

JUSHA Video Fusion Surgical Monitor



S5810

User Manual

Nanjing Jusha Display Technology Co., Ltd.

8A, Block 1, Nanjing International Service Outsourcing Mansion, No.301

Hanzhongmen Street, Nanjing City, Jiangsu Province, 210036 China

Tel: 0086-25-83305050

Fax: 0086-25-58783273

Free Hotline: 400-820-0556 800-820-0556

Visit us at the website: en.jusha.com.cn

Contents

1. Use Guide.....	1
1.1 About this manual.....	1
1.2 Flag and symbol instructions.....	1
1.3 Security information.....	3
2. Product profile.....	6
2.1 Product characteristics.....	6
2.2 Packing list.....	8
2.3 Display front view and keys.....	9
2.4 The remote control device and its keys.....	11
2.5 Display rear view and interface.....	12
3. Display installation.....	13
3.1 How the display is installed.....	13
3.1.1 Coverlever mounting.....	13
3.1.2 wall installation.....	15
3.2 Connect the video signal cord and the power supply.....	15
4. Display settings.....	17
4.1 Turn on the display.....	17
4.2 Turn off the display.....	17
4.3 Menu profile.....	17
4.4 Operation the OSD menu.....	26
4.4.1 Call out the menu.....	26
4.4.2 Exit the men.....	26
4.4.3 Adjust the digital brightness.....	27
4.4.4 Adjust the contrast degree.....	27
4.4.5 Adjust the screen brightness.....	27
4.4.6 Curve selection.....	28
4.4.7 Color-temperature selection.....	28
4.4.8 4.4.8Color parameters for pass-through switch adjustment.....	29
4.4.9 Adjust the color mode.....	30
4.4.10 Adjust the color tone.....	30
4.4.11 Adjust the saturation.....	30
4.4.12 Adjust the Gain value.....	31
4.4.13 Adjust the input color format.....	31
4.4.14 Adjust the Color Domain.....	32
4.4.15 Adjust the width ratio.....	32
4.4.16 Adjust the VGA channel image horizontal position.....	32
4.4.17 Adjust the vertical position of the VGA channel image.....	33
4.4.18 Adjust the VGA channel image pixel clock.....	33
4.4.19 Adjust the VGA channel image phase.....	34
4.4.20 The VGA channel image adjusts automatically.....	34
4.4.21 PQ parameter direct-through switch adjustment.....	34
4.4.22 Adjust the clarity.....	35
4.4.23 Image noise reduction processing.....	35
4.4.24 Resolution enhancement.....	36
4.4.25 Pay more attention to the window mode selection.....	36
4.4.26 Window selection.....	37
4.4.27 Adjust the PIP mode screen size.....	37
4.4.28 Adjust the PIP mode secondary screen horizontal position.....	38
4.4.29 Adjust the vertical position of the PIP mode subtitle screen.....	38
4.4.30 Select the signal source.....	39

Contents

4.4.31 Language selection.....	39
4.4.32 Adjust the menu transparency.....	39
4.4.33 The Menu rotates.....	40
4.4.34 Select the DP channel version.....	40
4.4.35 Restore the factory settings.....	41
4.4.36 Menu is locked.....	41
4.5 Tip information menu.....	41
5. Important information.....	43
5.1 Technical specifications.....	43
5.2 Overall dimension and weight.....	44
5.3 Environmental protection information.....	44
5.4 Safety standards.....	45
5.5 Electromagnetic adaptability.....	45
5.5.1 EMC information.....	45
5.5.2 Electromagnetic compatibility.....	45
6. Declarations.....	47
6.1 Legal notice.....	47
6.2 After sale service declaration.....	48
6.3 Declaration of Conformity.....	50
6.4 Statement of ownership.....	50

1. Use Guide





1.1 About this manual






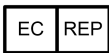





This manual is designed to guide the correct installation, setup, and operation of the Jusha S5810 Professional display, so please read this manual carefully before use.

- Please transfer this manual when the product to a third party.
- This product specification is subject to change without notice.
- Our goal is to provide you with instruction manuals as accurate and practical as possible. However, if you find any error in the manual, please be sure to inform us and thank you for your support.
- If you have other questions about this manual, please contact Nanjing Jusha Display Technology Co.

1.2 Flag and symbol instructions

This manual and products use the following signs and symbols:

	Note the information to provide more detailed information about the object
	Remind the user for warning messages that can cause danger
	Hazardous voltage, a warning information that may cause an electric shock
	Prohibited signs

	<p>Signs for safety grounding</p>
	<p>* Indicates that the product complies with the Chinese CCC certification</p>
	<p>* Indicates that the product complies with Part 15 of the FCC Rules</p>
	<p>* Indicates that the product meets common European standards (certified to medical device standards)</p>
	<p>* Indicates that the product is available in North America</p>
	<p>An Authorized EU Representative</p>
	<p>It is recommended that the user in accordance with WEEE (EU 2002 / 96 / EC Directive, involving the treatment and recycling of waste electrical and electronic equipment)</p>
	<p>It is recommended to refer to this manual</p>
	<p>Manufacturers</p>
	<p>Jusha product LOGO</p>
	<p>Product serial number.</p>

1.3 Security information



Note:

Read all the important security information before installing and operating your S5810 professional monitor.

Installation environment.

Please install the equipment near the easy to use sockets.

- The equipment shall be mounted on a solid, horizontal, vertical cantilever or wall and the cantilever or wall bearing greater than the weight of the display itself. If installed on an unstable cantilever or wall, the equipment may fall off and cause equipment damage or even personal injury.
- Do not use it in an environment where flammable narcotics have a mixture of air, oxygen or nitrous oxide or explosion may occur.
- Do not let the equipment rain or damp; do not use the monitor near the water source.
- When installed in a wall or other closed position, note that the gap has at least 10cm between the display and the wall for heat dissipation. Do not cover or block any vents in the equipment housing when use.
- Place small objects or liquid away from the device. If a small object or liquid falls into / flows into the equipment, unplug the equipment power plug immediately and contact our professional maintenance personnel.

Power supply and ground information.

- Use the power cord included with the device, and fully insert the power plug into the socket to maintain good contact.
- Do not contact the power cord, plug or unplug the power plug, otherwise an electric shock may occur.
- If the power cord needs to be disconnected, grab the power plug and pull it out. Pull the power cord may damage the power cord and cause electric shock.
- Pay attention to the power supply load capacity when using, and

the circuit overload can lead to fire or electric shock.

- Use the correct voltage as specified in this manual. If the voltage does not meet the requirements of the equipment, it may lead to fire, electric shock or equipment damage.
- If the device is not used for a long time, disconnect the device from a power outlet.
- If you need to completely power off the device, remove the power plug from the power outlet.
- Please make sure that this device is connected to a compliant computer or other equipment.
- Equipment must be connected to the protective ground.

