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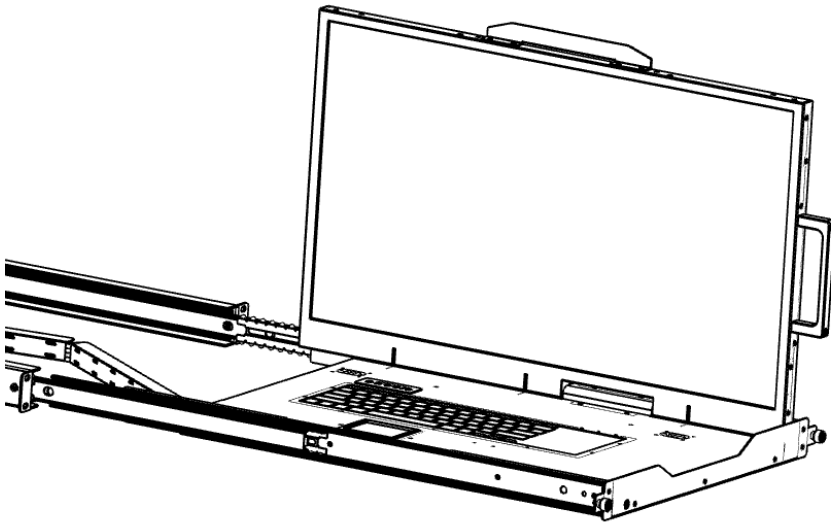
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LCD1U27-01

User Manual

V1.0



Version 1.0

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Declaration

Please read this chapter with some important notice before operations.

FCC Regulation Statement



This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class “a” digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

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Disclaimer

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Warranty

Our warranty that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

Customer Service

The user guide includes simple debug and trouble shooting, for system crack or serious damage, please contact with your distributor, sales representative, the customer service center for technical support if you need additional assistance. You may have the following information ready before you call:

Product serial number

Peripheral attachments




Description of complete problem

The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Safety Instructions

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

CAUTION		
Read manual prior to installing the product. The operation of products depends on your reading and following the information in this manual. Re-check your work prior to operating the product.		
EVENT	EFFECT	PREVENTION
	Although the brightness is good under sunlight, it shines directly all day would cause the panel damage.	You should avoid exposing the computer under the sunlight for whole working hours.
	If the product is close to explosive environment or such as on fire, the overheat will cause the product malfunction.	You should avoid placing the product near explosive or firing environment.
	If the product is close to the wet ground such as grassplot, the moisture between panel and glass will make the product malfunction.	You should avoid placing the product on the ground.

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Please read these safety instructions carefully.

- Please keep this user's manual for later reference.
- Please disconnect this equipment from any AC outlet before cleaning. Do not use acid or caustic liquid or spray detergents for cleaning. The good option is to use a damp cloth.
- Do not touch the LCD panel surface with sharp or hard objects.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Place this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage..
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

Getting Started

The design allows you to use it in radical industrial environments – places you would not take with normal commercial grade LCDs / Panel PCs. The mechanical is designed to be embedded in various kind of equipment.

This chapter tells you will find instructions for the following procedures:

