DHI-LM55-F400

User's Manual

Foreword

General

This manual introduces the installation, functions and operations of the monitor (hereinafter referred to as "the Device"). Read carefully before using the device, and keep the manual safe for future reference.

Models

This manual is applicable to Dahua F400 Series Monitor models. Includes: DHI-LM55-F400.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
⚠ **DANGER**	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
⚠ **WARNING**	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
⚠ **CAUTION**	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
⚿ **TIPS**	Provides methods to help you solve a problem or save time.
📖 **NOTE**	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.0	First release.	December 2023

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, audio, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

Operation Requirements

⚠

- This equipment is compliant with Class A of EN55032/CISPR 32. In a residential environment this equipment may cause radio interference.
- Make sure that the power supply of the device works properly before use.
- Do not pull out the power cable of the device while it is powered on.
- Only use the device within the rated power range.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- Do not disassemble the device.
- Do not use the product near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the product on an unstable cart, stand, or table. If the product falls, it can injure a person and cause serious damage to the appliance. Use only a cart or stand recommended by the manufacturer or sold with the product.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the product on a bed, sofa, rug, or similar surface. Do not place the product near or over a radiator or heat register. Do not place the product in a bookcase or cabinet unless proper ventilation is provided.
- The product should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Unplug the unit during a lightening storm or when it will not be used for long period of time. This will protect the product from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the product cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the product.
- Do not attempt to service the product by yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.
- To ensure satisfactory operation, use the product only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.
- Only suitable for the power adapter included.

Installation Requirements

⚠️ **WARNING**

- Connect the device to the adapter before power on.
- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Do not connect the device to more than one power supply. Otherwise, the device might become damaged.

⚠️

- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Do not install the device in humid, dusty or smoky places.
- Install the device in a well-ventilated place, and do not block the ventilator of the device.
- Use the power adapter or case power supply provided by the device manufacturer.
- Connect class I electrical appliances to a power socket with protective earthing.
- This monitor accepts a 200mm x 200mm VESA-Compliant mounting interface. VESA Mounting Screw (M6 20mm*4 pcs). Always contact manufacturer for wall-mount installation.

⚠️ **Stability Hazard**

The product may fall, causing serious personal injury or death. To prevent injury, this product must be securely attached to the floor/wall in accordance with the installation instructions.

A product set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Always use cabinets or stands or installation methods recommended by the manufacturer of the product set.
- Always use furniture that can safely support the product.
- Always ensure the product is not overhanging the edge of the supporting furniture.
- Always educate children about the dangers of climbing on furniture to reach the product or its controls.
- Always route cords and cables connected to your product so they cannot be tripped over, pulled or grabbed.
- Never place a product in an unstable location.
- Never place the product on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the product to a suitable support.
- Never place the product on cloth or other materials that may be located between the product and supporting furniture.
- Never place items that might tempt children to climb, such as toys and remote controls, on the top of the product or furniture on which the product is placed.
- If the existing product is going to be retained and relocated, the same considerations as above should be applied.

Maintenance Requirements

- To avoid the risk of shock or permanent damage to the set, do not expose the monitor to dust, rain, water, or excessive moisture environment.
- Please confirm the distribution system in building installation shall provide the circuit breaker rated 120/240V, 20A (maximum).

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

Table of Contents

Product Information

1. Unpacking and installation

1.1. Unpacking

- This product is packed in a paper packing case and comes with standard accessories.
- Any other optional parts are individually packed.
- Considering the size and weight of the monitor, it is recommended to move this monitor by two persons.
- Please confirm that items are complete and intact after opening the packing case.

1.2. Items in the packing case

Please confirm that the packing case contains the following items:

- LCD monitor
- Remote control
- Power cord
- HDMI Cable
- Logo
- Electronic manual QR code label
- Safety card
- Bracket x 2
- QSG

* The supplied power cord varies depending on destination.   Remote Control   Safety card

Power Cord   HDMI Cable   Electronic manual QR code label

Bracket   Logo   QSG

Notes:

● For all other regions, the power cords shall be matched with the AC voltage of the power socket, conform to the regulations of the relevant laws of the countries/territories, and pass certification. (Types H03VVH2-F 0.75 mm2 shall be used.)

● You can keep the packing case and packaging materials for later transport of the monitor.

1.3. Installation precautions

● This product belongs to high-power-consumption products. Please always use the plug specially designed for this product. If you need to extend the wire, please consult your service provider.

● This product should be installed on a plane to avoid overturn. The rear part of this product should be kept away from the wall at a certain distance so as to maintain proper ventilation. This product shall not be installed in the kitchen, bathroom or any other locations with high humidity, to avoid shortening the service life of the electronic components.

● This product works only at an altitude below 3000m. If the installation site is higher than 3000m, some abnormalities may occur.

1.4. Installation for the base of the mounting desk

Install the base:

1. Spread the protective film (wrapped on the monitored during packing) on the desk, and place the monitor with its front face down on the protective film (keep the trademark off the desk) to avoid scratching the screen.

2. Align the base according to the figure (distinguish the left and right supports). There are R and L marks on the base. Lock screws.

3. Lift the monitor and place it.
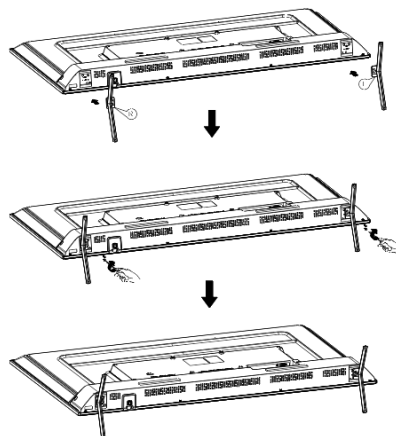
1 .5. Hanging the monitor on the wall

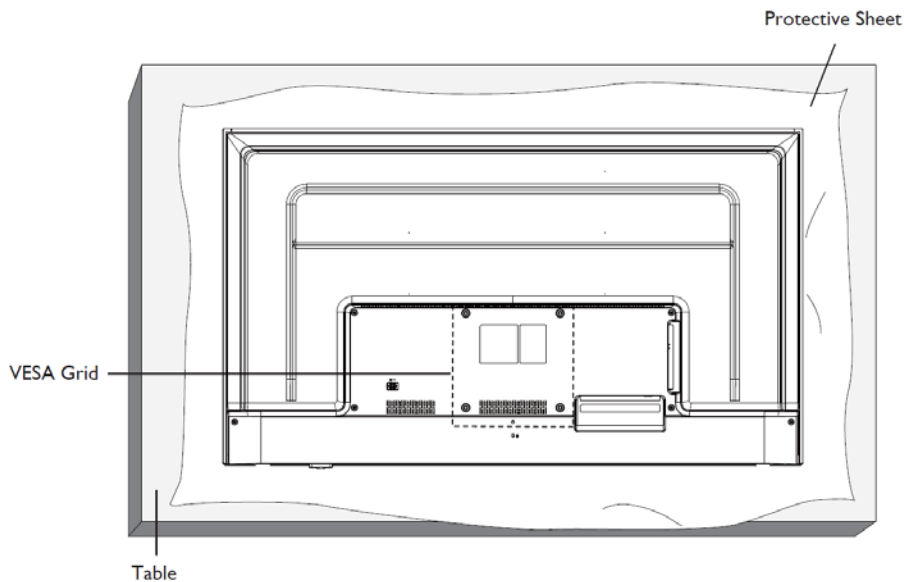In order to install the monitor on the wall, you must prepare a set of standard wall-hanging kit (separately purchased). You are recommended to use the mounting plate which conforms to the TUV-GS and/or UL1678 standard.