Repair and maintenance information

- Using faulty equipment can result in a fire, electrical shock, or equipment damage. If the equipment starts smoking with a burnt smell or abnormal noise, cut off immediately and contact Nanjing Jusha Display Technology for help.
- Maintenance work must be performed by qualified personnel. Do not repair or modify the equipment yourself, otherwise it may cause equipment damage or personal injury.
- Leaked from the LCD will produce toxic side effects, do not contact the damaged LCD. If you contact the LCD, conduct a thorough cleaning and consult your doctor immediately.

Use recommendations

- For extremely important applications, we highly recommend preparing standby displays for ready replacement.
- Do not squeeze the display panel hard, which may cause screen damage.
- Do not stroke or press the display with sharp objects (such as a pencil or pen), which may damage the display. Please clean the screen with a clean, soft cloth.
- Do not directly contact the signal port of the display, otherwise it may cause potential static harm to the display.

- The backlight of the LCD screen has a certain service life. We strongly recommend using the recommended brightness and turning off the display when unused to maximize its service life.
- Disposal of abandoned equipment shall comply with local regulations.
- If the display is not used correctly, the display may interfere with other devices while working. It is recommended to remove the interference with the following actions:
 - Move or adjust the disturbed device.
 - Set up a partition device between the equipment.
 - Insert the two device power plugs into the different sockets.

2. Product profile

Thank you for choosing a Jusha video fusion surgery special display!

- S5810 is a LED backlight color 8MP video fusion surgery dedicated display. Jusha S5810 adopts the industry-leading LED technology, with high brightness, high gray scale, Uniform brightness, energy saving and environmental protection, long service life and other advantages. It has high resolution, high brightness, and built-in standard LUT, such as DICOM, Gamma and can be customized according to customer needs
- The display itself supports 4-way video signals with the screen display, combined with the unique medical use of Jusha's video integration screen management system can realize up to 32 video signals with the screen display, and adjust the position, size and proportion of each window according to the requirements, and truly realize the demand of multi-way video information and the same screen display in DSA operation. The product at the same time is also suitable for teaching, consultation and other application scenarios.

2.1 Product characteristics

- **Multiscreen display function (PxP)**

The display itself supports the simultaneous display of the 4 images, combined with the unique medical video fusion of the Jusha Screen management system can display up to 32 images simultaneously.

- **Ultra HD resolution**

With a resolution of up to 8 million pixels and smaller pixel particles, it can fully display the details of medical images and meet the precise diagnosis needs of medical institutions.

- **14-bit gray scale display**

With 14-bit (RGB) gray scale display, gray scale display can present up to 16384 gray scale, color display shows up to 4398

billion colors, more refined display and smoother picture transition to ensure the perfect presentation of every detail of the medical image.

- **Compliance with the DICOM standards**

To ensure that the display always presents the most accurate image effect, the monitor carefully measures, corrects and sets each gray step parameter during the display production process. The displays produced meet DICOM standards

- **Brightness Rapid Technology (BIA)**

The stability of brightness is also an important basis for lesion observation. After the traditional display starts, it takes 20 minutes to stabilize to the desired brightness. Jusha developed rapid brightness improvement technology (BIA), reducing the waiting time to 30s.

- **Dual power thermal redundant backup technology**

Built-in dual power supply, and real-time heat exchange backup, to avoid the display black screen due to one of the power supply failure, and each power supply load decreases, extending the service life of the power supply.

- **Remote transmission technology**

With the Jusha far-end transmission and conversion system, the maximum distance of 100 meters is 8MP video transmission.

- **Infrared remote control**

It can be switched off through the remote control, adjust the display parameters and so on, very convenient.

2.2 Packing list

The S5810 Professional display box contains:

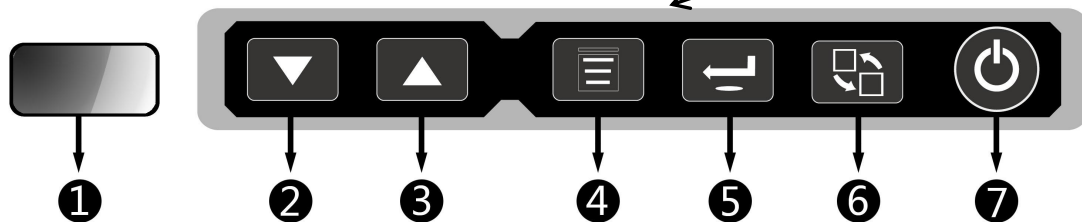
- S5810 display (no base)
- JUSHA Medical Video Fusion screen management system (optional with 1 AC power cord)
- Remote transmission and conversion system (optional)
- Fiber / CAT6 twisted pair (optional according to remote transfer conversion system)
- AC power cable (1 root)
- DVI video signal line (1 root)
- Infrared remote control
- Screws (4 out, M8 × 20)
- Display User Manual
- After-sales service record table (triple type)
- Boacking list
- Jusha Product Warranty Card









Note:

1. The packing list here is for reference only. Please follow the inner packing list.
 2. Contact us if the packing list is damaged or missing, attached.
 3. Do not use third-party accessories, such as power cord, video signal cord, optical fiber, etc. Jusha Medical is not responsible for any technical problems caused by third-party accessories.
 4. Please keep the original packaging well. If you need to transport the product again, be sure to use the original packaging.
-

2.3 Display front view and keys



Key		Function
①	Power supply indicator and Lamp infrared receiver	1. LED off: Power Off 2. LED red: Standby mode 3. LED Green: Works normally 4. LED Yellow: No input signal status
②	Down 	The Menu options goes down
③	Up 	The Menu options goes up

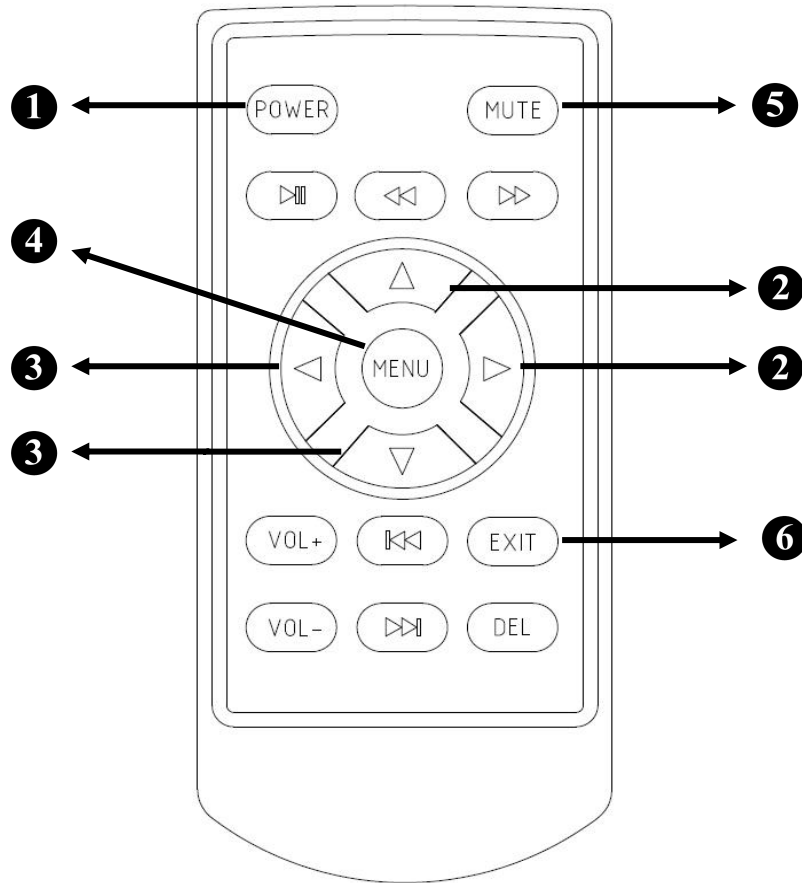
④	Order		Call out the menu options when there is no menu; Select the menu option or enter the menu to the next submenu; The menu exits automatically after 15s.
⑤	Enter		OSD display: Go to the next sub-menu display OSD is not displayed: switch the signal source channel.
⑥	Multi-window mode switch		Switch over the multiwindow mode.
⑦	Power		Under upper power, press the power button and switch the monitor

