JOC

LCD Monitor
User Manual
U27P2CA





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Safety

National Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:



NOTE: A NOTE indicates important information that helps you make better use of your computer system.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem. Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

Power

The monitor 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.

The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.

Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.



Do not overload power strips and extension cords. Overloading can result in fire or electric shock.

To ensure satisfactory operation, use the monitor 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.

Installation

⚠ Do not place the monitor on an unstable cart, stand, tripod, bracket, or table. If the monitor falls, it can injure a person and cause serious damage to this product. Use only a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with this product. Follow the manufacturer's instructions when installing the product and use mounting accessories recommended by the manufacturer. A product and cart combination should be moved with care.

Never push any object into the slot on the monitor cabinet. It could damage circuit parts causing a fire or electric shock. Never spill liquids on the monitor.



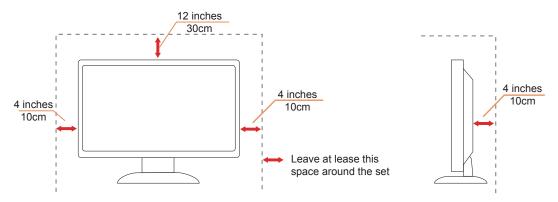
Do not place the front of the product on the floor.

If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.

Leave some space around the monitor as shown below. Otherwise, air-circulation may be inadequate hence overheating may cause a fire or damage to the monitor.

See below the recommended ventilation areas around the monitor when the monitor is installed on the wall or on the stand:

Installed with stand

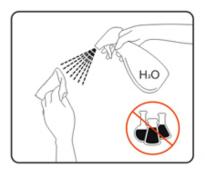


Cleaning

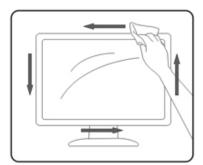
Clean the cabinet regularly with cloth. You can use soft-detergent to wipe out the stain, instead of strong-detergent which will cauterize the product cabinet.

When cleaning, make sure no detergent is leaked into the product. The cleaning cloth should not be too rough as it will scratch the screen surface.

Please disconnect the power cord before cleaning the product.







Other

If the product is emitting a strange smell, sound or smoke, disconnect the power plug IMMEDIATELY and contact a Service Center.



Make sure that the ventilating openings are not blocked by a table or curtain.

1 Do not engage the LCD monitor in severe vibration or high impact conditions during operation.

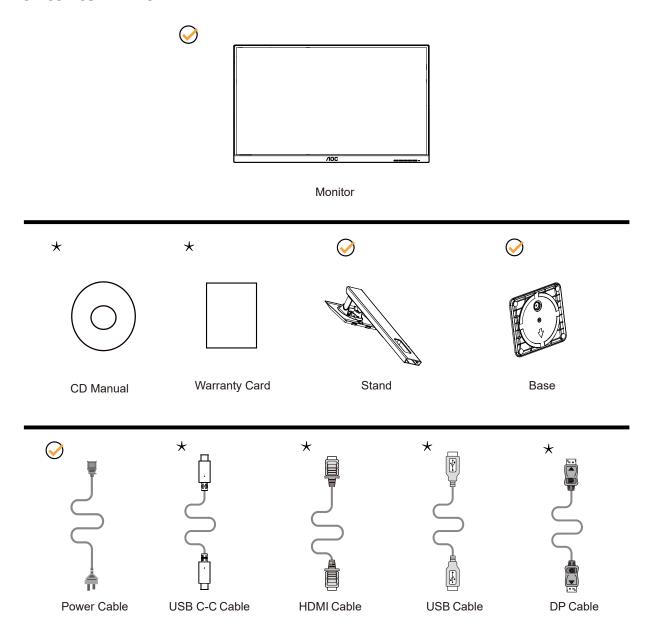
1 Do not knock or drop the monitor during operation or transportation.

IThe power cords shall be safety approved. For Germany, it shall be H03VV-F, 3G, 0.75 mm2, or better. For other countries, the suitable types shall be used accordingly.

IExcessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphones and headphones output voltage and therefore the sound pressure level.

Setup

Contents in Box

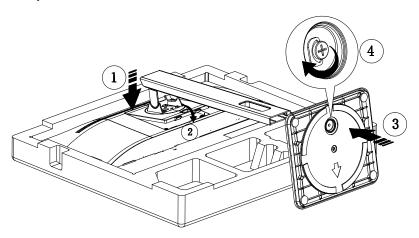


Not all signal cables will be provided for all countries and regions. Please check with the local dealer or AOC branch office for confirmation.