1. Spread a protective sheet which was wrapped around the display when it was packed on a flat surface. Lay the display face-down on the protective sheet to facilitate your operation without scratching the screen.

2. Ensure that you have all accessories necessary for any type of mounting (hanging rack, lifting rack, desk base, etc.).

3. Follow the instructions that come with the base mounting kit. Failure to follow correct mounting procedures could result in damage to the equipment or injury to the user or installer. Product warranty does not cover damage caused by improper installation.

4. For the wall-mounting kit, use M6 mounting screws 4pcs(with a length 20 mm longer than the thickness of the mounting bracket) and tighten them securely.

1.5.1. VESA grid plate

DHI-LM55-F400	200(H) x 200(V) mm

Caution:

Prevent the monitor from falling down:

- In the case of wall installation or suspended installation, it is recommended to use the metal assembling rack available on the market to install the monitor. Refer to the guide attached to the assembling rack for

specific installation instructions.

- In order to lower the probability that the monitor falls down and results in personal injuries and property loss under the condition of earthquake or other natural disasters, please do consult the assembling rack manufacturer to confirm the installation position.

Ventilation requirements for enclosed space

In order to ensure normal heat dissipation, sufficient space from items to four sides shall be kept, as shown in the figure below.
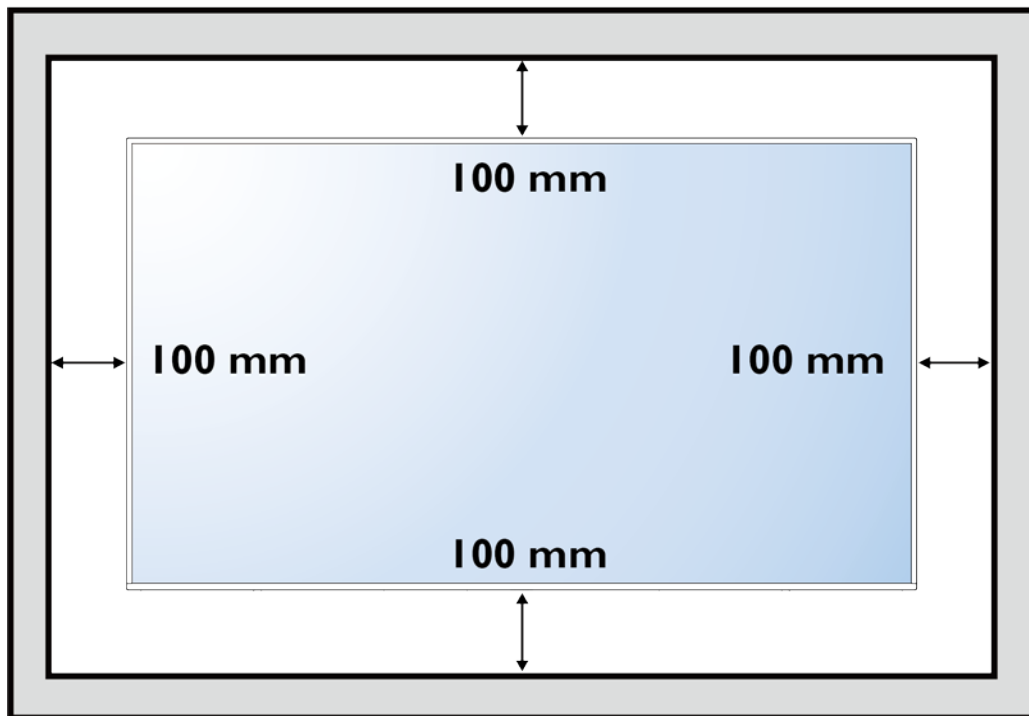
2. Parts and functions

2.1. Control panel
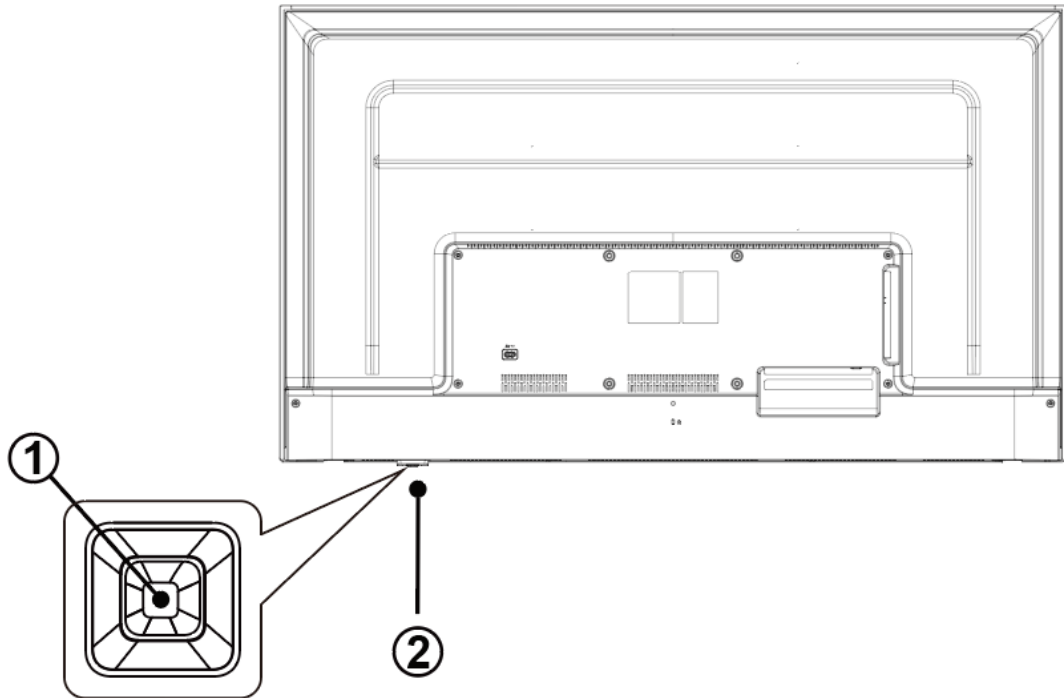
1. Power button

Turn the display On or put the display to standby mode.