Note:



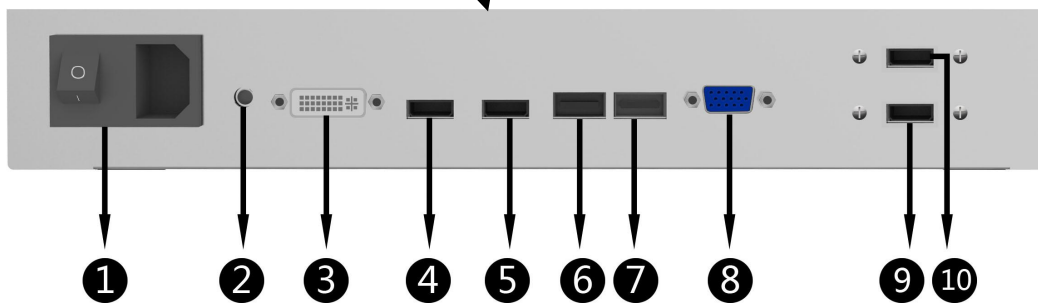
The key has each identification on the key board. refer to "Display Settings" for specific operation methods and implementation functions.

2.4 The remote control device and its keys



Key	Function
1 Power	Under upper power, press the power button and switch the monitor
2 Up / Right	OSD Display: Menu up. OSD not displayed: Switch multiwindow mode
3 Down / Left	The Menu goes down
4 MENU	Call out the menu options when there is no menu; Select the menu option or enter the menu to the next submenu; The menu exits automatically after 15s
5 MUTE	Switch over the signal source
6 EXIT	Under OSD Display: Return to the previous menu

2.5 Display rear view and interface



Display interface:

①	Power supply input	②	12V Power supply output
③	DVI	④	HDMI-2
⑤	HDMI-1	⑥	DP-2
⑦	DP-1	⑧	VGA
⑨	USB-5V-1	⑩	USB-5V-2

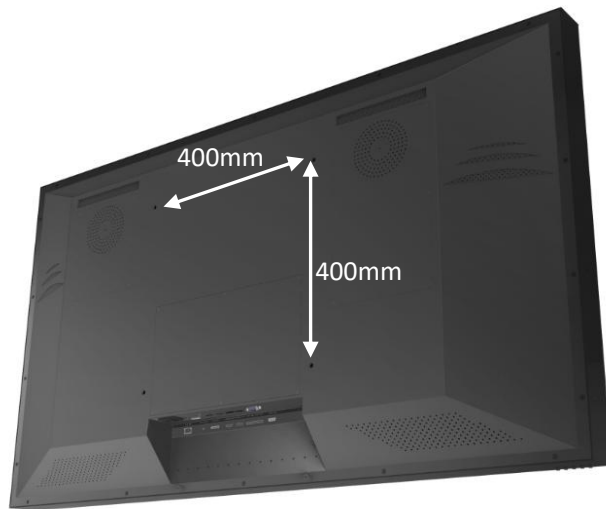
3. Display installation

3.1 How the display is installed

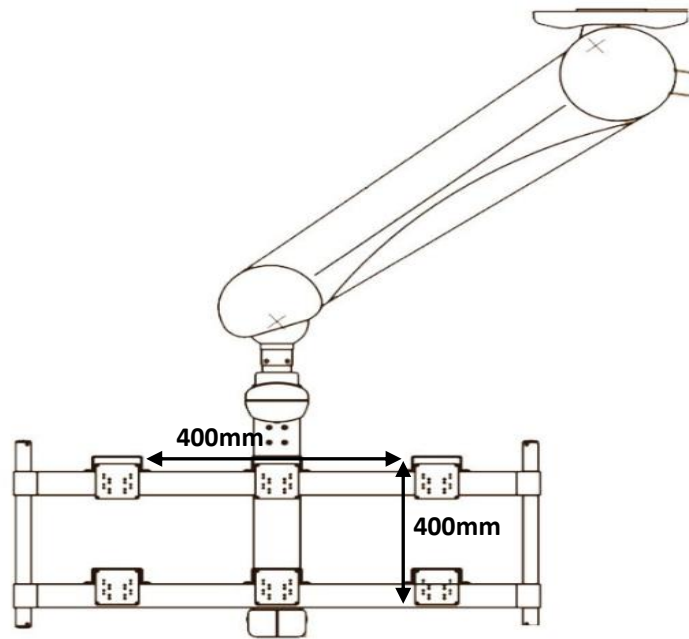
The installation mode of S5810 professional display can be divided into cantilever installation and hanging wall installation according to the different use environment and requirements.

3.1.1 Coverlever mounting

- Remove the display from the air box;



- The mounting VESA hole level for the adjusting cantilever is 400 × 400mm;

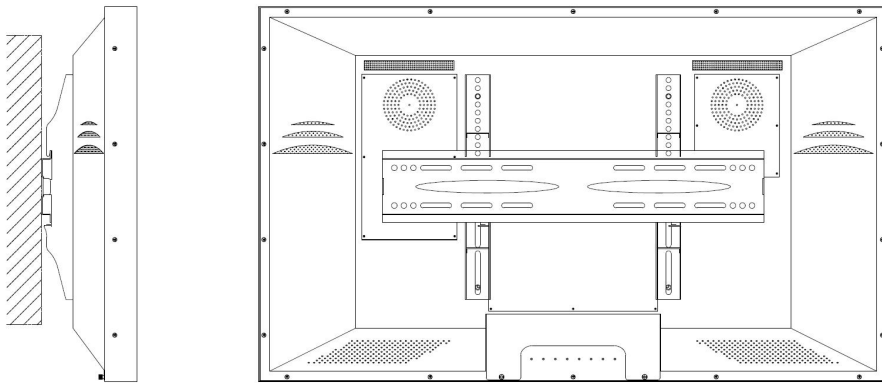


- The display back 400 × 400mm VESA hole position align the cantilever hole position using screws (M8 × 20). Secure the display to the cantilever.



