, HDMI1, HDMI 2, DVI, DisplayPort, Composite Video, S-video, then Component. The default is On.
Select Source	Adjusts the input source. Options include: VGA, HDMI 1, HDMI 2, S-Video, Composite Video, and Component. The default is HDMI 1.
PIP Mode	Adjusts the picture-in-picture mode. Options include: Off, Large PIP, Medium PIP, Small PIP, and Side-by-Side. The default is Off.
PIP Position	Adjusts the picture-in-picture position. Options include: Bottom-Right, Top-Left, Top-Right, and Bottom-Left. The default is Bottom-Right.
Aspect Ratio	Adjusts the aspect ratio. Options include: Full Screen, Pillar Box and Letter Box. The default is Full Screen.
Side by Side Scale	Adjusts the side-by-side scale. Options include: Zoom In, Zoom Out, Main, PIP, Default, and Return.
Auto Scan (PIP)	Adjusts whether auto scan is on or off. When auto scan is on, the order is: VGA, HDMI1, HDMI 2, DVI, DisplayPort, Composite Video, S-video, then Component. The default is On.
Select Source	Adjust the picture-in-picture source. Options include; HDMI 1, HDMI 2, DVI, DisplayPort, S-Video, Composite Video, and Component. The default is VGA for Main, and Composite Video for PiP.

Audio Settings

Use the Audio Settings menu to adjust volume settings. Audio can also be controlled from the remote control (*Adjust Volume* on page 18).

See OSD Menu Controls on page 20 for OSD menu control information.

	Audio	Settings	
11	Volume		0
-	Bass		0
	Treble		0
	Balance		0
	HDMI Audio Input	HDMI	•
1	DP Audio Input	DisplayPort	•
Contraction of the second seco	Internal Speakers	Off	•
(1)			

Menu Item	Description
Volume	Adjusts the main volume. Volume ranges from $0 \sim 100$. The default is 50.
Bass	Adjusts the bass level (low tones). Bass ranges from $0\sim20$. The default is 10.
Treble	Adjusts the treble (high tones). Treble ranges from $0\sim 20$. The default is 10.
Balance	Adjusts the left and right speaker balance. The values range from $0\sim 20$. The default is 10.
HDMI Audio Input	Adjusts the HDMI audio input. Options include: HDMI and PC audio input. The default is HMDI.
DP Audio Input	Adjusts the DisplayPort audio input. Options include: DisplayPort and PC Audio Input. The default is DisplayPort.
Internal Speakers	Turns the internal speakers on or off. Options include: On and Off. The default is On.

Basic Settings

Use the Basic Settings menu to make OSD menu adjustments.

See OSD Menu Controls on page 20 for OSD menu control information.



Menu Item	Description
OSD Transparent	Adjusts the menu transparency level. Transparency levels ranges from 0 to 100. The default is 0.
OSD Location	Adjusts the menu location. Options include: up, down, left, or right.
OSD Zoom	Configures whether the menu zoom is on or off. The default is off.
OSD Rotation	Adjusts menu rotation. Options include: landscape, or portrait. The default is landscape.
OSD Language	Adjusts the menu language. Options include: Simplified Chinese, French, German, Italian, Portuguese, Russian, Spanish, Japanese and Korean. The default is English.
OSD Timeout	Adjusts the menu timeout. The timeout ranges from $5\sim120$ seconds. The setting defaults to 30.
Sleep Timer	Configures the time after which the LCD panel switches to standby mode. Options include, Off, 15, 30, 60, 90 and 120 minutes. The default is OFF.
Power LED	Configures the LED power setting. Options include: Off, DCR, and light sensor. The default is off.
Real Time Clock	Expands the Basic Settings menu. See <i>Basic Settings (continued)</i> on page 25.