2. Remote control sensor and power status indicator.

2.2. Input/output terminal
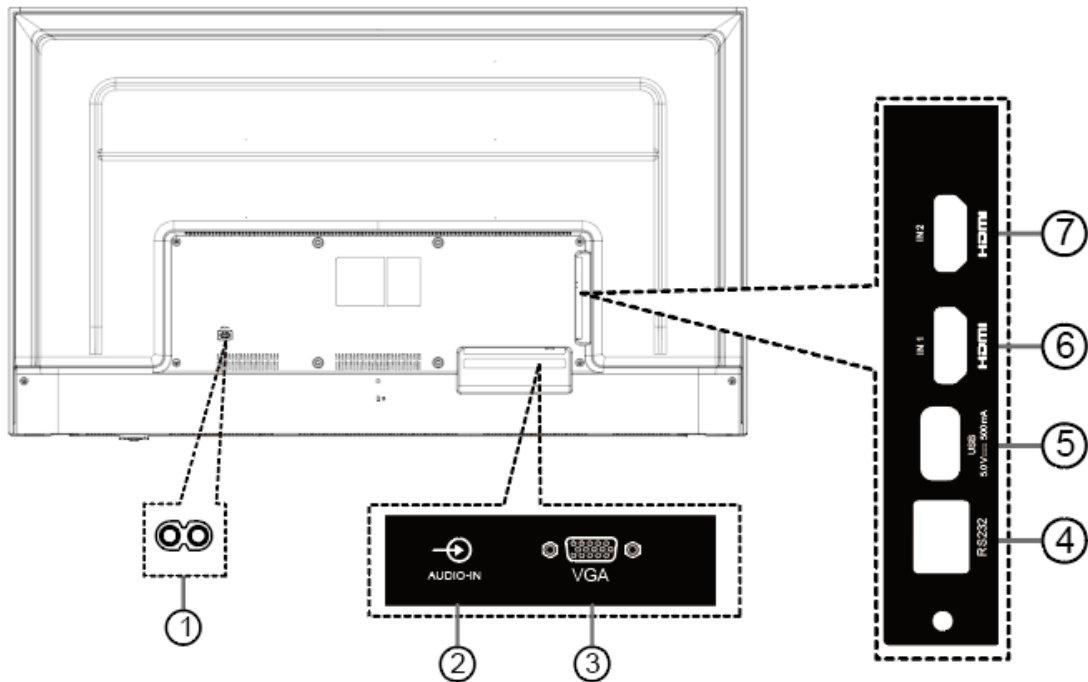
SN	Port	Description
1	AC IN	AC power input from the wall socket.
2	AUDIO IN	Audio input for VGA source.
3	VGA IN	VGA video input.
4	RS232	Receive command signals from the external RS232 device.
5	USB port	Connect to the USB storage device.
6	HDMI 1	HDMI 1 support HDMI 1.4, up to 4K @30Hz.
7	HDMI 2	HDMI 2 support HDMI 2.0, up to 4K @60Hz.

2.3. Remote control

2.3.1. General function
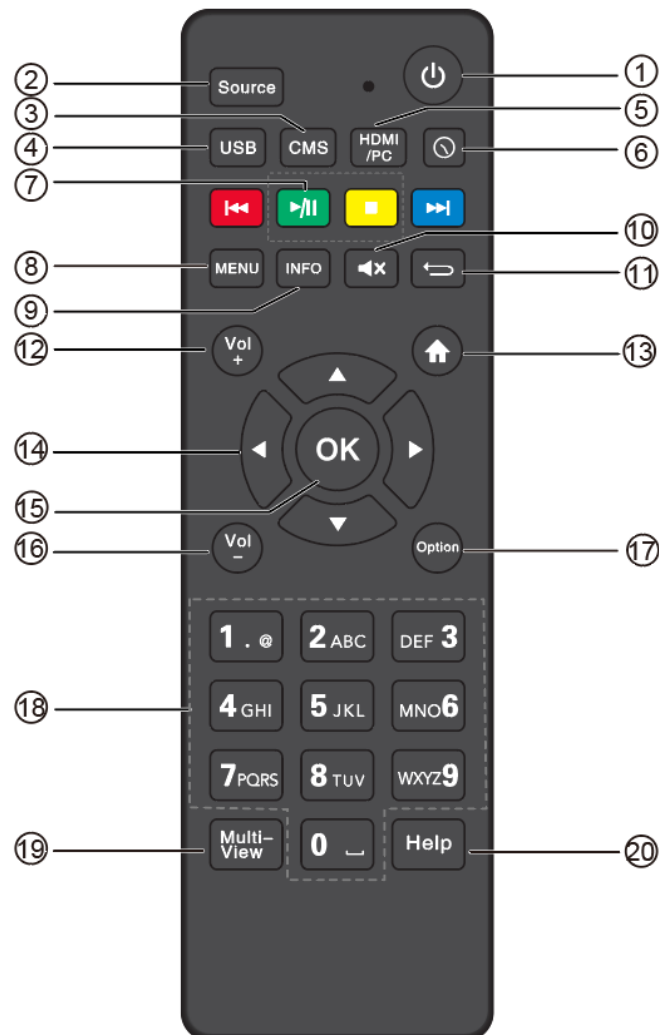
1. [⏻]Power button

    Turn OFF the display until power is off.

2. [**Source**] button

    Channel switching, source key only supports switching (source).

3. CMS button

    No function

4. USB button

    Go to USB source.

5. HDMI/PC button

    Go to HDMI source.

6. [🕐]Time button

   No function

7. [**PLAY**] button

   Control playback of media files.

8. [MENU] SETTINGS button

   Enter the main menu, or return to previous menu or exit the main menu. The remote control buttons [up], [down],[left], [right] are movement, Under the menu setting, press the left and right buttons to enter the lower menu or adjust the parameters.

9. [INFO] button

   Show Information OSD.

10. [◀✕] MUTE button

    Mute or restore volume.

11. [↩] BACK button

    Signal source interface or menu interface: prompt "exit" and press RC [return] to exit.

12. [**Vol+**]VOLUME button

    Turn up the volume.

13. [🏠] HOME button

    No function

14. [▲] [▼] [◀] [▶]NAVIGATION buttons

    Up, down, left and right operation key.

15. [OK] button

    Press OK to display the message.

16. [Vol-] Volume button

    Turn Down the volume.

17. [Option] button

    No function

18. [Number] buttons

    Input figures or text.