3.1.2 wall installation

- Make the fixing hole on the wall with the electric drill, fix the retaining bracket to the wall with the expansion bolt (M8 × 90,12), and tighten the expansion bolt with the inner hexagon wrench;
- Install the two hooks to the VESA hole on the back of the display;
- Lift the display and hang on the wall through the back of the display.



3.2 Connect the video signal cord and the power supply

Connect the display to the source output port using the DVI, HDMI or DP interface signal lines. The nal input selection for the display is then automatically completed.

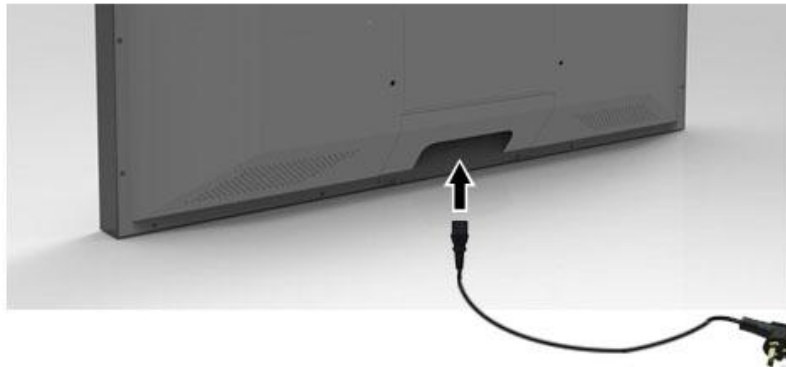
- The output port of the signal source is connected to the corresponding video interface (DVI/HDMI/DP/VGA) of the display via the corresponding video signal line.



Note:

The nal input supported by the display may refer to "5.1 Specification".

- Connect the supplied power cord to the display power input interface and insert the other end into the ground power outlet. When the display's power indicator is red, the display is powered.



Note:

Signal input supported by the display can refer to the "2.5 Display Rear View and Interface" section

Warning:



Please contact our technicians for installation, and Jusha Medical is not responsible for any damage caused by unauthorized disassembly and installation.

4. Display settings

4.1 Turn on the display

Turn on the AC power switch, press the display power switch button, and the display turns on.



Note:

1. The display memory function automatically records the shutdown mode after users last used the display. If the AC power switch after the switch button, the switch button of the display button after the AC power switch, the AC power switch.
2. It needs to wait 4 seconds after power off by pressing the AC power ship switch. After the indicator is completely turned off, the boot can be restarted, otherwise abnormal startup will be caused

4.2 Turn off the display

When the display is turned on, press the display power switch and the display to enter the power saving mode, and the power indicator will turn red. Press the AC power ship type switch again, the display is off and the indicator is off.

4.3 Menu profile

Users can use the display's key or menu function options to set the display differently to meet the user's working environment needs. Similarly, the user can also view the basic information about the display and the current settings through the menu.

The menu diagram is shown as follows, mainly divided into four parts:

Display Settings

- The top column displays the physical resolution of the signal source and the display screen
- The left icon represents the main menu information.
- The right represents the submenu and the submenu options
- The following column displays the signal source and the corresponding resolution for the individual windows.

Tips:

The physical resolution of the current signal source

Main menu

分辨率: 3840*2160@60HZ

DVI

IMAGE

COLOR

DISPLAY

PQ

M-WIN

SETUP

数字亮度 50

对比度 75

动态对比度

屏幕亮度 50

曲线 DICOM

色温 8000K

视窗1:
输入源: DVI
分辨率: 3840*2160@30HZ

视窗2:
输入源:
分辨率:

视窗3:
输入源:
分辨率:

视窗4:
输入源:
分辨率:

Tips:
Signal source and current resolution for each window.

submenu options

DVI		分辨率: 3840*2160@60HZ
 IMAGE  COLOR  DISPLAY  PQ  M-WIN  SETUP	Bypass	关
	颜色模式	标准
	色调	50
	饱和度	50
	Gain	
	输入颜色模式	RGB
	ColorDomain	RGBDomain
视窗1: 输入源: DVI 分辨率: 3840*2160@30HZ	视窗2: 输入源: 分辨率:	
视窗3: 输入源: 分辨率:	视窗4: 输入源: 分辨率:	

Display Settings

ENGLISH

DVI 分辨率: 3840*2160@60HZ

	宽高比	全屏
IMAGE	水平位置	
	垂直位置	
COLOR	像素时钟	
	相位	
DISPLAY	自动调节	
		
PQ		
		
M-WIN		
		
SETUP		

视窗1: 输入源: DVI 分辨率: 3840*2160@30HZ	视窗2: 输入源: 分辨率:
视窗3: 输入源: 分辨率:	视窗4: 输入源: 分辨率:

DVI		分辨率: 3840*2160@60HZ	
 IMAGE  COLOR  DISPLAY  PQ  M-WIN  SETUP	Bypass		关
	清晰度		50
	响应时间		
	Noise Reduction		关
	Uniformity Compensation		
	Super Resolution		关
	Dynamic luminous Control		
视窗1:	视窗2:		
输入源: DVI	输入源:		
分辨率: 3840*2160@30HZ	分辨率:		
视窗3:	视窗4:		
输入源:	输入源:		
分辨率:	分辨率:		

Display Settings

ENGLISH

DVI		分辨率: 3840*2160@60HZ	
	多重视窗模式	关	
IMAGE	选择视窗		
	PIP尺寸		
COLOR	PIP水平位置		
	PIP垂直位置		
DISPLAY	输入源	自动选择	
			
PQ			
			
M-WIN			
			
SETUP			
视窗1:		视窗2:	
输入源: DVI		输入源:	
分辨率: 3840*2160@30HZ		分辨率:	
视窗3:		视窗4:	
输入源:		输入源:	
分辨率:		分辨率:	

DVI 分辨率: 3840*2160@60HZ

 IMAGE  COLOR  DISPLAY  PQ  M-WIN  SETUP	语言	简体中文
	菜单透明度	0
	菜单旋转	
	DP Config	
	工厂重置	

视窗1: 输入源: DVI 分辨率: 3840*2160@30HZ	视窗2: 输入源: 分辨率:
视窗3: 输入源: 分辨率:	视窗4: 输入源: 分辨率:



Note:

The menu here is only schematic, with different models, subject to the actual menu

The menu options and parameters are as shown below:

Menu	Options	Parameter	Default
IMAGE	Digital Brightness	0-100	50
	Contrast Degree	0-100	75
	Dynamic Contrast Degree	On	关
		Off	
Screen	0-100	50	