Basic Settings (continued)

	B	asic So	ettings	
<i>M</i>	Current Time	O	/ 0 / 0 User	00:00 MON
0	Week MON	Enable	Power On 00 : 00	Power Off 00:00
>	TUE WED		00 : 00 00 : 00	00 ± 00 00 : 00
100	THU FRI		00 : 00 00 : 00	00 : 00 00 : 00
ONC.	SAT SUN		00 : 00 00 : 00	00 : 00 00 : 00

Menu Item	Description
Current Time	Configures the current time settings. The time and date are displayed in this format Year/Month/Day Hour:Minutes Weekday. The time format is 24-hour.
Timer mode	 Configures the power on and power off timer. Options include: User - manually configure the alarm timer of each day. Same Settings On All - configure the same alarm timer for every day. Same Settings On Work Days - configure the same alarm timer for Monday to Friday.

Advanced Settings

NOTICE

Do not disconnect the AC power cord when Winter Mode is set to Enable.

Use the Advanced Settings menu to configure advanced features such as VGA mode. See *OSD Menu Controls* on page 20 for OSD menu control information.

11	Auto Adjustment	No	•
J.J.	Image Position	•	
1	Phase		0
	Clocks		0
	VGA ADC Settings		
9	Flesh Tone	Off	•
-	IRFM	Off	•
	Baud Rate	115200	•
	Smart Light Control	Off	•
and the second	Wake Up From Sleep	VGA Only	•
	Temperature & Fan Stati	is 🕨	
	Winter Mode	Disable	•
	Factory Reset	No	•

Menu Item	Description
Auto Adjustment	Forces the LCD panel to reacquire and lock to the input signal. This is useful when the signal quality is poor. This feature does not continually reacquire the signal. Options include: Yes, and No. The default is No.
Image Position	Adjusts the VGA mode image position. Options include: Up, Down, Left, and Right.
Phase	Adjusts the VGA mode phase. Phase ranges from 0~63.
Clocks	Adjusts the VGA mode clocks. The clocks range from $0 \sim 100$.
VGA ADC Settings	Sets the VGA ADC setting. Options include: Default and User. The default is Default.
Flesh Tone	Adjusts the video mode flesh tone settings. Options include: Off, Low, Medium and High. The default is Off.
IRFM	Creates slight frame motion to help avoid image retention. Options include: On and Off. The default is Off.
Baud Rate	Adjusts the number of signaling events per second. Options include: 115200, 38400, 19200, 9600. The default is 115200.
Smart Light Control	Adjusts the screen brightness. Options include: Off, DCR (dynamic contrast), Light Sensor. The default is Off.

Menu Item	Description
Wake Up From Sleep	 Adjusts the wake up from sleep behavior. Options include: VGA Only - the LCD panel normally wakes up from power saving mode when it receives an active video signal from its VGA (analog) input. VGA, Digital, RS232 - the LCD panel wakes up when it receives an active signal from the VGA, HDMI, DisplayPort, DVI inputs, or an RS232 command. Never Sleep - the LCD panel never goes to sleep. The default is VGA Only.
Temperature & Fan Status	Provides the status of the thermal sensor and cooling fans.
Winter Mode	Adjusts Winter Mode. Options include: Enable and Disable. The default is Disable. To maintain a minimum internal temperature, the LCD screen may remain partially illuminated when set to Enable. Only enable this feature when operating temperatures are below 32°F (0°C) as power consumption is greater than 0.5 W.
Factory Reset	Restores all settings to their default value. Options include: No and Yes. The default is No.

System Status

Use the System Status menu to view the status of active sources or the latest firmware version. See *OSD Menu Controls* on page 20 for OSD menu control information.

		System S	tatus
11	Channe	l Information	
		Source	Resolution
	Main	No signal	1024x768@60.0Hz
O	PIP	No signal	1024x768@60.0Hz
C.S.	Total Ho	ours:	o
	Firmwa	re Version :	FHD551-W V0.10 SUB MCU - V01

Care and Cleaning

Electrical shock hazard! Always turn the power off and disconnect all power sources from the LCD panel before servicing.

This section provides care and cleaning instructions for the LCD panel FHD551-W.

Clean the LCD Panel Screen

NOTICE

- Do not use abrasive cleaners on the LCD panel.
- Do not scratch or hit the LCD panel with hard objects such as fingernails or jewelry.

To remove accumulated dust, lightly wipe the surface of the LCD panel with a soft clean cloth.