19. [Multi-View] button

    No function

20. [Help] button

    No function

2.3.2. Inserting the batteries in the remote control

The remote control is powered by two 1.5V AAA batteries. To install or replace batteries:

1. Install and push away the battery cover.

2. Place the batteries according to the marks (+) and (–).

3. Close the battery cover.
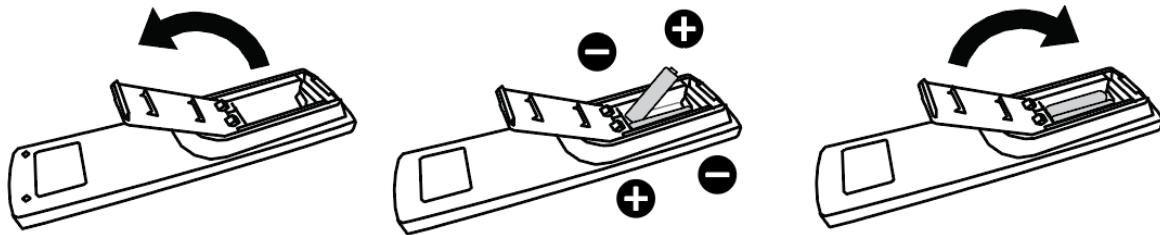
Caution:

The incorrect use of batteries can result in leaks or bursting. Be sure to follow these instructions:

● Place "AAA" batteries matching the (+) and (–) signs on each battery to the (+) and (–) signs of the battery compartment.

● Do not mix battery types.

● Do not combine new batteries with used ones. It causes shorter life or leakage of batteries.

● Remove the dead batteries immediately to prevent them from liquid leaking in the battery compartment. Don't touch exposed battery acid, as it can damage your skin.

NOTE: If you do not intend to use the remote control for a long period, remove the batteries.

2.3.3. Handling the remote control

Do not subject to strong shock.

Do not allow water or other liquid to splash the remote control. If the remote control gets wet, wipe it dry immediately.

Avoid exposure to heat and steam.

Other than to install the batteries, do not open the remote control.

2.3.4. Remote control use

To press buttons on the remote control, please point the front of the remote control at the remote sensor on the monitor.

When the remote control is in use, the distance to the sensor on the monitor shall be smaller than 5m, and the horizontal and vertical angles shall be smaller than 30 degrees.

Notes:

The remote control may fail to work normally when sunlight or other strong light radiates on the remote sensor of the monitor or there is an obstacle between the remote and the remote sensor.
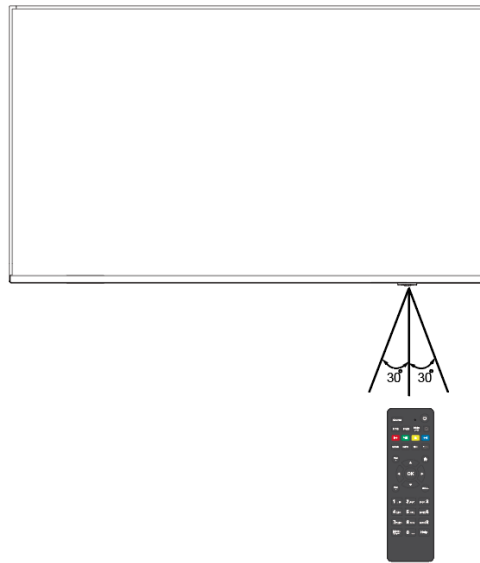
3. Connecting External Equipment

⚠️Note: The following illustration for the rear case of the monitor connecting to an external device is for reference only. Actual products may vary.

3.1. Connecting External Equipment

3.1.1. Using HDMI video input

DVD / VCR / NVR

IN 1   IN 2

HDMI   HDMI

[HDMI IN]
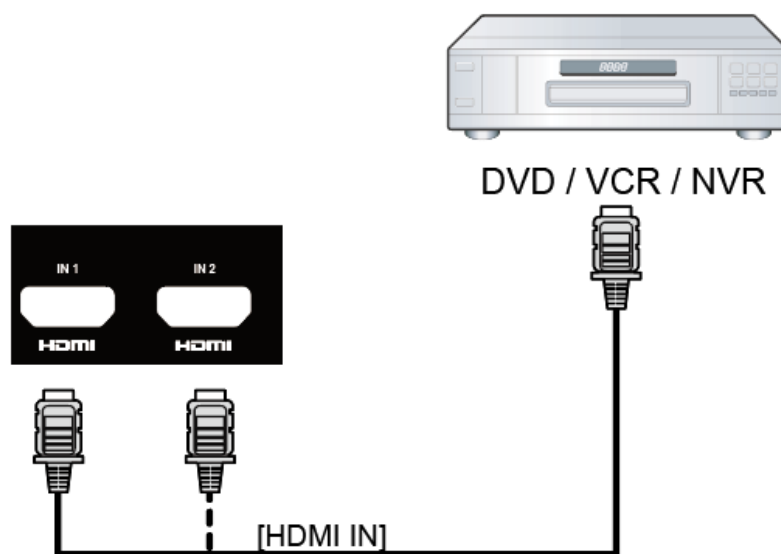
3.2. Connecting a PC

3.2.1. Using HDMI video input
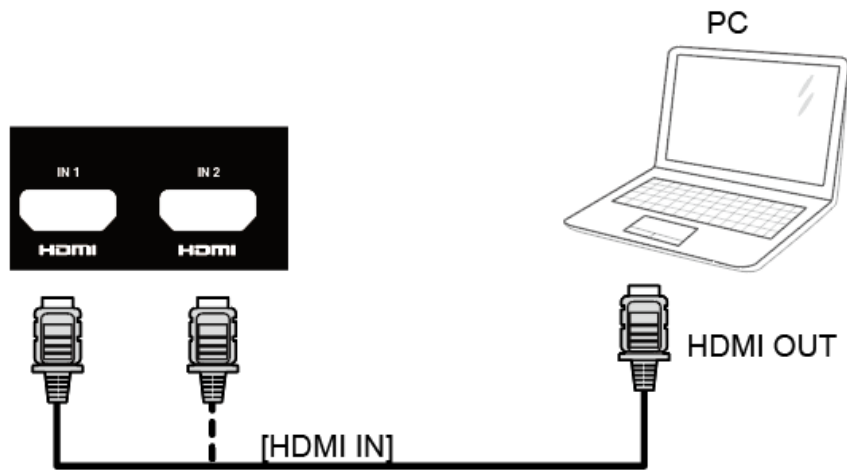
3.2.2. Using VGA input
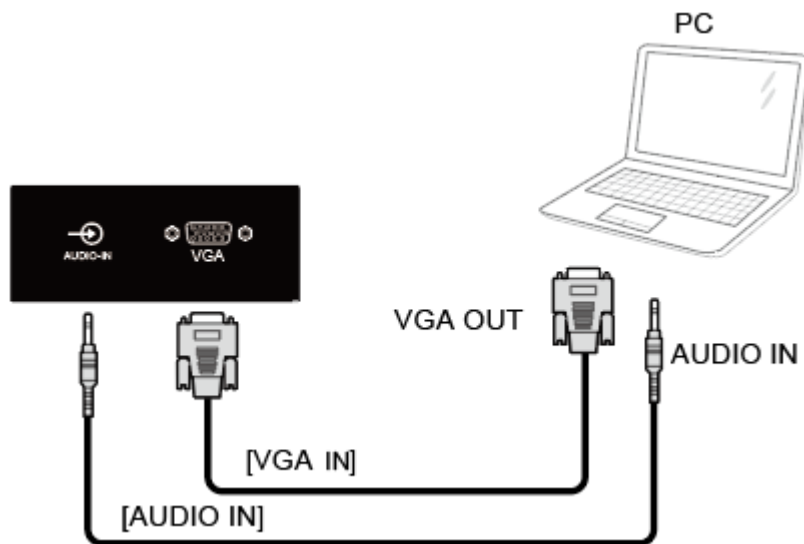
3.3. Connecting USB