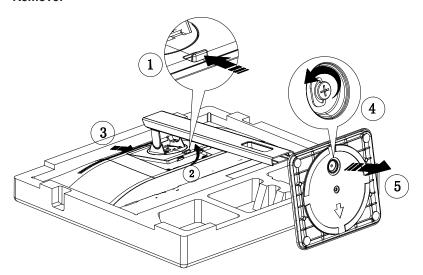
Setup Stand & Base

Please setup or remove the base following the steps as below.

Setup:



Remove:

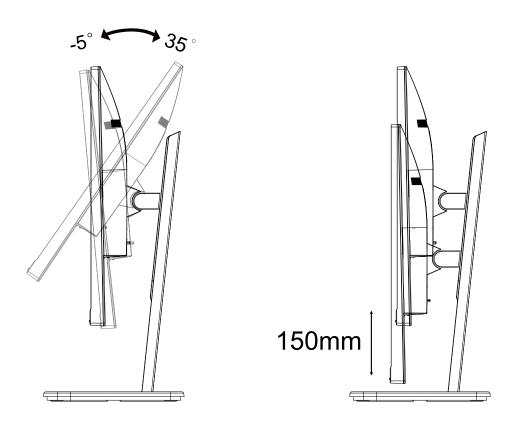


Adjusting Viewing Angle

For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.

Hold the stand so you will not topple the monitor when you change the monitor's angle.

You are able to adjust the monitor as below:

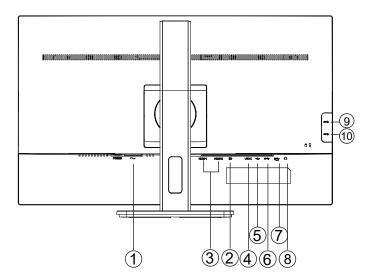




Do not touch the LCD screen when you change the angle. It may cause damage or break the LCD screen.

Connecting the Monitor

Cable Connections In Back of Monitor and Computer:



- 1. Power
- 2. DP
- 3. HDMI
- 4. USB-C
- 5. USB-PC(USB upstream)
- 6. USB3.2 Gen1
- 7. USB3.2 Gen1+charging
- 8. Earphone
- 9. USB3.2 Gen1
- 10. USB3.2 Gen1

Connect to PC

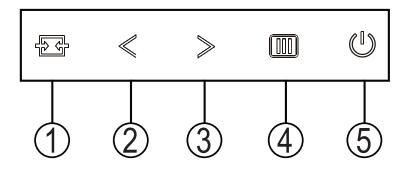
- 1. Connect the power cord to the back of the display firmly.
- 2. Turn off your computer and unplug its power cable.
- 3. Connect the display signal cable to the video connector on the back of your computer.
- 4. Plug the power cord of your computer and your display into a nearby outlet.
- 5. Turn on your computer and display.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

To protect equipment, always turn off the PC and LCD monitor before connecting.

Adjusting

Hotkeys



1	Source/Exit
2	Clear Vision/<
3	Volume/>
4	Menu/Enter
5	Power

Power

Press the power key to turn on/off the monitor.

Menu/Select

Activate the OSD menu or function adjustment confirmation.

Volume / increase

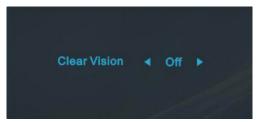
When the OSD menu is closed, press the ">" key to open the volume adjustment bar, and press the "<" or ">" key to adjust the headphone output volume.

Source switching/exit

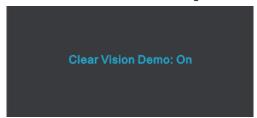
When the OSD menu is off, press this key to activate the signal source switching function, press this key continuously to select the signal source displayed in the information bar, and press the menu key to adjust to the selected signal source. When the OSD menu is active, this button acts as an exit key (to exit the OSD menu)

Clear Vision

- 1. When there is no OSD, Press the "<" button to activate Clear Vision.
- 2. Use the "<" or ">" buttons to select between weak, medium, strong, or off settings. Default setting is always "off".



3. Press and hold "<" button for 5 seconds to activate the Clear Vision Demo, and a message of "Clear Vision Demo: on" will be display on the screen for a duration of 5 seconds. Press Menu or Exit button, the message will disappear. Press and hold "<" button for 5 seconds again, Clear Vision Demo will be off.



Clear Vision function provides the best image viewing experience by converting low resolution and blurry images into clear and vivid images.

	Off	
Clear Vision	Weak	Adiiyat tha Class Vision
	Medium	Adjust the Clear Vision
	Strong	
Clear Vision Demo	On or Off	Disable or Enable Demo

OSD Setting

Basic and simple instruction on the control keys.