Display Settings

ENGLISH

	Brightness		
	Curve	GAMMA2.0	DICOM
		GAMMA2.2	
		DICOM	
		CUSTOM1	
		CUSTOM2	
Color Temperature	6500K	8000K	
	8000K		
	9300K		
COLOR	Bypass	On	关
		Off	
	Color Mode	Standard	Standard
		Mode 1	
		Mode 2	
		Mode 3	
	Tue	0-100	50
	Saturation	0-100	50
	Gain	Red	100
		Green	100
		Blue	100
	Color Format	RGB	RGB
		YPbPr	
		Auto Detection	
Color Domain	RGB Domain	RGB Domain	
	YUV Domain		
DISPLA Y	Aspect Ratio	Full Screen	Full Screen
		Auto	
		4:3	
		5:4	
		16:9	
		1:1	
	Horizontal Position	0-100	50
	Vertical Position	0-100	50
	Pixel Clock	0-100	50
	Phase	0-100	50
Automatic Adjustment			
PQ	Bypass	On	On
		Off	

	Definition	0-100	50
	Response Time	On	On
		Off	
	Noise Reduction	Off	Off
		High	
		Medium	
	Low		
		On	Off
		Off	
	Super Resolution	Off	Off
		High	
		Medium	
		Low	
	Dynamic Luminous Control	On	Off
Off			
M-WIN	Pay more attention to the window mode	Off	Off
		PIP mode	
		PBP mode 1	
		PBP mode 2	
		Three picture mode	
		Four-picture mode	
	Select Window	Window 1	Window 1
		Window 2	
		Window 3	
		Window 4	
		All Window	
	PIP Size	Small	Medium
		Medium	
		Large	
Super			
PIP Horizontal Position	0-100	50	
PIP Vertical Position	0-100	50	
Input Source	Auto	Auto	
	VGA		
	DisplayPort1		

SETUP		DisplayPort2	
		HDMI1	
		HDMI2	
		DVI-D	
	Language	English	Simplified Chinese
		Simplified Chinese	
	Menu Transparency	0-100	20
	Menu rotates		
	DP Config	DP1.1	DP1.1
		DP1.2	
Factory Reset			




Note:

This product menu options and specifications are subject to change without notice. Dynamic contrast options of COLOR page in the menu, response time and Uniformity Compensation, Dynamic Luminous Control option of PQ page are displayed as gray in the menu, and the user can not adjust.



4.4 Operation the OSD menu

4.4.1 Call out the menu

When the display is on, press the  key, and the OSD menu appears on the display screen. If so in the next one.15s Without taking the next step, the menu will disappear again.








4.4.2 Exit the men

There are two ways to exit the OSD menu:

1. On the sub-menu page, press  the key to return to the previous option of the current operation; then on the main menu page, press the  key to exit the menu.
2. If nothing is done, the menu automatically disappears after 15s.








4.4.3 Adjust the digital brightness

The digital brightness of the display LCD can be adjusted. Operation as follows:

1. Press the  key to call out the menu. The 【IMAGE】 page appears first by default.
2. Press the  key to enter the image submenu page.
3. Move the cursor to 【Digital luminance】 by  /  key, and press the  Enter luminance progress bar.
4. Increases or reduces the progress bar value by pressing  /  key and set the digital brightness value as required.


4.4.4 Adjust the contrast degree







The display contrast can be adjusted, operating as follows:

1. Press the  key to call out the menu. The [IMAGE] page appears first by default.
2. Press the  key to enter the image submenu page.
3. Move the cursor to [Contrast] by  /  key and press the  Contrast progress bar.
4. The user increases or reduces the progress bar value by pressing  /  key and sets the contrast value as required.

4.4.5 Adjust the screen brightness

Display display brightness can be adjusted. When the user needs to increase or decrease the display brightness, the display will adjust its backlight to the target. Operation as follows:

1. Press the  key to call out the menu. The [IMAGE] page appears first by default.

2. Press the  key to enter the image submenu page.
3. Move the cursor to [Screen brightness] through  /  key and press the Enter  luminance progress bar.
4. Users increase or decrease the progress bar value by pressing  /  key to set the screen brightness value as required.









Note:



The LED backlight has a certain life span. We recommend you use the screen brightness value 50 to extend display life.

4.4.6 Curve selection

The display is built-in with 5 correction curves, and the user can choose according to the actual needs. Operation as follows:

1. Press the  key to call out the menu. The [IMAGE] page appears first by default.
2. Press the  key to enter the image submenu page.
3. Move the  /  cursor to [Curve] and press the Enter  Curve suboption.
4. Users select different curves by pressing  /  button as required, and then press  to confirm.

Note:










The monitor is built-in DICOM corrected, accurately calibrated and conforms to DICOM standards. DICOM correction ensures more visible gray scales, and we recommend selecting DICOM correction for most medical imaging diagnostics.

4.4.7 Color-temperature selection

The display has three color temperature options, and the user











can choose according to the actual needs. Operation as follows:

1. Press the  key to call out the menu. The [IMAGE] page appears first by default.
2. Press the  key to enter the image submenu page.
3. Move the cursor to [Color Temperature] by  /  key and press the Enter Color Temperature option.
4. Users select different color temperatures by pressing  /  key as required, and then press  to confirm.

4.4.8 4.4.8Color parameters for pass-through switch adjustment







We provide the color parameter through mode switch option, the color pass option is selected as closed, the digital brightness, contrast, the display, color mode, tone, saturation, Gain, curve, color temperature call the user set parameters; the color pass option is selected to open, display the digital brightness, contrast, color mode, tone, saturation, Gain, call factory default parameters, and the curve and color temperature calls.

Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  key [COLOR], to  the [COLOR] submenu page.
3. Move the cursor by  /  to [Bypass], and press  Enter the Bypass suboption.
4. Users select  /  key on or off color parameter through mode by pressing as required, and then press  OK to select.







4.4.9 Adjust the color mode

The display is built-in with 4 color modes, and the user can choose according to the actual needs. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  key [COLOR], to  the [COLOR] submenu page.
3. Move the cursor to [Color Mode] by  key and press the Enter  Color Mode suboption.
4. Users select different color modes by pressing  key as required.






4.4.10 Adjust the color tone



The display tone can be adjusted, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  key [COLOR], to  the [COLOR] submenu page.
3. Move the cursor to [Tue] by  key and press  Enter Tue Progress bar.
4. Increase or decrease the progress bar value by pressing  key and set the tone value as needed.

4.4.11 Adjust the saturation













The display saturation can be adjusted, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  COLOR], to  the [COLOR] submenu page.
3. Move the cursor to [Saturation] by  key and press the Enter  Saturation progress bar.

4. The user increases or reduces the progress bar value by pressing  /  key and sets the saturation value as required.











4.4.12 Adjust the Gain value

The Gain values of red, green, and blue for the display image can be adjusted separately, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  [COLOR], to  the [COLOR] submenu page.
3. Move the cursor  /  to [Gain], and press to enter  Gain Suboptions.
4. Move the cursor to [Red], [Green], or [Blue] by  /  key and press the  Enter progress bar.
5. The user sets  /  the Gain values of red, green and blue of the image, as required.