To remove dirt, gently wipe the surface with a soft clean cloth that is dampened with water or a nonammonia based glass cleaner.

To remove water spots, gently wipe the surface with a soft clean cloth that is dampened with a 3:1 water and household vinegar solution.

Clean the LCD Panel Cabinet

Wipe the LCD panel cabinet using a soft cloth that is dampened with a mild liquid dish soap.

Clean the Power Cord

Power cord dust build-up can lead to fire or electrical shock. At regular intervals, remove the power plug from the outlet and clean off the dust.

Clean the Dust Filter

NOTICE

Do not use harsh cleaners to clean the dust filter.

Clean the dust filter once a year to prevent dust build-up. In high-dust environments, the filter may require more frequent cleaning.

- 1. Remove 2 screws from the right side of the back of the LCD panel.
- 2. Remove the dust filter cover.
- 3. Remove the dust filter.



- Clean the dust filter by rinsing it below running tap water.
 Do not scrub the filter or use harsh cleaners.
- Place the clean dust filter back into the LCD panel.
 The dust filter can be wet when it is replaced.
- 6. Replace the filter cover and 2 screws.

RS-232C Commands

This section describes how to control the power and OSD menus using recommended standard-232C.

RS-232C Command Format

Recommended standard-232C commands use the following format:

[STX] [IDT] [TYPE] [CMD] ([VALUE] Or [REPLY]) [ETX]

Variable	No. of Bytes	Description
STX	1	Starting byte. Value equals 07.
IDT	1	00 (Hex Num) for broadcast mode (no announcing, only for Video Wall), 01~19 (Hex Num) for single control mode.
TYPE	1	Specifies the type of command: • 00: return to host (from LCD panel) • 01: read/action • 02: write
CMD	3	Specifies the command. See <i>RS-232C CMD Options</i> on page 32.
VALUE	1	Specifies the command's parameter setting.
REPLY	1	Provides the response returned by the LCD panel.
ETX	1	Ending byte. Value equals 08.

For example,

Description	Command Sent (Computer to LCD Panel)	Command Received (LCD Panel to Computer)
Turn I CD namel neuron off		
Turn LCD panel power off.	07 01 02 30 4F 37 00 08	07 01 00 50 4F 57 00 08
Turn LCD panel power on.	07 01 02 50 4F 57 01 08	07 01 00 50 4F 57 01 08
Request LCD panel power status.	07 01 01 50 4F 57 08	07 01 00 50 4F 57 XX 08
		(XX = 0 when off or 1 when on)
Set the LCD panel contrast to 30.	07 02 02 43 4F 4E 1E 08	07 02 00 43 4F 4E 1E 08
Request the LCD panel to use large PIP.	07 19 02 50 53 43 03 08	07 19 00 50 53 43 03 08
Reset the LCD panel display settings.	07 02 02 41 4C 4C 00 08	07 02 00 41 4C 4C 00 08
Request LCD panel serial number.	07 01 01 53 45 52 08	07 01 00 53 45 52 S(0)S(12) 08
		$S(0) \dots S(12) =$ the serial number in ASCII
Request LCD panel firmware version.	07 01 01 47 56 45 08	07 01 00 47 56 45 S(0)S(5) 08
		$S(0) \dots S(5) =$ the firmware version in ASCII

RS-232C CMD Options

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Power Control and Input Source	Power Control	POW	W/R	00	00	Off (soft power)	50 4F 57	For advanced A/D boards. Optional.
				01	01	On (soft power)	-	
	Input Source	MIN	W/R	00	00	VGA	4D 49 4E	
				01	01	Digital DVI		
				02	02	S-Video		
				03	03	Composite Video	_	
				04	04	Component		
	Input Source	MIN	W/R	09	09	HDMI 1	4D 49 4E	
				10	10	HDMI 2	_	
				13	13	DisplayPort		
Display Adjustment	Display Adjustment	BRI	W/R	0~100	Current value	Back Light Brightness	42 52 49	
		BRL	W/R	0~100	Current value	Digital Brightness Level	42 52 4C	
		BLC	W/R	00	00	Off (Back Light)	42 4C 43	
				01	01	On (Back Light)		
		CON	W/R	0~100	Current value	Contrast	43 4F 4E	
		HUE	W/R	0~100	Current value	Hue	48 55 45	
		SAT	W/R	0~100	Current value	Saturation	53 41 54	
		СОТ	W/R	00	00	User	43 4F 54	
				01	01	6500K		
		СОТ	W/R	02	02	9300K		