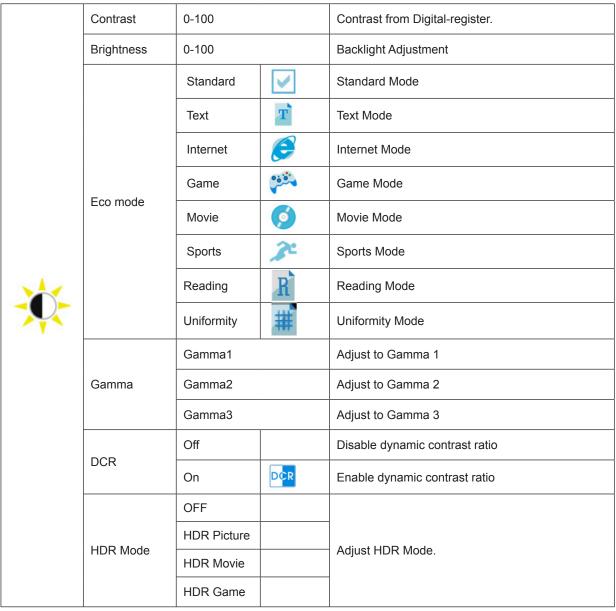
- 1). Press the **MENU-button** to activate the OSD window.
- 2). Press < or > to navigate through the functions. Once the desired function is highlighted, press the **MENU-button** to activate it, press < or > to navigate through the sub-menu functions. Once the desired function is highlighted, press **MENU-button** to activate it.
- 3). Press < or > to change the settings of the selected function. Press **AUTO-button** to exit. If you want to adjust any other function, repeat steps 2-3.
- 4). OSD Lock Function: To lock the OSD, press and hold the **MENU-button** while the monitor is off and then press **power button** to turn the monitor on. To un-lock the OSD press and hold the **MENU-button** while the monitor is off and then press **power button** to turn the monitor on.

Notes:

- 1). If the product has only one signal input, the item of "Input Select" is disable to adjust.
- 2). If the screen size of the product is 4:3 or the input signal resolution is the native resolution, then the item "Image Ratio" is invalid.
- 3). The four states of ECO mode (except standard mode), DCR, DCB mode and window highlight can only display one state at a time.

Luminance



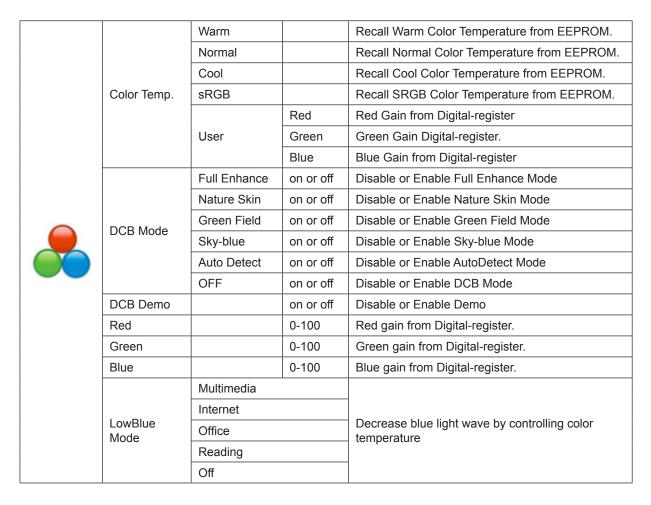


Note:

When "HDR Mode" is set to a non-off state, "Contrast", "Brightness Scene Mode", and "Gamma" items cannot be adjusted.

Color Setup



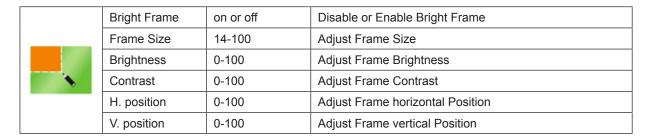


Note:

When "HDR Mode" under "Brightness" is set to a non-off state, all items under "Color Settings" cannot be adjusted.

Picture Boost





Note:

- 1). For a better viewing experience, adjust the brightness, contrast, and position of the brightening.
- 2). When the "HDR Mode" under "Brightness" is set to a non-off state, all items under "Window Brightening" cannot be adjusted.