3.3.1. Use USB device

4. Operation

NOTE:

The control button described in this section is mainly on the remote control unless specified otherwise.

4.1. Play multimedia files from USB device

1. Connect your USB device to the USB port on the display.
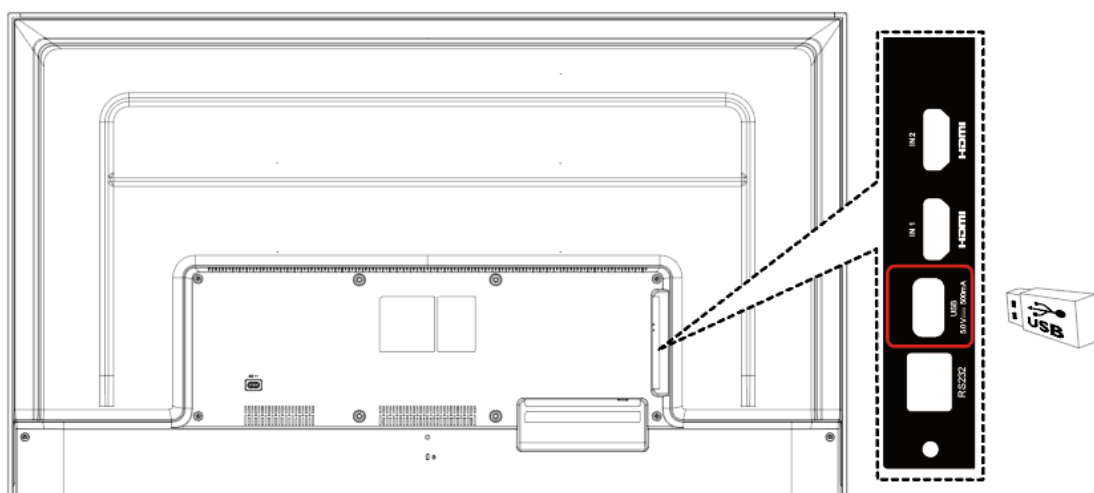
2. Press **SOURCE** button, choose **USB**, and press [OK] button.
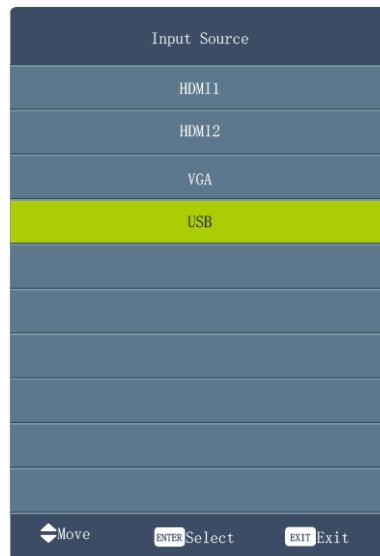
3. Press ◄/► to select Photo/Music/Movie/Text icon and OK to enter the USB memory.
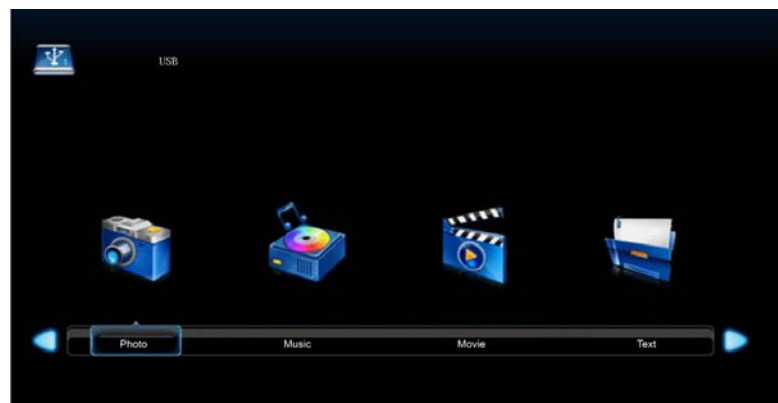
4. Follow the on-screen instruction to control the play option.

4.1.1. Photo

Select a picture file and press OK to view, and it will display all the pictures in the folder automatically. Press OK to display the following menu.
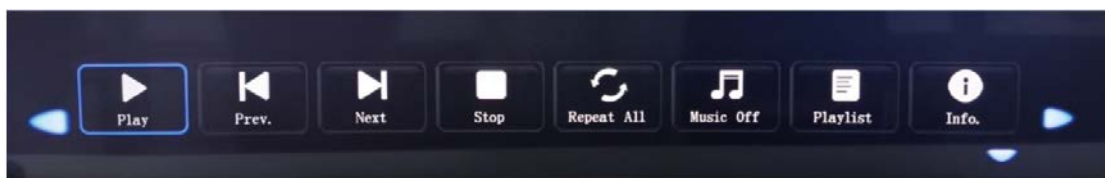
Play/Pause	Press "Play/Pause" button to play or pause the slideshow.
Next/Prev.	Press the "Next/Prev." button to switch images.

