AGON
PRO

OLED Monitor
User Manual
AG456UCZD

Based on the characteristics of the OLED product, screen maintenance according to the requirements of the user instructions is recommended, so as to reduce the risk of generating image retention.

AOC

www.aoc.com

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

Safety

National Conventions

The following subsections describe national 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.

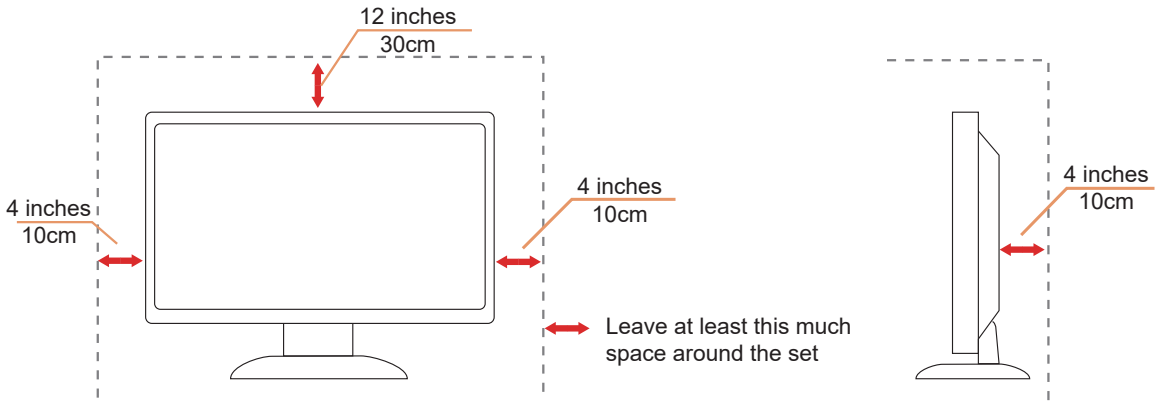
If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.

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.

To avoid potential damage, for example the panel peeling from the bezel, ensure that the monitor does not tilt downward by more than -5 degrees. If the -5 degree downward tilt angle maximum is exceeded, the monitor damage will not be covered under warranty.

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

Installed with stand



Cleaning

Clean the cabinet regularly with a water-dampened, soft cloth.

When cleaning use a soft cotton or microfiber cloth. The cloth should be damp and almost dry, do not allow liquid into the case.

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.

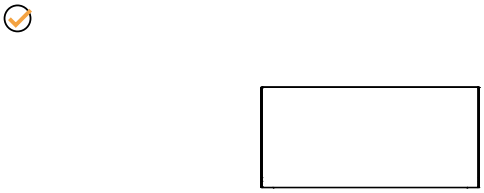
 Do not engage the OLED monitor in severe vibration or high impact conditions during operation.

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

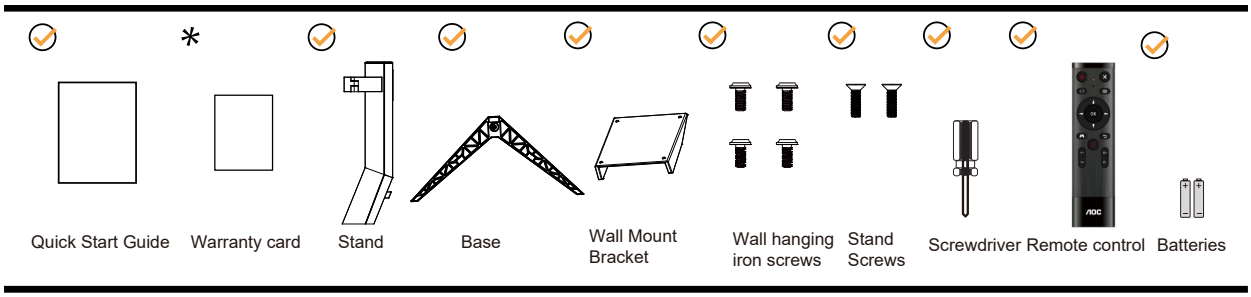
 Based on the characteristics of the OLED products, it is not recommended to continuously use this product for more than four hours. This product uses many technologies to eliminate possible image retention. For details, refer to instructions on “Screen Maintenance.”

Setup

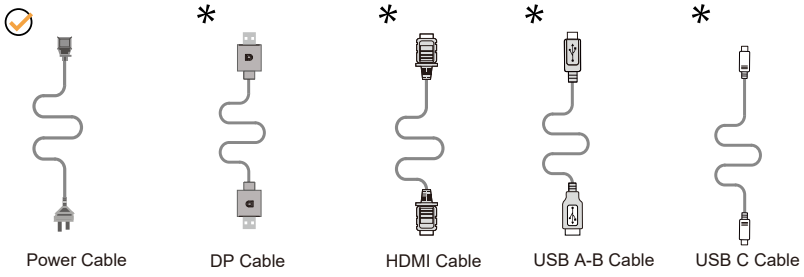
Contents in Box



OLED Monitor



Quick Start Guide | Warranty card | Stand | Base | Wall Mount Bracket | Wall hanging iron screws | Stand Screws | Screwdriver | Remote control | Batteries