OSD Setup



Language		Select the OSD language		
Timeout	5-120	Adjust the OSD Timeout		
DP Capability	1.1/1.2	If the DP video content supports DP1.2, please select DP1.2 for DP Capability; otherwise, please select DP1.1		
H. Position	0-100	Adjust the horizontal position of OSD		
V. Position	0-100	Adjust the vertical position of OSD		
USB* 3.2Gen1 / 2.0 / Off		For model need to turn on/off USB power during power saving		
Transparence	0-100	Adjust the transparence of OSD		
Break Reminder	on or off	Break reminder if the user continuously work for more than 1hrs		
USB Selection	Auto / USB C / USB up	*Auto : switch with display input source *USB C / USB up : fix up stream not change with input source		

Note:

^{*:} USB C(DP Alt) signal input, and "USB" is set to "3.2Gen1", the maximum resolution is 3840x2160@30Hz.

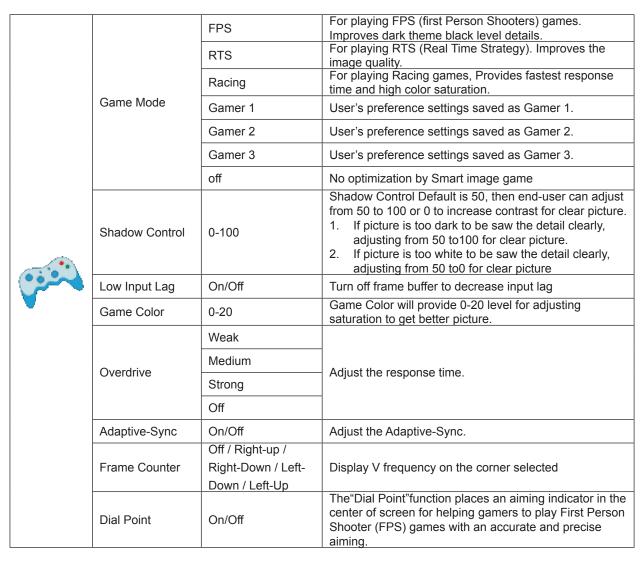
PIP Setting



	PIP Setting	OFF / PIP / PBP	Disable or Enable PIP or PBP.
	Main Source	HDMI1 、HDMI2 、DP、 USB-C	Select main screen source.
	Sub Source	HDMI1 、HDMI2 、DP、 USB-C	Select sub screen source.
	Size	Small / Middle / Large	Select screen size.
		Right-up	
PIP	Position	Right-down	Set the screen location.
' ''		Left-up	Set the screen location.
		Left-down	
	Audio	On: PIP Audio	Disable or Enable Audio Setus
	Audio	Off: Main Audio	Disable or Enable Audio Setup.
	Swon	On: Swap	Swon the garage gaures
	Swap	Off: non action	Swap the screen source.

Game Setting





Note:

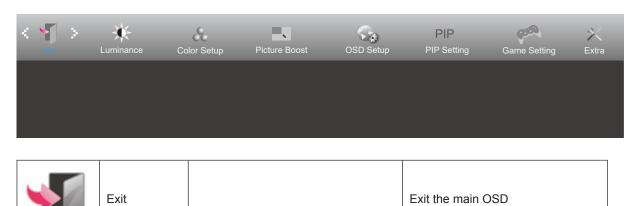
When the "HDR Mode" under "Brightness" is set to a non-off state, the "Game Mode", "Dark Field Control", and "Game Tone" items under "Game Settings" cannot be adjusted.

Extra



	Input Select		Select Input Signal Source
	Off timer	0-24hrs	Select DC off time
		Wide	
2005.3		4:3	
1	Image Ratio	1:1	Select image ratio for display.
		Movie1	
		Movie2	
	DDC/CI	yes or no	Turn ON/OFF DDC/CI Support
	Reset	yes or no	Reset the menu to default. (ENERGY STAR® available for selective
	Neset	ENERGY STAR® or no	models.)

Exit



LED Indicator

Status	LED Color
Full Power Mode	White
Active-off Mode	Orange

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 images on the screen	 Is the power cord connected properly? Check the power cord connection and power supply. Is the cable connected correctly? (Connected using the VGA cable) Check the VGA cable connection. (Connected using the HDMI cable) Check the HDMI cable connection. (Connected using the DP cable) Check the DP cable connection. * VGA/HDMI/DP input is not available on every model. If the power is on, reboot the computer to see the initial screen (the login screen), which can be seen. 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	Make sure the AOC Monitor Drivers are installed. Adjust the Contrast and Brightness Controls. Press 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 shut-down mode to adjust CLOCK and FOCUS. Press to auto-adjust.		
Regulation & Service	Please refer to Regulation & Service Information which is in the CD manual or www.aoc.com (to find the model you purchase in your country and to find Regulation & Service Information in Support page.		