4.4.13 Adjust the input color format

The color format of displaying the input image can be adjusted as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  [COLOR], to  the [COLOR] submenu page.
3. Move the cursor to [Enter Color Format] by  / , and then press the  Enter Color Format suboption.
4. Users select a different input color format by pressing  /  key as required, and then press  to confirm.









4.4.14 Adjust the Color Domain

The color gamut of the image can be adjusted, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  COLOR], to  the [COLOR] submenu page.
3. Move the cursor by  to [Color Domain], and press  the Enter Color Domain suboption.
4. Users select a different color gamut by pressing  /  key as required, and then press OK  to select.

4.4.15 Adjust the width ratio









The display can adjust the width ratio of the display image, and choose the matching width ratio according to different signal sources to ensure that the display image has no geometric distortion, as follows:

1. 1.Press the  key to call out the menu.
2. 2.Move the  cursor to [DISPLAY], key  enter [DISPLAY] sub-menu page.
3. 3.Move the cursor to [Width ratio] by  key and press the  Enter Width ratio suboption.
4. The user selects a different width ratio by pressing  /  key according to the actual input signal source, and then pressing  to confirm.

4.4.16 Adjust the VGA channel image horizontal position










The user can adjust the horizontal position of the VGA channel input image displayed on the display as follows:

1. Press the  key to call out the menu.

2. Move the  /  cursor to [DISPLAY], key  enter [DISPLAY] sub-menu page.
3. Move the cursor to [Horizontal position] by  /  key and press  the horizontal position progress bar.
4. The user increases or reduces the value of the progress bar by pressing  /  key to adjust the horizontal position of the image as required.










4.4.17 Adjust the vertical position of the VGA channel image

The user can adjust the vertical position of the VGA channel input image displayed on the display, as follows:

1. Press the key  to call out the menu.
2. Move the cursor  /  to [DISPLAY], key  enter [DISPLAY] sub-menu page.
3. Move the cursor to [Vertical position] by  /  key and press the  vertical position progress bar.
4. The user adjusts the vertical position of the image by pressing  /  key to increase or decrease the value of the progress bar as needed.










4.4.18 Adjust the VGA channel image pixel clock

The user can adjust the pixel clock of the VGA channel input signal, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor  /  to [DISPLAY], key enter  [DISPLAY] sub-menu page.
3. Move the cursor to [pixel clock] by  /  key and press  the pixel clock progress bar.
4. The user adjusts the pixel clock of the image as required by pressing  /  by increasing or reducing the progress bar value.








4.4.19 Adjust the VGA channel image phase

The user can adjust the phase of the VGA channel input signal, operating as follows:

1. Press the  key to call out the menu.
2. Move the cursor  /  to [DISPLAY], key enter  [DISPLAY] sub-menu page.
3. Move the cursor to [Phase] by  /  key and then press the  phase progress bar.
4. The user adjusts the phase of the image by pressing  /  by increasing or reducing the progress bar value as required.

4.4.20 The VGA channel image adjusts automatically








The user can adjust the VGA channel input image for automatic adjustment, and when the display position of the image is not neutral on the display. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor  /  to [DISPLAY], key enter  [DISPLAY] sub-menu page.
3. Move the cursor to [Auto Adjust] by  /  key and press  to automatically adjust the image display position.

4.4.21 PQ parameter direct-through switch adjustment







We provide the P Q parameter through mode switch option, the P Q pass option is selected off, display clarity, response time, noise reduction, uniformity correction, resolution enhancement, dynamic brightness control call display built-in parameters; when the PQ through option is selected open, the display clarity, response time, noise reduction, uniformity correction, resolution enhancement, dynamic brightness control function is off.

Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  key [PQ], to the [PQ] submenu page. 
3. Move the cursor by  to [Bypass], and press  Enter The Bypass suboption.
4. Users select open or off the PQ parameter passthrough mode by pressing  key as required, and then press OK  to select.




4.4.22 Adjust the clarity







Display clarity can be adjusted. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  key [PQ], to  the [PQ] submenu page.
3. Move the cursor to [Clarity] by  key and press the Enter Clarity progress bar. 
4. The user increases or decreases the progress bar value by pressing  key and sets the clarity value as required.

4.4.23 Image noise reduction processing











The display provides a noise reduction process of the image, which the user can adjust its intensity or turn off. Operation as follows:

1. 1.Press the  key to call out the menu.
2. 2.Move the cursor to  key [PQ], to  the [PQ] submenu page.

3. 3. Move the cursor by  /  to [Noise Reduction], and press the  Enter Noise Reduction suboption.
4. 4. Users press  /  key to turn off or select different noise reduction strengths for position, and then press  OK to select.








4.4.24 Resolution enhancement

The display provides resolution enhancement that users can adjust the resolution enhancement or turn off. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  key [PQ], to  the [PQ] submenu page.
3. Move the cursor by  /  to [Super Resolution], and press the  Enter Super Resolution suboption.
4. The user selects off resolution enhancement by pressing  /  key or selects a different resolution enhancement gear and press  OK to select.

4.4.25 Pay more attention to the window mode selection











The display supports multi-window display function, with built-in PIP mode, PBP mode 1, PBP mode 2, three screen mode and four screen mode. Users can select different multi-window modes according to the requirements. Operation as follows:

1. 1. Press the  key to call out the menu.
2. 2. Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
3. 3. Move the cursor to [Multiwindow mode] by  /  key and press the Enter  multiwindow mode suboption.

- Users select a different multiwindow mode by pressing  /  key and press OK .











4.4.26 Window selection

In multi-window mode, users can adjust the parameters of each window independently, or adjust all the parameters simultaneously. Select the window as follows:

- Press the key  to call out the menu.
- Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
- Move the cursor to [Select Window] by  / , and press  Enter the Select Window suboption.
- Users select different windows by pressing  /  key, and then press  OK to select.










4.4.27 Adjust the PIP mode screen size

The user can adjust the display size of the auxiliary screen in PIP mode, operating as follows:

- Press the  key to call out the menu.
- Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
- Move the cursor to [PIP dimension] by  /  key and press to enter  PIP size sub-options.
- The user selects different subscreen size gears by pressing  /  key, and then press  to confirm.










4.4.28 Adjust the PIP mode secondary screen horizontal position

The user can adjust the display position of the auxiliary screen in the display horizontal direction in PIP mode, as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
3. Move the cursor to [PIP Horizontal Position] by  /  key and press the  Enter PIP Horizontal Position progress bar.
4. Users press  /  key to increase or reduce the progress bar value, and adjust the display position of the auxiliary screen in the horizontal direction of the display as necessary.











4.4.29 Adjust the vertical position of the PIP mode subtitle screen

The user can adjust the display position of the auxiliary screen in the vertical direction of the display in PIP mode, as follows:

1. 1.Press the  key to call out the menu.
2. 2.Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
3. 3.Move the cursor to [PIP Vertical] by  /  and press  the PIP Vertical progress bar.
4. 4.Users press  /  key to increase or decrease the progress bar value and adjust the display position of the secondary screen in the vertical direction of the display as necessary.