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Display	Display	СОТ	W/R	06	06	5000K	43 4F 54	
(cont.)	(cont.)	(cont.)	(cont.)	07	07	7500K	(cont.)	
		GAC	W/R	00	00	Off (Gamma)	47 41 43	
				01	01	2.2 (Gamma)		
		USR	W/R	0~255	Current value	Red Gain (128~383)	55 53 52	
		USG	W/R	0~255	Current value	Green Gain (128~383)	55 53 47	
		USB	W/R	0~255	Current value	Blue Gain (128~383)	55 53 42	
		UOR	W/R	0~100	Current value	Red Offset (-50~50)	55 4F 52	
		UOG	G W/R 0~100 Current Green Offset (-50~50) value		55 4F 47			
		UOB	W/R	0~100	Current value	Blue Offset (-50~50)	55 4F 42	
	Adjustment	PHA	W/R	0~63	Current value	Phase	50 48 41	
		CLO	W/R	0~100	Current value	Clock	43 4C 4F	
		HOR	R	•	Current value	Horizontal Position	48 4F 52	
		VER	R	•	Current value	Vertical Position	56 45 52	
		ADJ	W	00	00	Auto Adjust	41 44 4A	
	Video Mode	SHA	W/R	0~24	Current value	Sharpness	53 48 41	
Other Control	PIP Adjust	PSC	W/R	00	00	PIP OFF	50 53 43	
				01	01	PIP Small	_	
				02	02	PIP Medium		
				03	03	PIP Large		
				04	04	PIP Side-by-Side		
	PIP source selection	PIN	W/R	00	00	VGA	50 49 4E	

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Other Control	PIP source selection	PIN (cont.)	W/R (cont.)	01	01	Digital DVI	50 49 4E (cont.)	
(cont.)	(cont.)	(001101)		02	02	S-Video		
				03	03	Composite Video		
				04	04	Component		
				09	09	HDMI 1		
				10	10	HDMI 2	-	
				13	13	DisplayPort	-	
	PIP position	PPO	W/R	00	00	PIP Position Bottom-Left	50 50 4F	
				01	01	PIP Position Bottom-Right	-	
				02	02	PIP Position Top-Left		
				03	03	PIP Position Top-Right	-	
	PIP/Main Swap	SWA	W	00	00	Swap Main and PIP	53 57 41	
	Scaling	ASP	W/R	00	00	Native	41 53 50	
				01	01	Full Screen	_	
				02	02	Pillar Box		
				03	03	Letter Box		
		ZOM	W	00	00	Zoom In	5A 4F 4D	
				01	01	Zoom Out		
	Baud Rate Adjustment	BRA	W/R	00	00	115200	42 52 41	
				01	01	38400		
				02	02	19200		
				03	03	9600	-	
	Other Control	RCU	W	00	00	MENU Key	52 43 55	
				01	01	INFO Key		

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Other Control	Other Control	RCU	W (cont.)	02	02	UP Кеу	52 43 55 (cont.)	
(cont.)	(cont.)	(conc.)	(conci)	03	03	DOWN Key		
				04	04	LEFT Key		
				05	05	RIGHT Key		
				06	06	ENTER Key		
				07	07	EXIT Key		
				08	08	VGA Key		
				09	09	DVI Key		
				10	10	HDMI1 Key		
				11	11	HDMI2 Key	· ·	
				12	12	DISPLAYPORT Key		
				13	13	СОМР Кеу		
				14	14	S-V Key		
				15	15	AV Key		
				18	18	SOURCE Key		
				19	19	P-SOURCE Key		
				20	20	РІР Кеу		
				21	21	P-POSITION Key		
				22	22	SWAP Key		
				23	23	SCALING Key		
				24	24	FREEZE Key		
				25	25	MUTE Key		
				26	26	BRIGHT Key		