Stop	Press "Stop" button to stop and return.
RepeatAll	Press to select the repeat mode: Repeat 1/ALL/None.
Music	Press to play or stop the background music.
Playlist	Press to view the list of pictures.
Info.	Press to display the information of the current picture (Resolution/Size/Date/Time)
Rotate	Rotate counterclockwise.
Zoom in	Zoom the picture in.
Zoom out	Zoom the picture out.
Move view	Zoom out the picture first. Highlight the icon and press OK, then press ▼/▲ & ◄/► to move the picture.
Capture	Press to set the selected picture as the boot logo. (Available for select model)

4.1.2. Music
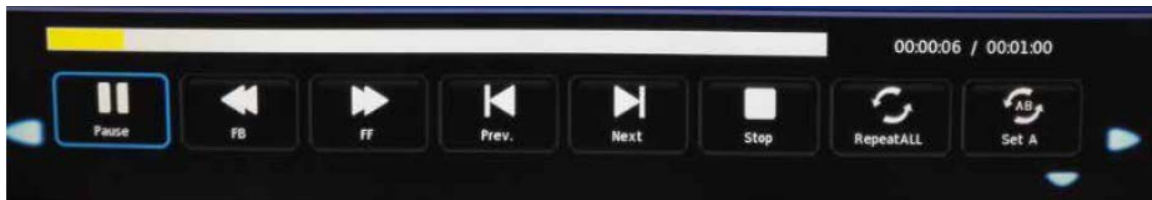
Play/Pause	Press to play or stop.
FB	Press to play slower.
FF	Press to play faster.
Prev.	Press to play the previous song.
Next	Press to play the next song.
Stop	Press to stop and return to folder interface.
RepeatAll	Press to select the repeat mode: Repeat 1/ALL/None.
SET A	Select AB mode.

Mute	Select "MUTE" mode: on or off .
Playlist	Select to display play list.
INFO.	Select to display the music information.
Goto time	Select to setup play time.

4.1.3. Movie
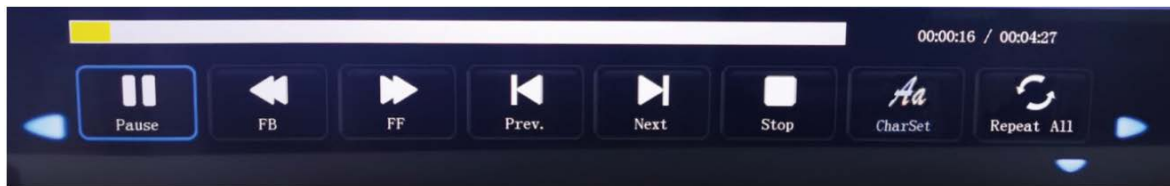
Play/Pause	Press to play or pause.
FB	Press to play slower.
FF	Press to play faster.
Prev.	Press to play the previous movie.
Next	Press to play the next movie.
Stop	Press to stop and back to folder interface.
RepeatAll	Press to select the repeat mode: Repeat 1/ALL/None.
Set A	Select AB mode.
Charset	Character set switching.
Playlist	Press to view the list of pictures.
INFO.	Press to display the information of the current movie.
Slow forward	Slow forward.
Step forward	Step forward.
Goto time	Select to setup play time.

4.1.4. Text
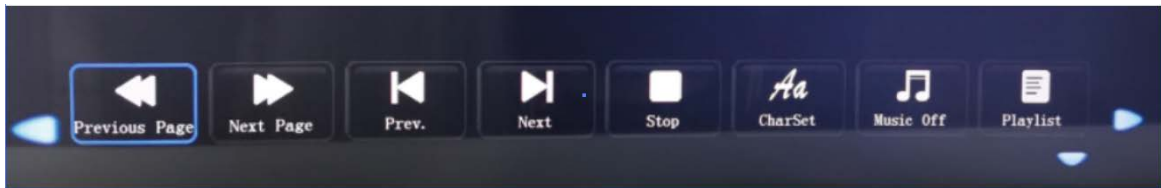
Prev Page	Press to the previous page.
Next Page	Press to the next page.
Prev.	Press to play previous text.
Next	Press to play next text.
Stop	Press to stop and back to folder interface.
Charset	Character set switching.
Music	Turn background music on or off.
Playlist	Press to view the list of texts.
INFO.	Press to display the information of the current movie.

4.2. OSD menu operation

Column 1	Column 2	Column 1, 3	Remarks
Picture	Picture Mode	Security monitoring	Depend on HDMI 1/HDMI 2
		Automatic	Depend on HDMI 1/HDMI 2
		Bright	
		Standard	
		Soft	
		User	Sub items can be adjusted in user mode only, and the items which grayed out means can not be adjusted
	Color temp	Standard (9300K)	Adjust different image modes, the default color temperature is the standard.(only user mode can be adjusted, other modes are grayed out)
		Warm (6500K)	
		User	
		Cool (12000K)	
	Noise Reduction	Off	1. It is not adjustable in computer channel or security monitoring mode, and the display proportion is point-to-point. 2. When entering video timing, noise suppression is adjustable. 3. USB source playing video noise is adjustable.
		Low	
		Middle	
		High	
		Default	
	Brightness	0 … 100	Backlight adjustment.
	HDMI Mode	Auto	The reappearance rate is different under different separation rate and mode.
		Video	
		PC	
Sound	Treble	0 … 100	In mute mode, when you press the key to adjust the sound and balance, the mute icon will disappear.
	Bass	0 … 100	
	Balance	-50 … +50	

TIME	Sleep Timer	Off, 10min, 20min, 30min, 60min, 90min, 120min, 180min, 240min	After setting the time, the device will automatically turn off at the time you set. Restart and return to the default value of off.
	Auto Sleep	Off, 3 hours, 4 hours, 5 hours	Turn off or select no device operation to automatically enter sleep time (3 hours, 4 hours, 5 hours). Default value: turn off.
	OSD Timer	5S / 10s / 15s / 20s / 25s / 30s	Set OSD disappear time.
OPTION	OSD Language	English	Set the OSD display language.
		Chinese	
	Color Range	Auto	VGA, USB source graying is not optional.
		0-255	
		16-235	
	Aspect Ratio	Auto	VGA signal: 4:3 / 16:9 /PointToPoint. Note: options are different for different channels, input signal formats and image modes. USB channel does not support proportional mode.
		16:9	
		4:3	
		Zoom1	
		Zoom2	
		Just Scan	
		Panorama	
		PointToPoint	
	Blue Screen	On/Off	After the blue screen is opened, the no signal interface and menu interface display the blue background.
	Restore Factory Default	—	Recall the default setting.
	Soft Update（USB）	—	software to Update
SCREEN	Auto Adjust	—	Note: 1. The VGA signal is not connected, so the

	Position H.	—	screen menu cannot be selected; 2. Press up / down key to switch in the process of horizontal position / vertical position / clock / phase adjustment value. When VGA is in the pop-up interface of the automatic adjustment mode, the remote control and the power key have no effect, and the pop-up interface disappears and the system will shut down normally.
	Position V.	—	
	Size	—	
	Phase	—	
	Position Reset	—	

Note: Some options may vary for different signals and models, please subject to the actual machine.