- Introduction
- Unpacking
- Installing the monitor

2-1 Getting Started

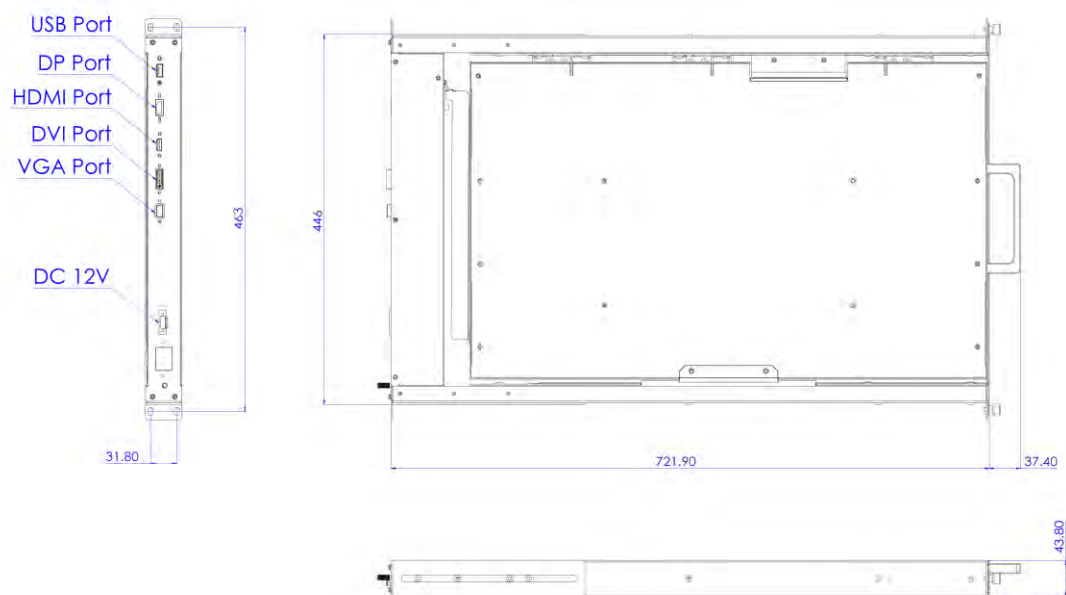
The procedures for setting up your TFT LCD monitor kit is as follows:

This manual describes the procedure to retrofit protocol analysis 1U-sized systems for rack mounting at your site. The mount kit is for securing these systems in an EIA 19" equipment rack. The rack mount kit is included with some systems, or may be purchased as an accessory for existing systems.

Two brackets, which are attached (as shown in this document) to the side of the chassis, connect the chassis to the mounting posts of the rack.

2-2 Specifications

2-2-1 Dimensions



2-2-2 Specification

1.LCD Specification

Size/ Type	: 27" LCD (LED backlight)
Active Area (mm)	: 596.16 (H) x 335.34 (V)
Pixel Pitch (um)	: 155.25 (H)x 155.25 (V)
Resolution	: 3840 x 2160 @ 60Hz
Contrast Ratio	: 1000 : 1 (typ.)
Max. Colors	: 1.07B colors
Brightness	: 400 nits (cd/m ²)

Viewing Angle	: -89 ~ 89 (H); -89 ~ 89 (V)
Response Time	: 12 m sec.(typ.)

2.Signal Input:

VGA	: 1 x VGA, up to 1920x1080@60Hz
DVI	: 1 x DVI-D, up to 3840x2160@60Hz
HDMI	: 1 x HDMI 2.0, up to 3840 x 2180@60Hz
DP	: 1 x DP 1.2 input
USB	: 1 x USB 2.0 for keyboard/keypad
Power Input	: 1 x DC input

3. Power specification

Power Adapter	: 1 x AC/DC power adapter
Consumption	: 35 W typical, normal operation
Input	: 12V DC Input (terminal block)
Power Cord	: 1 x Power Cord

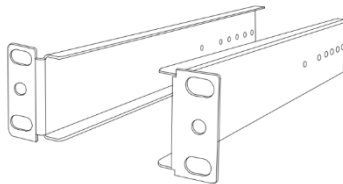
2-2-3 Rack Mount Kit Accessory

1. Cables: 1 x 1.8m Power cable, 1 x 1.8m VGA, 1 x 1.8m HDMI , 1x 1.8m DP cable

2. Rear supporting brackets: *Default has been fixed on the rear side of machine. It contains 4 x screws and 2 x Rear extended brackets.