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Other Control	Other Control	RCU	W (cont.)	27	27	CONTRAST Key	52 43 55	
(cont.)	(cont.)	(conc.)	(conc.)	28	28	AUTO Key		
				29	29	VOLUME+ Key	-	
				30	30	VOLUME- Key	-	
		ALL	w	00	00	Reset All	41 4C 4C	
		KLC	W/R	00	00	Un-lock Keys	4B 4C 43	
				01	01	Lock Keys	-	
		SER	R		13 bytes	Read Serial Number	53 45 52	
		MNA	R		13 bytes	Read Model Name	4D 4E 41	
		GVE	R		6 bytes	Read Firmware Version	47 56 45	
		RTV	R		Current value	Read RS-232C Table Version	52 54 56	
		RTT	R		Current value	Read the temperature of the internal thermal sensor -198~260°F (-128~127°C)	52 54 54	
		RSF	W	0~255	00	Read speed of Fan 0 (RPM = 40 x Reply value).	52 53 46	
				0~255	01	Read speed of Fan 1 (RPM = 40 x Reply value).	-	
		WFS	W/R	00	00	Wake Up From Sleep = VGA Only	57 46 53	
				01	01	Wake Up From Sleep = VGA, Digital, RS232	-	
				02	02	Wake Up From Sleep = Never Sleep	-	
	Audio	VOL	W/R	0~100	Current value	volume	56 4F 4C	
		MUT	W/R	00	00	Mute Off	4D 55 54	
			-	01	01	Mute On	1	
	Scheme Selection	SCM	W/R	00	00	User	53 43 4D	

Main Item	Control Item	CMD	Туре	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Remark
Other Control	ther Scheme S ontrol Selection (SCM (cont.)	W/R (cont.)	01	01	Sport	53 43 4D (cont.)	
(cont.) (cont.)			02	02	Game			
				03	03	Cinema		
				04	04	Vivid		

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Compliant Timing

The following notation is used in the compliant timing table:

- O = compliant timing for single display is supported
- 480i = 480i@60 Hz (YPbPr)
- 576i = 576i@60 Hz (YPbPr)

	Timing	fH (kHz)	fV (Hz)	Dot Clock (MHz)	IMDH	VGA	Component	S-Video	Composite	DVI	DisplayPort
	VGA 640 x 480	31.469	59.94	25.175	0	0	-	-	-	0	0
		37.861	72.809	31.5	0	0	-	-	-	0	0
		37.5	75	31.5	0	0	-	-	-	0	0
		43.269	85.008	36	0	0	-	-	-	0	0
	SVGA 800 x 600	35.156	56.25	36	0	0	-	-	-	0	0
		37.879	60.317	40	0	0	-	-	-	0	0
		48.077	72.188	50	0	0	-	-	-	0	0
		46.875	75	49.5	0	0	-	-	-	0	0
		53.674	85.06	56.25	0	0	-	-	-	0	0
	XGA 1024 x 768	48.363	60.004	65	0	0	-	-	-	0	0
		56.476	70.069	75	0	0	-	-	-	0	0
/ESA		60.023	75.029	78.75	0	0	-	-	-	0	0
-		68.677	84.997	94.5	0	0	-	-	-	0	0
	WXGA1360 x 768	47.712	60.015	85.5	0	0	-	-	-	0	0
	1280 x 720	44.444	59.98	64	0	0	-	-	-	0	0
		44.772	59.86	74.5	0	0	-	-	-	0	0
		56.456	74.78	95.75	0	0	-	-	-	0	0
	1280 x 768	47.776	59.87	79.5	0	0	-	-	-	0	0
		47.396	59.995	68.25	0	0	-	-	-	0	0
		68.633	84.837	117.5	0	0	-	-	-	0	0
	1280 x 800	49.306	59.91	71	0	0	-	-	-	0	0
		49.702	59.81	83	0	0	-	-	-	0	0
	SXGA 1152 x 864	67.5	75	108	0	-	-	-	-	-	0