4.4.30 Select the signal source

The display supports two HDMI, two Road DP, Road DVI-D and one Road VGA signal inputs, and has the function of automatic scanning signal. When the multiple-channel signal is connected at the same time, the display will automatically scan to the primary-circuit signal as the input source, and the user can also adjust the menu to select the HDMI, DP, DVI or VGA signal as the input source as necessary. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  key [M-WIN], to  the [M-WIN] submenu page.
3. Move the cursor  /  to [Signal Source] and press the  Enter Signal Source suboption.
4. Users automatically scan or select a specific signal source by pressing  /  key, and then press  OK.

4.4.31 Language selection









The display offers menus available in both simplified Chinese and English. The change menu language operation is as follows:

1. Press the  key to call out the menu.
2. Move the cursor by the  /  key to the [SETUP], key  to enter [SETUP] Sub-menu page.
3. Move the cursor  /  to [Language], and press the  Enter Language suboption.
4. The user selects by pressing  /  key simplified Chinese or English, and then pressing  Confirmation.

4.4.32 Adjust the menu transparency








The transparency of the display OSD menu can be adjusted, operating as follows:

1. Press the key  to call out the menu.

2. Move the cursor to  /  key [SETUP], to the  [SETUP] submenu page.
3. Move the cursor to [Menu Transparency] by  /  key and press the Enter  Menu Transparency Progress bar.
4. Users increase or decrease the progress bar value by pressing  /  key and adjust the menu transparency as needed.











4.4.33 The Menu rotates

The user can perform a 90-degree rotation on the OSD menu of the display as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  key [SETUP], to  the [SETUP] submenu page.
3. Move the cursor to [menu Rotation] by  /  key and press  90 degree rotation of the menu.








4.4.34 Select the DP channel version

The version of the display DP channel is selectable, operating as follows:

1. Press the key  to call out the menu.
2. Move the cursor to  /  SETUP], to  the [SETUP] submenu page.
3. Move the cursor by  /  to [DP Config], and press  the Enter DP Config suboption.
4. Users select a different version of the DP channel by pressing  /  key and press  OK.



4.4.35 Restore the factory settings

We set the recommended status for the display before leaving the factory. After the user adjusts according to the actual needs, if it needs to restore the initial state, it can restore the factory default state with one click by restoring the factory setting function. Operation as follows:

1. Press the  key to call out the menu.
2. Move the cursor to  /  [SETUP], to the  [SETUP] submenu page.
3. Move the cursor  /  to [Factory Reset] and press  the display parameters to restore the factory settings.

4.4.36 Menu is locked

We provide the menu locking functionality. After the menu lock function is turned on, the menu options can not be set to prevent misoperation. Menu locking function is operated as follows:

1. The menu is not locked with the long button  for 10 seconds.
2. Menu lock key for 10 seconds Close menu lock  for 10 seconds.

4.5 Tip information menu

When the display is in certain states, the prompt information menu appears in the center of the display, reminding the user of the current state for the user to operate the display.

Tip		Description
①	There is no input signal prompt for the cable	When the channel access signal cable is currently selected but no signal is input, prompt "enter power saving mode after 5 minutes"; the prompt box disappears after the power saving mode is on.
②	No cable tips	When the current selection channel is not connected to the cable, prompt "No XX cable enters power saving mode after no XX cable" (XX is the current selected channel); prompt box disappears after the power saving mode is opened.
③	Enter a port prompt	The current signal channel is switched and the signal is automatically recognized on the screen.
④	Multi-window mode prompt	Current window mode shows the window mode through the window mode.
⑤	Auto-adjustment prompt	The "Automatic Adjustment in Progress" prompt appears in the center of the screen when the VGA channel is automatically adjusted.
⑥	Read the system data tips	The system data will be read after the display is displayed normally, and after the startup process image is displayed, "The prompt box disappears after Loading System Data...", 10 seconds. The user menu cannot be called out when the prompt box does not disappear.

5. Important information

5.1 Technical specifications

Input Voltage	AC110-240V 50/60Hz
Standby	<5W
Operating	< 300W
LCD	58", TFT Color LCD Display
Backlight	LED
Brightness	Max: 700 cd/m ² , Default: 500cd/m ²
Visual angle	Horizontal 176°, Vertical 176°
Resolution	3840*2160
Color	43980 billion colors
Screen Size	1270.08 (H) x 721.44 (V) mm
Interface	DVI-D×1, DP×2, HDMI×2, VGA×1
Operating environment	Temperature: 0°C - 40°C Humidity: 20% - 85% (no condensation) Air pressure: 700hPa - 1060hPa
Storage and transportation environment	Temperature: -20°C - 60°C Humidity: 10% - 90% (no condensation) Air pressure: 200hPa - 1060hPa
Certification	CCC