Specification

General Specification

	Model name	U27P2CA		
Panel	Driving system	TFT Color LCD		
	Viewable Image Size	68.5 cm diagonal		
	Pixel pitch	0.1554mm(H) x 0.1554mr	m(V)	
	Horizontal scan range	30k-140kHz		
	Horizontal scan Size(Maximum)	596.736mm		
	Vertical scan range	23-75Hz		
	Vertical Scan Size(Maximum)	335.664mm		
Others	Max resolution	3840x2160@60Hz (HDM	I,DP,USB C*)	
Officis	Plug & Play	VESA DDC2B/CI		
	Power Source	100-240V~, 50/60Hz, 2.0A		
	Power Consumption	Typical (Default brightness and contrast) 37W		
		Max. (brightness = 100, contrast =100) ≤ 178W		
		Power saving		≤ 0.5W
Physical	Connector Type	HDMI×2、DP、USB C、 Earphone	USB×4、 USB	upstream
Characteristics	Signal Cable Type	Detachable		
	Temperature	Operating	0°~ 40°	
	Temperature	Non-Operating	-25°~ 55°	
Environmental	Humidity	Operating	10% ~ 85% (non-condensing)	
Environmental	litarillality	Non-Operating	5% ~ 93% (non-condensing)	
	Altitude	Operating 0~ 5000 m (0~ 16404ft))~ 16404ft)
	Attitude	Non-Operating	0~ 12192m (0~ 40000ft)	

Note:

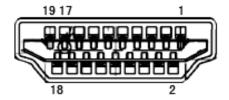
^{*:} USB C(DP Alt) signal input, and "USB" is set to "3.2Gen1", the maximum resolution is 3840x2160@30Hz.



Preset Display Modes

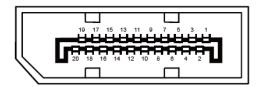
STANDARD	RESOLUTION	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
	640x480@60Hz	31.469	59.94
VGA	640x480@72Hz	37.861	72.809
	640x480@75Hz	37.5	75
	800x600@56Hz	35.156	56.25
CV/CA	800x600@60Hz	37.879	60.317
SVGA	800x600@72Hz	48.077	72.188
	800x600@75Hz	46.875	75
	1024x768@60Hz	48.363	60.004
XGA	1024x768@70Hz	56.476	70.069
	1024x768@75Hz	60.023	75.029
0.7.0.4	1280x1024@60Hz	63.981	60.02
SXGA	1280x1024@75Hz	79.976	75.025
M/V/OA :	1440x900@60Hz	55.935	59.887
WXGA+	1440x900@60Hz	55.469	59.901
MOVOA	1680x1050@60Hz	65.29	59.954
WSXGA	1680x1050@60Hz	64.674	59.883
FHD	1920x1080@60Hz	67.5 60	
QHD	2560x1440@60Hz	88.787	59.951
***	1920x2160@60Hz	133.293	59.988
	3840x2160@30Hz	67.5	30
UHD	3840x2160@50Hz	112.5	50
	3840x2160@60Hz	135	60
	IBM N	MODES	
DOS	720x400@70Hz	31.469	70.087
	MAC	MODES	
VGA	640x480@67Hz	35	66.667
SVGA	832x624@75Hz	49.725	74.551
XGA	1024x768@75Hz	60.241	74.927

Pin Assignments



19-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
1.	TMDS Data 2+	9.	TMDS Data 0-	17.	DDC/CEC Ground
2.	TMDS Data 2 Shield	10.	TMDS Clock +	18.	+5V Power
3.	TMDS Data 2-	11.	TMDS Clock Shield	19.	Hot Plug Detect
4.	TMDS Data 1+	12.	TMDS Clock-		
5.	TMDS Data 1Shield	13.	CEC		
6.	TMDS Data 1-	14.	Reserved (N.C. on device)		
7.	TMDS Data 0+	15.	SCL		
8.	TMDS Data 0 Shield	16.	SDA		



20-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name
1	ML_Lane 3 (n)	11	GND
2	GND	12	ML_Lane 0 (p)
3	ML_Lane 3 (p)	13	CONFIG1
4	ML_Lane 2 (n)	14	CONFIG2
5	GND	15	AUX_CH(p)
6	ML_Lane 2 (p)	16	GND
7	ML_Lane 1 (n)	17	AUX_CH(n)
8	GND	18	Hot Plug Detect
9	ML_Lane 1 (p)	19	Return DP_PWR
10	ML_Lane 0 (n)	20	DP_PWR

Plug and Play

Plug & Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bi-directional data channel based on the I2C protocol. The host can request EDID information over the DDC2B channel.