	Timing	fH (kHz)	fV (Hz)	Dot Clock (MHz)	IMDH	VGA	Component	S-Video	Composite	DVI	DisplayPort
	SXGA 1280 x 1024	63.981	60.02	108	0	-	-	-	-	-	0
		79.976	75.025	135	0	-	-	-	-	-	0
		91.146	85.024	157.5	0	-	-	-	-	-	0
	SXGA+ 1400 x 1050	64.744	59.95	101	0	-	-	-	-	-	0
$\widehat{}$		64.317	59.98	121.75	0	-	-	-	-	-	0
cont	1440 x 900	55.469	59.901	88.75	0	0	-	-	-	0	0
SA (55.935	59.88	106.5	0	0	-	-	-	0	0
< Z	WSXGA+ 1680 x	64.674	59.883	119	0	0	-	-	-	0	0
	1050	65.29	59.954	146.25	0	0	-	-	-	0	0
	UXGA 1600 x 1200	75	60	162	0	0	-	-	-	0	0
	1920 x 1080	66.587	59.93	138.5	0	0	-	-	-	0	0
	WUXA 1920 x 1200	74.038	59.95	154	0	0	-	-	-	0	0
2	NTSC	15.734	29.97	13.5	-	-	480i	0	0	-	-
SD ⁻	PAL	15.625	25	13.5	-	-	576i	0	0	-	-
≥	480p	31.5	60	27.03	0	-	0	-	-	0	0
ĒD	576p	31.25	50	27	0	-	0	-	-	0	0
	720p 1280 x 720	37.5	50	74.25	0	-	0	-	-	0	0
		44.995	59.94	74.176	0	-	0	-	-	0	0
		45	60	74.25	0	-	0	-	-	0	0
	1080i 1920 x 1080	28.13	50	74.25	0	-	0	-	-	0	0
		33.716	59.94	74.176	0	-	0	-	-	0	0
		33.75	60	74.25	0	-	0	-	-	0	0
DTV V	1080p 1920 x 1080	27	24	74.25	0	-	-	-	-	-	0
T		28.125	25	74.25	-	-	-	-	-	-	-
		33.716	29	74.18	-	-	-	-	-	-	-
		33.75	30	74.25	-	-	-	-	-	-	-
		56.25	50	148.5	0	-	0	-	-	0	0
		67.433	59.94	148.352	0	-	0	-	-	0	0
		67.5	60	148.5	0	-	0	-	-	0	0

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Troubleshooting

This section provides LCD panel troubleshooting information.

LCD Panel Problem	Correction
Black dots are visible on the image	• Clean the screen surface with a soft cloth. See <i>Clean the LCD Panel Screen</i> on page 29.
Flickering image	 Remove objects that contain a magnetic field (for example; speakers, steel structures, or high-voltage lines) installed near the LCD panel. Adjust the graphic interface (PC mode) within allotted frequency parameters.
Image color is abnormal	 Adjust the color settings. See <i>Image Settings</i> on page 20. Reset the display. If YUV terminals are used, verify that the cables are connected correctly.
The LCD Panel is not functioning correctly	 Check the LCD panel temperature from the System Status menu. If the temperature is below -4°F (-20°C), move the LCD panel to a warmer location.
Image ghosting is visible	• Verify that the source equipment connection cables are less than 50 ft. (15 m) in length. If additional length is required, please contact your authorized dealer for a signal amplifier (not provided).
Image is dark	 Verify that the LCD panel is warmed up. It may take several seconds for the LCD panel to warm up after the power is enabled. Adjust the backlight and brightness. See <i>Image Settings</i> on page 20. Direct sunlight and hot conditions may cause the screen image to temporarily darken.
Image is not centered	 Verify that the input signal is compatible with the display. Adjust the format of the image. See <i>Display Settings</i> on page 22.
Image size is not correct	• Adjust the image size. See <i>Display Settings</i> on page 22.
No image	 Verify that the power cord is connected properly to the power outlet and to the LCD panel. Verify that the main power switch is set to the I position. If the power indicator is amber, press the power button on the remote control. If both the S-Video input and the AV2 input are connected, remove one. Check the operating temperature. The LCD panel stops running when it overheats or when the fan(s) fails. Check the environment temperature. The LCD panel cannot turn on when the environment temperature is below -4°F (-20°C) or above 114°F (45°C).
Partial blurring of the image is visible	 Remove objects that contain a magnetic field (for example; speakers, steel structures, or high-voltage lines) from the immediate vicinity of the LCD panel. Adjust the LCD panel using the OSD menu.