5. Compatibility of the USB device

Format of the USB multi-media coder-decoder

Spec of AV codec , Video					
Type	**Video coder-decoder**	**Highest bit rate**	**Frame rate**	**Resolution**	**Audio format**
AVI(.avi)	MPEG-1,	80Mbps	30FPS	1920x1080	MPEG-1 Layers I,II, III(MP3) AAC, AC3, PCM, WMA, WMAPro
	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	
	MPEG-4 SP@L0-3, ASP@L0-5,	50Mbps	30FPS	1920x1080	
	H.264 MP,HP@Level4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	VC1 (AP),	45Mbps	30FPS	1920x1080	
	H263,	5Mbps	30FPS	1280x720	
	MJPEG,		30FPS	1920x1080	
MPEG-2 TS Transport	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	MP3 AAC AC3
	MPEG-4SP@L0-	50Mbps	30FPS	1920x1080	

Stream(.ts)	3,ASP@L0-5,				PCM
	H.264 MP,HP@Level4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	AVS benchmark grade@level 6.0,	50Mbps	30FPS	1920x1080	
	VC1 (AP),	45Mbps	30FPS	1920x1080	
	H265	100Mbps	30FPS	3840x2160	
MPEG File Format (.mpeg)	MPEG-1,	80Mbps	30FPS	1920x1080	PCM, AC3, MP3
	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	
	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	MPEG-4SP@L0-3, ASP@L0-5,	50Mbps	30FPS	1920x1080	
	H265	100Mbps	30FPS	3840x2160	
QuickTime (.mov)	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	AAC
	MPEG-4SP@L0-3, ASP@L0-5,	50Mbps	30FPS	1920x1080	
	MJPEG,		30FPS	1920x1080	
	H265	100Mbps	30FPS	3840x2160	
BDAV MPEG-2 transport stream (.m2ts)	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	AC3, AAC,
	VC1 (AP),	45Mbps	30FPS	1920x1080	
	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	
Matroska (.mkv)	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	VC1 (AP),	45Mbps	30FPS	1920x1080	

	H265	100Mbps	30FPS	3840x2160	
Flash Video (.flv)	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	AAC, MP3
	H263	5Mbps	30FPS	1280x720	
Video OBject (.vob)	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	AC3 PCM MP3
DAT (.dat)	MPEG-1,	80Mbps	30FPS	1920x1080	PCM MP3
Advanced Stream Format (.asf)	VC1 (AP),	45Mbps	30FPS	1920x1080	MP3 PCM WMA
	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	
	MPEG-4SP@L0-3, ASP@L0-5,	50Mbps	30FPS	1920x1080	
3gp	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	AMR_NB, AAC
	H263	5Mbps	30FPS	1280x720	
	MPEG-4SP@L0-3, ASP@L0-5,	50Mbps	30FPS	1920x1080	
tp	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	MPEG-1 Layers II, AC3
trp	H.264 MP,HP@Level 4.1,	100Mbps(VCL) 120Mbps(NAL)	30FPS	3840x2160	MP3
	MPEG-2MP@HL,	80Mbps	30FPS	1920x1080	

Spec of AV codec , Audio			
Type	Audio format	Sampling Rate	Bit rate
Windows Media Audio (.wma)	WMA WMAPro	8KHz ~ 48Khz	128bps ~ 320Kbps
MPEG Audio Layer III (.mp3)	MPEG	32kHz ~ 48kHz	32kbps ~ 320kbps
Advanced Audio Coding (.aac)	AAC	16kHz ~ 48kHz	24kbps ~ 384kbps
N/A (Work with video files only)	AC3	32kHz, 44.1kHz, 48kHz	32kbps ~ 640kbps
	EAC3	32kHz, 44.1kHz, 48kHz	32Kbps ~ 6 Mbps
OGG Vobis (.ogg)	Vorbis	8kHz~48kHz	max 320Kbps

Spec of AV codec , Photo		
Type	Maximum resolution	Minimum resolution
png	8K*8K（Hardware solutions）	4*4
jpeg	baseline 8K*8K, (Hardware solutions) progressive 4K*4K	4*4
bmp	8K*8K	4*4

Notes:

● If the standard bite rate/frame rate of the contents is higher than the compatible frames/second listed in the above table, audio or video may not work.

● Video contents with a bit rate or frame rate higher than the designated rate in the above table may result in discontinuation of video during display.

6. Input mode

PC mode

- 720 x 400 @ 70Hz
- 640 x 480 @ 60Hz
- 640 x 480 @ 75Hz
- 800 x 600 @ 60Hz
- 1024 x 768 @ 60Hz
- 1152 x 870 @ 75Hz
- 1280 x 720 @ 60Hz
- 1280 x 1024 @ 60Hz
- 1366 x 768 @ 60Hz
- 1920 x 1080 @ 60Hz
- 1600 x 900 @ 60Hz
- 1680 x 1050 @ 60Hz
- 1600 x 1200 @ 60Hz

Video mode

- 480P - 60Hz
- 480i - 60Hz
- 576P - 50Hz
- 576i - 50Hz
- 720P - 50Hz/60Hz
- 1080P - 50/60Hz
- 1080i - 50/60Hz
- 4K2K - 30Hz
- 4K2K - 60Hz

7. Cleaning and Troubleshooting

7.1. Cleaning

7.1.1. Caution When Using the Display

- Do not bring your hands, face or objects close to the ventilation holes of the display. The top of the display is usually very hot due to the high temperature of exhaust air being released through the ventilation holes. Burns or personal injuries may occur if any body parts are brought too close. Placing any object near the top of the display could also result in heat related damage to the object as well as the display itself.

- Be sure to disconnect all cables before moving the display. Moving the display with its cables attached

may damage the cables and thus cause fire or electric shock.

- Disconnect the power plug from the wall outlet as a safety precaution before carrying out any type of cleaning or maintenance procedure.

7.1.2. Front Panel Cleaning Instructions

- The front of the display has been specially treated. Wipe the surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface becomes dirty, soak a soft, lint-free cloth in a mild detergent solution. Wring the cloth to remove excess liquid. Wipe the surface of the display to remove dirt. Then use a dry cloth of the same type to dry.

- Do not scratch or hit the surface of the panel with fingers or hard objects of any kind.

- Do not use volatile substances such as insert sprays, solvents and thinners.

7.1.3. Cabinet Cleaning Instructions

- If the cabinet becomes dirty, wipe the cabinet with a soft, dry cloth.

- If the cabinet is extremely dirty, soak a lint-free cloth in a mild detergent solution. Wring the cloth to remove as much moisture as possible. Wipe the cabinet. Use another dry cloth to wipe over until the surface is dry.

- Do not allow any water or detergent to come into contact with the surface of the display. If water or moisture gets inside the unit, operating problems, electrical and shock hazards may result.

- Do not scratch or hit the cabinet with fingers or hard objects of any kind.

- Do not use volatile substances such as insert sprays, solvents and thinners on the cabinet.

- Do not place anything made from rubber or PVC near the cabinet for any extended periods of time.