M4x4

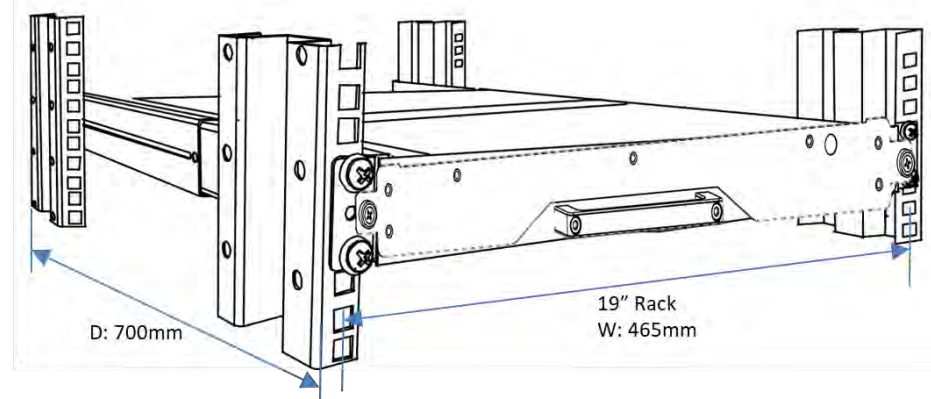


2-4 Installations

Installing the system chassis in a rack mount enclosure requires some planning for issues such as location, spacing, airflow and power supply. These issues are reviewed below.

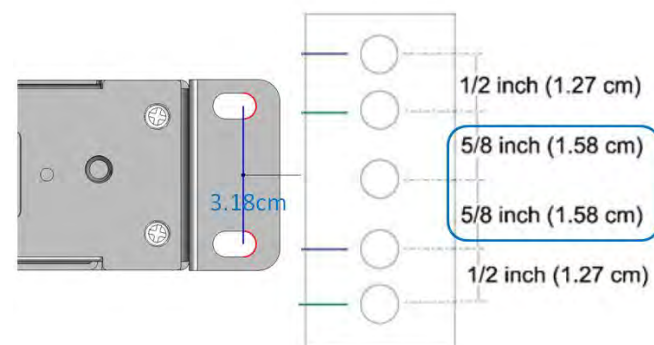
2-4-1 Location

Most rack mounts conform to the EIA 310-D standard, which provides mounting holes on two vertical support rails which are separated by 19" (480 mm).



This standard provides separation of the spacing holes in increments of both 1/2" (12.7 mm) and 5/8" (15.8 mm), which allows for various multiples of these spacing distances (such as 1.75" [44.5 mm] which is obtained by the separation of two 5/8" gaps and one 1/2" gap).

This 27" 1U rack mount brackets supplied use 2 x 5/8" spacing, and the depth of cabinet will require 700mm.



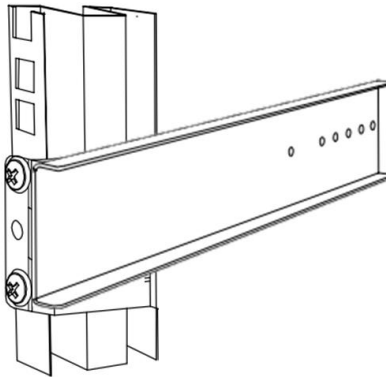
2-4-2 Installing the System Chassis into the Rack

Step 1: Position the chassis in the rack as follows:

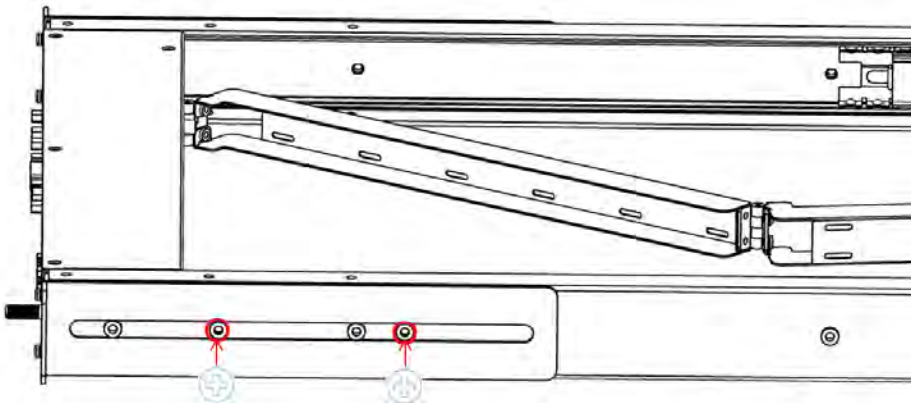
Step 2: Ensure that the supporting shelf and the chassis are installed straight and level.