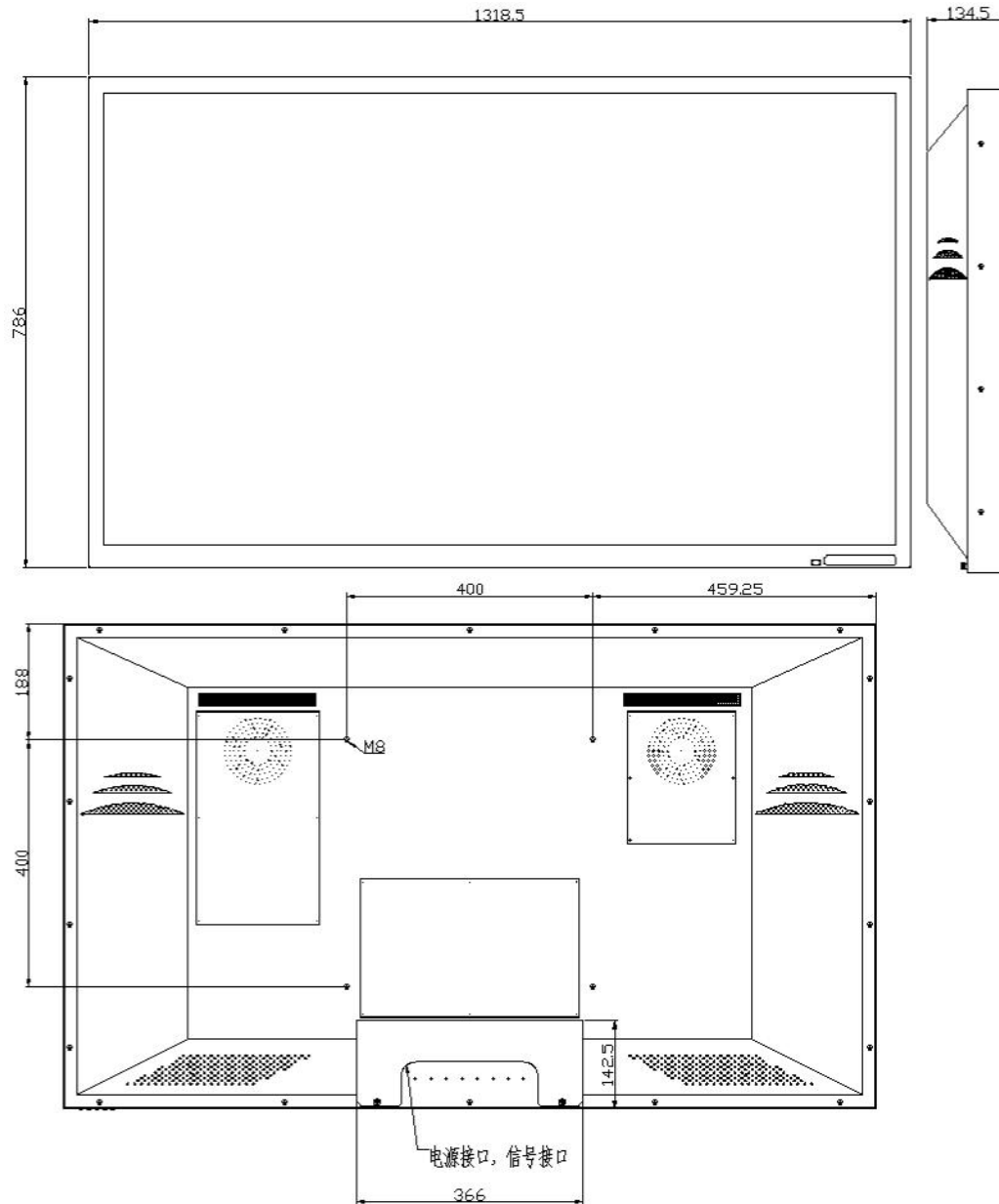


Note:

This product specification is subject to change without notice.

5.2 Overall dimension and weight

Width (mm)	Height (mm)	Thickness (mm)	Weight (kg)
1318.5	786	134.5	46



5.3 Environmental protection information

The raw materials used in this product meet ROHS requirements and contain no harmful substances such as lead and mercury.

5.4 Safety standards

This product meets the GB4943.1-2011 standards

5.5 Electromagnetic adaptability

5.5.1 EMC information



Warning:

The monitor requires special precautions for EMC which need to be installed, started and used using the following information.

1. When installing this equipment, you may only include attached power supplies or spare parts supplied by the statutory manufacturer.
2. Use of other power supplies or parts may result in the reduced disturbance resistance level of the device.
3. Please do not approach any portable or mobile communication RF devices to the display. Doing so may have adverse effects on the equipment.
4. The display must not be used close to or stacked with other devices. If you must be used near or stacked with other devices, you must observe the device or system to confirm that the configuration used is working properly.
5. When configuring the medical system, the personnel connecting other devices to the signal input element or the signal output element must ensure that the system meets the requirements of the IEC/EN60601-1-2

5.5.2 Electromagnetic compatibility

The electromagnetic adaptability of this product meets the following conditions:

Important Information

ENGLISH

Electromagnetic interference	GB17625.1-2012 GB9254-2008
------------------------------	-------------------------------

6. Declarations

6.1 Legal notice

The auxiliary equipment that is connected with JUSHA display should meet the corresponding IEC Standard (data processing equipment should meet IEC 60950-1 Standard and armamentariums should meet IEC60601-1 Standard). In addition, all configurations should meet IEC 60601-1-1 Standard. Before a configuration is connected to signal output or input interface for processing system configuration, technician should make sure that the system meets IEC 60601-1-1 Standard.

Staffs that are responsible for connecting the display with system should make sure that installed devices meet IEC 60601-1-1 Standard. If there is any question, please contact with JUSHA Engineering Technology Service Department or local marketing representatives.

JUSHA markets its products through armamentarium manufacturers, distributors and franchisers. Therefore, please consult your seller whether he/she provides relevant maintenance service.

JUSHA will neither take any responsibility nor authorize anyone to take any responsibility for product distribution and its use. Please read carefully the related documents, operation instruction and labels on package before you apply the product so that you can use and maintain the product properly.

Please note that its performance will be affected by system configuration, software, application program and client's data and client's operating control. Though JUSHA product is compatible with many systems, client's specific function might be come true

differently. Whether the product is suitable for specific purpose or application program it depends on clients, therefore, JUSHA should not guarantee for it.

JUSHA expressly disclaims all warranties of any kind, whether statutory, express or implied, including, but not limited to, implied warranties of merchantability, fitness for particular purpose and non-infringement. JUSHA hereby explicitly rejects all warranties and state of any kind, any property or extent whether statutory, express or it leads to any laws, rules, commercial practice, conventions or trade disputes etc.

In no event shall JUSHA and its suppliers/franchisers be liable for any special, incidental, punitive, indirect or consequential damages (including, but not limited to, delay deliver, non-delivery, fault items, product design or production manufacture, being unable to use the product and service, loss of business or profits or other reasons, and any responsibility caused by buy or sell, lease, install or use related products, these terms and conditions and related articles of agreement.

The limits in this article and/or exclusions are not necessarily suitable for some inadmissible exclusion clause, warranties or limited judicial districts. The maximum extent is permitted by applicable law in named jurisdiction under the circumstance.

JUSHA keeps patents, copyright and its exclusive right and all information in this manual including JUSHA all designs and related materials. Anyone cannot plagiarize JUSHA design or copy its product to sell or use without the company's explicit authority.

6.2 After sale service declaration

The after-sale warranty is three years from the date of purchase,

only if the product has been used with the recommended brightness. We are responsible for the quality problems caused by non-artificial factors and the maintenances are free of charge.

Quality assurance is only for the product that Nanjing Jusha Display Technology Co., Ltd provides. Any other third-party equipment problems are beyond the scope of this quality assurance.

**Note:**

The user must contact and get permission from JUSHA before sending back the product for repairs.

Please keep well the original package and, if the product is transported again, the original package must be selected. No heavy load on the package is permitted during transportation.

The user shall not maintain or repair products at a place other than the after- sale service point of Nanjing Jusha Display Technology Co., Ltd., the original equipment number shall not be modified or removed. In order to obtain this quality assurance, the use shall not be contrary to the requirements of this manual, and the quality assurance will fail in such cases.

This product provides limited liability quality assurance. **Nanjing Jusha Display Technology Co., Ltd. is not responsible for the direct, indirect and accidental damage caused by the users themselves.** Users should pay attention to the system settings, software, application programs, user data and operation control of the product. All of the above factors will affect the performance of product. This product can be compatible with many systems, and users may decide to use the characteristics and functions of this product in their own discretion.

6.3 Declaration of Conformity

This machine could meet the following two conditions

- This machine will not generate Dangerous interference
- This machine will not come into unpredictable results

6.4 Statement of ownership

Nanjing Jusha Display Technology Co., Ltd. reserves all patents, copyrights and other ownership of the User Manual. Without the explicit authorization of Nanjing Jusha Display Technology Co., Ltd., it is forbidden to plagiarize the product design, or duplicate, use and sell the product.