7.2. Troubleshooting

Symptom	Possible Cause	Remedy
No picture is displayed	1. The power cord is disconnected. 2. The main power switch on the back of the display is not switched on. 3. The selected input has no connection. 4. The display is in standby mode.	1. Plug in the power cord. 2. Make sure the power switch is switched on. 3. Connect a signal connection to the display.
Interference displayed on the display or audible noise is heard	Caused by surrounding electrical appliances or fluorescent lights.	Move the display to another location to see is the interference is reduced.
Color is abnormal	The signal cable is not connected properly.	Make sure that the signal cable is attached firmly to the back of the display.
Picture is distorted with abnormal patterns	1. The signal cable is not connected properly. 2. The input signal is beyond the capabilities of the display.	1. Make sure that the signal cable is attached firmly. 2. Check the video signal source to see if it is beyond the range of the display. Please verify its specifications with this display's specification section.
Can hear sound, but no picture	Improperly connected source signal cable.	Make sure that both video inputs and sound inputs are correctly connected.
Can see picture but no sound is heard	1. Improperly connected source signal cable. 2. Volume is turned all the way down. 3. {Mute} is turned on. 4. No external speaker connected.	1. Make sure that both video inputs and sound inputs are correctly connected. 2. Press [+] or [-] button to hear sound.

		3. Switch MUTE off by using the ⁅🔇⁆ button. 4. Connect external speakers and adjust the volume to a suitable level.
Some picture elements do not light up	Some pixels of the display may not turn on.	This display is manufactured using an extremely high level of precision technology: however, sometimes some pixels of the display may not display. This is not a malfunction.
After-Images can still be seen on the display after the display is powered off. (Examples of still pictures include logos, video games, computer images, and images displayed in 4:3 normal mode)	A still picture is displayed for an over extended period of time.	Do not allow a still image to be displayed for an extended period of time as this can cause a permanent after-image to remain on the display.
The display has horizontal or vertical interference	—	Enter VGA setting which under picture option of OSD MENU to do auto adjust or adjust frequency / phase.
Image deviation from the center of the display or size error	—	Enter VGA setting which under picture option of OSD MENU to do auto adjust then adjust horizontal /vertical position if needed.

8. Product Specifications

Input/output terminal:

Item		Specification
Loudspeaker output	Internal loudspeaker	7 W (L) + 7 W (R) [RMS]/6 Ω
Audio input	3.5mm Headphone jack x 1	0.5V [rms](normal mode) / 2 sound track (L+R)
VGA input	D-SUB jack (15pin)	Analog RGB: 0.7V [p-p] (75Ω), H/CS/V: TTL (2.2kΩ), MAX: 1920 x 1080/60 Hz (WUXGA)
HDMI input	HDMI interface x 2 (A type) (19 pins)	Digit RGB: TMDS (video + audio setting) Max.: Video – HDMI 1 4K@30Hz HDMI 2 4K@60Hz Audio - 48 KHz/ 2 sound track (L+R) Support LPCM only
USB input	USB2.0 A type x1	USB2.0
RS232	RJ-45 Jack x 1 (8 pin)	RS232 in

Appendix 1 Troubleshoot

Problem & Question	Possible Solutions
Power LED Is Not ON	Make sure the power button is ON and the Power Cord is properly connected to a grounded power outlet and to the monitor.

No image on the screen	● Is the power cord connected properly?
	● Check the power cord connection and power supply.
	● Is the video cable connected correctly?
	● (Connected using the HDMI cable)
	    Check the HDMI cable connection.
	● If the power is on, reboot the computer to see the initial screen (the login screen.)
	● If the initial screen (the login screen) appears, boot the computer in the applicable mode (the safe mode for Windows 7/8/10) and then change the frequency of the video card.
	    (Refer to the Setting the Optimal Resolution)
	    If the initial screen (the login screen) does not appear, contact the Service Center or your dealer.
	● Can you see "Input Not Supported" on the screen?
	● You can see this message when the signal from the video card exceeds the maximum resolution and frequency that the monitor can handle properly.
	    Adjust the maximum resolution and frequency that the monitor can handle properly.

Picture Is Fuzzy & Has Ghosting Shadowing Problem	Adjust the Contrast and Brightness Controls. Press hot-key (AUTO) to auto-adjust. Make sure you are not using an extension cable or switch box. We recommend plugging the monitor directly to the video card output connector on the back.
Picture Bounces, Flickers Or Wave Pattern Appears In The Picture	Move electrical devices that may cause electrical interference as far away from the monitor as possible. Use the maximum refresh rate your monitor is capable of at the resolution you are using.
Monitor Is Stuck In Active Off-Mode"	The Computer Power Switch should be in the ON position. The Computer Video Card should be snugly fitted in its slot. Make sure the monitor's video cable is properly connected to the computer. Inspect the monitor's video cable and make sure no pin is bent. Make sure your computer is operational by hitting the CAPS LOCK key on the keyboard while observing the CAPS LOCK LED. The LED should either turn ON or OFF after hitting the CAPS LOCK key.

Missing one of the primary colors (RED, GREEN, or BLUE)	Inspect the monitor's video cable and make sure that no pin is damaged. Make sure the monitor's video cable is properly connected to the computer.
Screen image is not centered or sized properly	Adjust H-Position and V-Position or press hot-key (AUTO).
Picture has color defects (white does not look white)	Adjust RGB color or select desired color temperature.
Horizontal or vertical disturbances on the screen	Use Windows 7/8/10/2000 shut-down mode to adjust CLOCK and FOCUS. Press hot-key (AUTO) to auto-adjust.

Appendix 2 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations from Dahua on how to create a more secured security system.

Mandatory actions to be taken for basic device network security:

1. **Use Strong Passwords**

   Please refer to the following suggestions to set passwords.
   - The length should not be less than 8 characters.
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
   - Do not contain the account name or the account name in reverse order.
   - Do not use continuous characters, such as 123, abc, etc.
   - Do not use overlapped characters, such as 111, aaa, etc.

2. **Update Firmware and Client Software in Time**
   - According to the standard procedure in Tech-industry, we recommend to keep your device (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your device network security:

1. **Physical Protection**

   We suggest that you perform physical protection to device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**

   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**

   The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**

   The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**

   We suggest you to change default HTTP and other service ports into any set of numbers between

1024–65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**

We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **MAC Address Binding**

We recommend you to bind the IP and MAC address of the gateway to the device, thus reducing the risk of ARP spoofing.

8. **Assign Accounts and Privileges Reasonably**

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. **Disable Unnecessary Services and Choose Secure Modes**

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up strong passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

10. **Audio and Video Encrypted Transmission**

If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. **Secure Auditing**

- Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
- Check device log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. **Network Log**

Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. **Construct a Safe Network Environment**

In order to better ensure the safety of device and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.

- Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.

More information

Please visit Dahua official website security emergency response center for security announcements and the latest security recommendations.

ENABLING A SAFER SOCIETY AND SMARTER LIVING