Step 3: Make sure that your path to the rack is unobstructed.

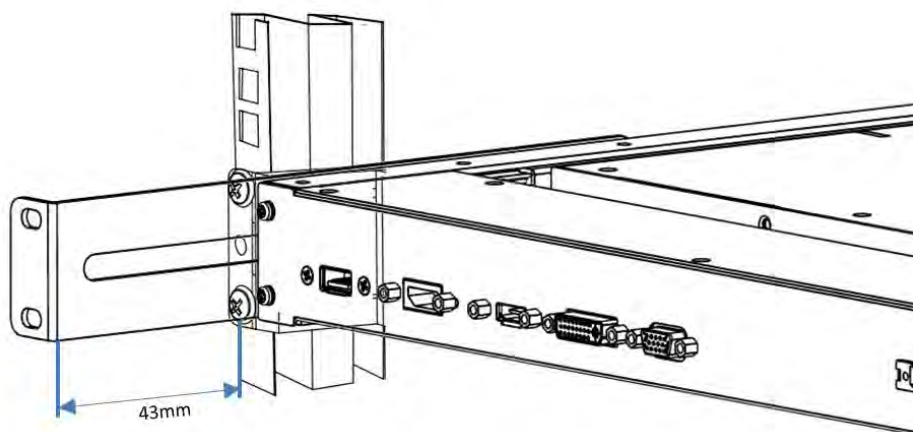
Step 4: Remove the extended brackets (or do not install the extended brackets),
Fix both extended brackets on the rack console.



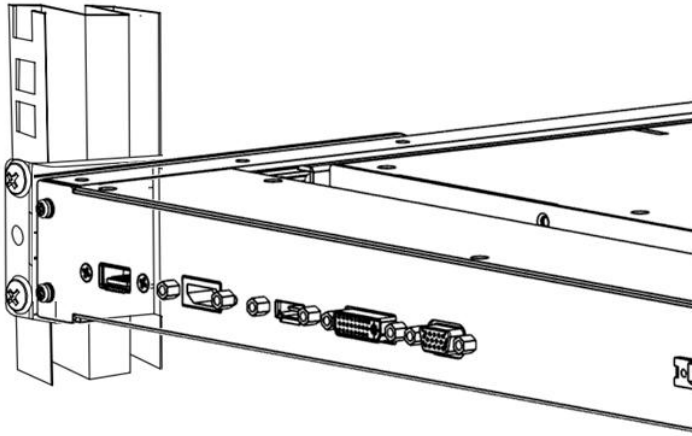
Step 5: Slide the unit into the rack and position using the extended L brackets so that the slots in the brackets are positioned over the appropriate mounting holes in the side rails of the rack. Please M4 x 4 screws to fix the monitor at side as below,



*Note: the extending brackets can be extended max. 43mm out of rear end of machine based on the size of rack cabinet.



Step 6: Finished, and adjust appropriate distance and fix it on the rack.



Operation

When using a device, be sure to read the instructions accompanying the device together with the relevant section in this chapter. This chapter gives guidelines on using the device