LCD Panel Problem	Correction
The remote control is not functioning	 Verify that the infrared extender cable is installed correctly. Verify that the remote control is not locked. Unlock if required. See <i>Remote Control</i> on page 7. Verify that the batteries are fresh and that they are installed correctly. Make sure the remote control is aimed at the IR sensor on the back of the display.
White color is not correct	Adjust the color temperature. See <i>Image Settings</i> on page 20.

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Specifications

This section provides the specifications for the LCD panel FHD551-W. Specifications are subject to change.

LCD Panel

Specification	Value
Active Screen Size	54.6 in. (138.7 cm)
Resolution	1920 x 1080 (16:9)
Brightness (panel native)	700 cd/m2 (typ.)
Contrast Ratio (panel native)	4000:1
Response Time	6.5 ms (GTG)
Aspect Ratio	16:9
Driver Element	a-Si TFT Active Matrix
Display Colors	10-bit, 1.07 Billion Colors
Pixel Pitch (H x W)	0.024 in. x 0.024 in. (0.063 cm x 0.063 cm)
Pixel Arrangement	RGB Vertical Stripe
Horizontal Frequency	15 ~ 94 KHz (Digital)
	23 ~ 92 KHz (Analog)
Vertical Frequency	23 ~ 85 KHz (Digital)
	49 ~ 86 Hz (Analog)
Wall Mount	VESA Standard 15.7 in. x 7.9 in. (40 cm x 20 cm)

Performance

Specification	Value
Auto Adjust	Clock, Phase, H-Position, and V-Position
Screen Scaling	VGA, SVGA, XGA, WXGA, and HDTV Full Screen Display
Power Management	VESA DPMS, DVI DMPM, Energy Star
Color Adjustment	5000K, 6500K, 7500K, 9300K, User
OSD Language	English, Simplified Chinese, French, German, Italian, Portuguese, Russian, Spanish, Japanese, and Korean

Power



To restrict power consumption to ${\leq}0.5$ W during standby mode, Wake Up From Sleep must be set to VGA Only.

See Adjust Wake Up From Sleep on page 19.

Specification	Value
Power Input	100-240VAC, 4A (50/60 Hz)
Normal Operation	≤ 265 W
Power Off (Winter Mode Disabled)	≤ 0.5 W
Power Off (Winter Mode Enabled)	> 0.5 W
Speaker	4Ω / 10 W x 2

Connections

Specification	
Input Connections	 RS-232C (D-Sub 9-pin) Component (RCA) Component Audio (RCA L/R) S-Video Composite Video (RCA) Audio In (RCA - S-Video/Component Video) Infrared Extender (3.5 mini jack) PC Audio In (3.5 mini jack) VGA (D-sub 15-pin) DVI-D (HDCP compliant) HDMI 2 HDMI 1 DisplayPort AC In
Output Connections	 Audio out (3.5 mini jack)

Environment

	Specification
Storage Temperature	Min -22°F (-30°C) ~ Max 140°F (60°C)
Operating Temperature	Min -4°F (-20°C) ~ Max 114°F (45°C)
Humidity	~ 85% RH (max.)

Physical

Specification	Value
Dimension (W x H x D)	51.2 in. x 30.4 in. x 4.8 in. (130 cm x 77.1 cm x 12.2 cm)
Net Weight	121 lb (55 Kg)
Gross Weight	132 lb (60 Kg)
Mounting screw size	M8 x 15 mm



Parts

Part Number	Description
142-001102-XX	LCD Panel FHD551-W
142-100102-XX	Flat Panel (FP) Remote Control
108-383105-XX	Power Cord NA
108-390103-XX	Power Cord EU
108-388100-XX	Power Cord UK
108-376107-XX	Power Cord JP
108-375106-XX	Power Cord CN
108-392105-XX	Power Cord AU



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