3-1 Open the LCD

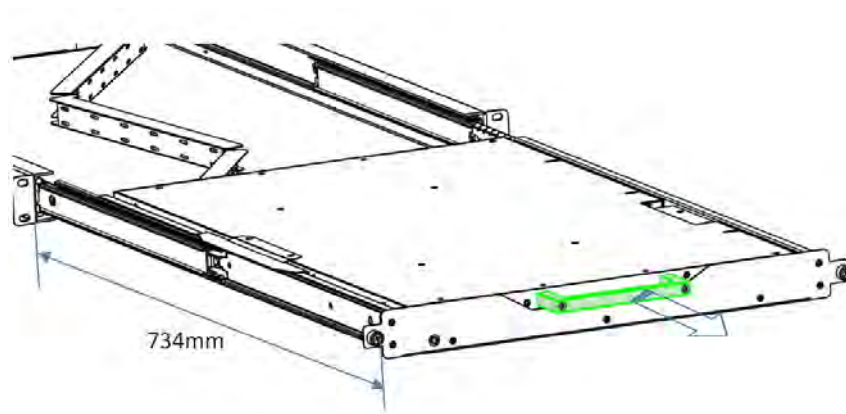
When using a device, be sure the machine has been tightly fixed on the rack cabinet, to read the instructions accompanying the device together with the relevant section in this chapter.

This chapter gives guidelines on using the device after installations.

3-1-1 Pull out the LCD

The rack mount monitor can pull out 734mm out of rack in distance.

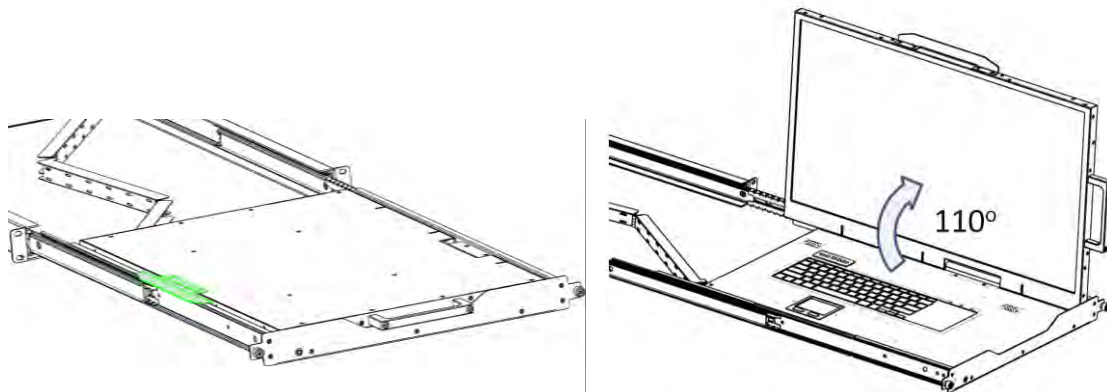
1. Release thumb screws on both sides.
2. Pull out the LCD by front handles



3-1-2 Open the LCD

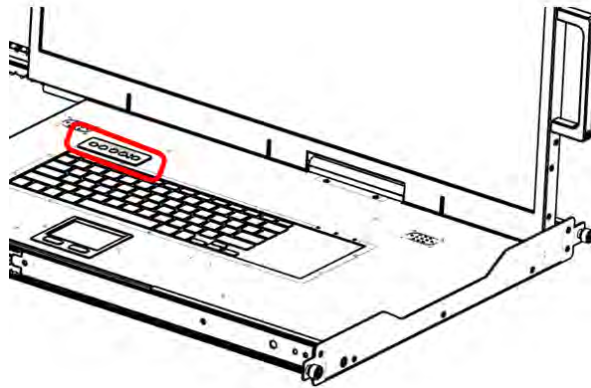
Please check the opening side of the LCD, and open it by a supporting bracket at side.

And the LCD opening angle do not exceed 110° in case of distorting metal and cable inside.

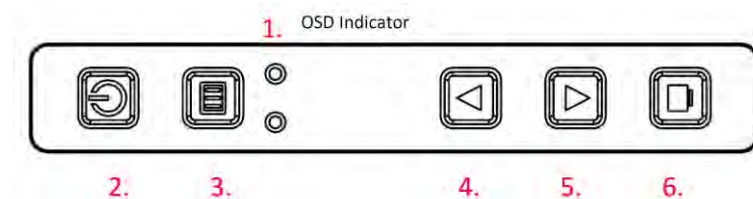


3-2 OSD Key Function






Power-on the LCD by pressing “Power icon” key to activate the LCD monitor. The LCD indicator shows in Orange/Red when the external power connected. If signal cable connected with content, the LED will turn to Green automatically.



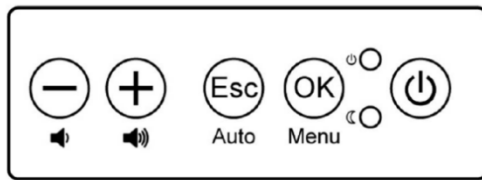
Please refer to the keypad type as below,
1.Type1 Membrane board



- 1. LED Indicator: Orange/ Green
- 2. Power On/Off
- 3. Menu (OK)
- 4. Left/Down (decrease)
- 5. Right/Up (Increase)
- 6. Exit / Esc

Icon	Function
	Right/Up (Increase)
	Left/Down (decrease)
	Power On/Off
	Exit / Esc
	Menu (OK)

2.Type2 Membrane board











Icon	Item	Main Menu	Sub-Menu
	Power	Power On/Off	Power On/Off
	Menu	Call Menu, OK	OSD Menu Choise/Switch
	Up Key	Input source choice	Up, "+"
	Down Key	Display data information	Down, "-"
	Exit Key	Exit	Back to previous level

Icon	Description	Function
	Power Indicator	Lights up in "Green" when the monitor turn on
	Stand by Indicator	Lights up in "Orange" when the device cannot detect any input source

3-2-1 OSD Menu Screen


The following diagram show a general BIOS menu screen when the “Menu (OK)” button pressed,

Icon	Category	Items	Icon	Category	Items
	Picture	Brightness, Contrast, Sharpness adjustment		Input	Input signal selected
	Display	Content displaying adjustment		Audio	Audio adjustment (optional)
	Color	Gamma, Color temperature, Color effect		Other	OSD menu location/ transparency
	Advanced	Screen ratio, DP resolution		Information	Input resolution, frequency...etc.


3-2-2 Picture

Icon	Sub-Menu	Settings	Note
	Backlight	by slider bar	Default 50
	Adjust screen's backlight. Range 0-100		
	Brightness	by slider bar	Default 50
	Adjust screen's brightness. Range 0-100		
	Contrast	by slider bar	Default 50
	Adjust screen's contrast. Range 0-100		
	Sharpness	by slider bar	Default 2
	Adjust screen's sharpness. Range 0-4		


3-2-3 Display

Icon	Sub-Menu	Settings	Note
	Auto Adjust	Select and execute	
	Choose the best settings for the current input signal		
	H Position	Select and execute	VGA only
	Adjust the value of horizontal image. Range 0-100		Default 50
	V Position	Select and execute	VGA only
	Adjust the value of horizontal image. Range 0-100		Default 50
	Clock	by slider bar	VGA only
	Adjust the value of horizontal image. Range 0-100		
	Phase	by slider bar	VGA only
	Adjust the phase control. Range 0-100		Default 13
	Display Rotate	Select and execute	
	0, 180 degree		


3-2-4 Colors

Icon	Sub-Menu	Settings	Note
	Panel Uniformity	Select and execute	Default On
	Choose LCD color uniformed for R,G,B colors, On / Off		
	Gamma Value	Select and execute	Default Off
	Choose the parameter of Gamma, Off/ 1.8 / 2.0/ 2.2/ 2.4		
	Temperature	Select and execute	Default User
	Set value of monitor for CIE coordinate, 9300 / 7500/ 6500/ 5800/ sRGB/ User		
	Color Effect	Select and execute	Default Standard
	Set value of different video content, Standard / Game/ Movie/ Photo/ Vivid/ User		
	Demo	Select and execute	Default Off
	Different Demo color, Off/ Type 1-5		
	Color Format	Select and execute	RGB
	RGB / YUV		
	PCM		Native
	Native / User		
	HUE		Default 50
	Adjust color Hue, Range 0-100		
	SAT/saturation		Default 50
	Adjust color saturation, Range 0-100		


3-2-5 Advanced

Icon	Sub-Menu	Settings	Note
	Aspect Ratio	Select and execute	Default Full
	Screen ratio, Full/ 16:9/ 4:3/ 5:4/ 1:1/ User		
	Over Scan	Select and execute	Default On
	Analog signal, zoom in the screen (enlarged), to block the noise at 4 borders. (On/ Off)		
	Over Drive	Select and execute	Default Off
	Used in game screens or high-speed animations to reduce ghosting. (On/ Off)		
	DDCCI	Select and execute	Default On
	On/ Off		
	Ultra Vivid	Select and execute	Default Off
	Image enhancement function (increase brightness and contrast) (Off/ L/ M/ H)		
	DP Option	Select and execute	Default 1.2
	D0: 1.1/ 1.2/ 1.3, D1: 1.1/ 1.2/ 1.3		
	DP MST	Select and execute	Default Off
	MST Daisy Chain Output function. (Off/ D0/ D1)		
	DP resolution	Select and execute	Default 4K2K
	D0, D1 resolution support from 1080P/ 2560x1440/ 4K2K@60Hz		
	Clone Mode	Select and execute	Off
	On/ Off		


3-2-6 Input signal selection

Icon	Sub-Menu	Settings	Note
	Input source	Select and execute	Default Auto Select
	Auto Select/ A0:VGA/ D0:DP / D1:DP(Vain, for option) /D2:HDMI (DVI) /D3:HDMI (*Note)		
	*Note: D1:DP port is for optional, D2:HDMI could be DVI in certain circumstances		

3-2-7 Audio

Icon	Sub-Menu	Settings	Note
	Volume	by slider bar	Default 50
	Tune the voice volume, from 0-100		
	Mute	Select and execute	Default Off
	Select Mute On/Off		
	Stand Along	Select and execute	Default Off
	On/Off		
	Audio source	Select and execute	Default Digital
	Analog / Digital		

3-2-8 Other

Icon	Sub-Menu	Settings	Note
	Reset	Select and execute	
	Return OSD to default		
	Menu Time	Select and execute	Default 10
	Set OSD Menu showing time (sec.) on the screen		
	ODS H Position	by slider bar	Default 50
	OSD horizontal position 0- 100		
	OSD V Position	by slider bar	Default 50
	OSD vertical position 0-100		
	Language	Select and execute	Default English
	English and Chinese		
	Transparaency	by slider bar	Default 0
	OSD transparency 0 - 255		
	OSD Rotate	Select and execute	Default Digital
	0 / 90 / 270 / 180 degree		

Trouble Shooting

This chapter covers the following topics:

- Storage Notice
- Troubleshoot your LCD Monitor

If your monitor fails to operate correctly, consult the following chart for possible solution before calling for repairs.

4-1 Trouble Shooting

If your terminal fails to operate correctly, consult the following chart for possible solution before calling for repairs:

Condition	Check Point
1 The picture does not appear	<ul style="list-style-type: none">● Check if the signal cable is firmly seated in the socket.● Check if the Power is ON at the computer● Check if the brightness control is at the appropriate position, not at the minimum.
2 The screen is not synchronized	<ul style="list-style-type: none">● Check if the signal cable is firmly seated in the socket.● Check if the output level matches the input level of your computer.● Make sure the signal timings of the computer system are within the specification of the monitor.● If your computer was working with a CRT monitor, you should check the current signal timing and turn off your computer before you connect the VGA Cable to this monitor.
3 The position of the screen is not in the center	<ul style="list-style-type: none">● Adjust the H-position, and V-position, or Perform the Auto adjustment.
4 The screen is too bright (too dark).	<ul style="list-style-type: none">● Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).
5 The screen is shaking or waving	<ul style="list-style-type: none">● Press ◀ (the Auto - adjustment control) to adjust. Moving all objects which emit a magnetic field such as motor or transformer, away from the monitor. Check if the specific voltage is applied.● Check if the signal timing of the computer system is within the specification of monitor.

If you are unable to correct the fault by using this chart, stop using your monitor and contact your distributor or dealer for further assistance.

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