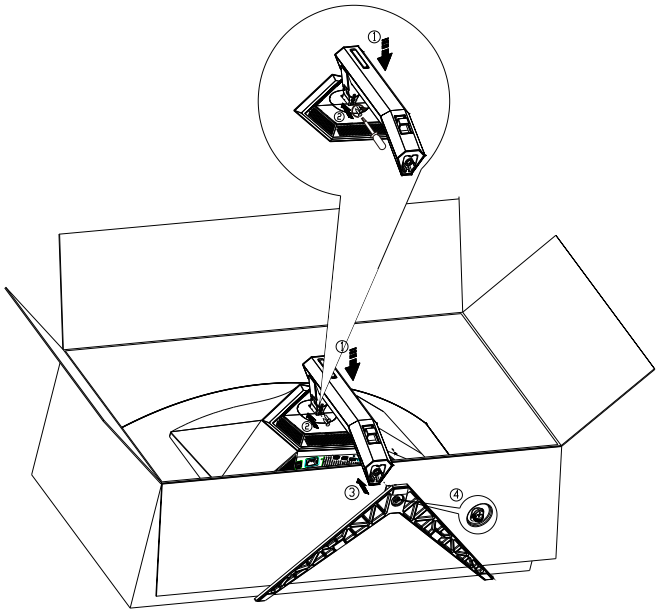
Power Cable | DP Cable | HDMI Cable | USB A-B Cable | USB C Cable

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

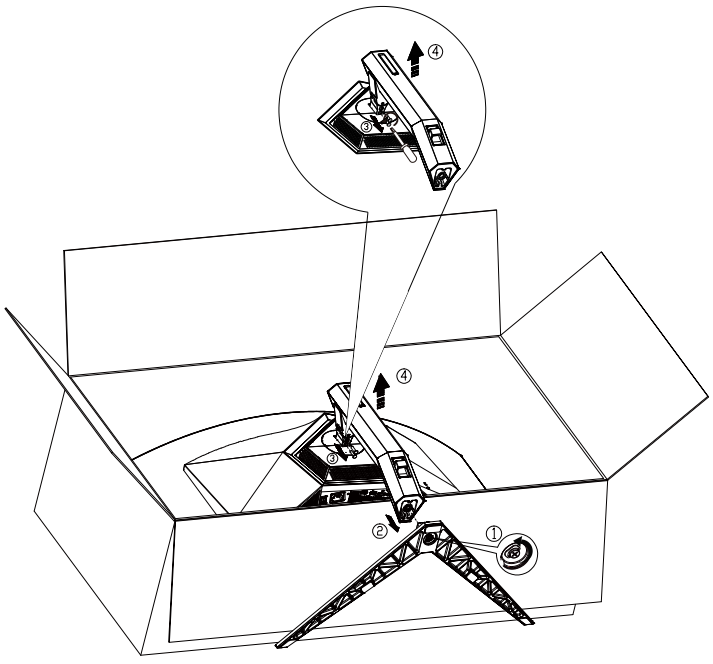
Setup Stand & Base

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

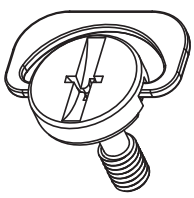
Setup:



Remove:

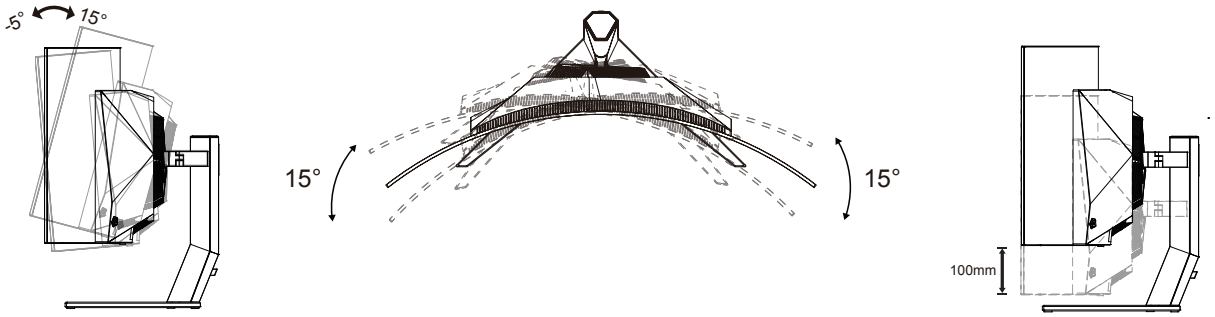


Specification for base screw: M8*35 mm (effective thread 10 mm)



Adjusting the monitor

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:



NOTE:

Do not touch the OLED screen when you change the angle. Touching the OLED screen may cause damage.

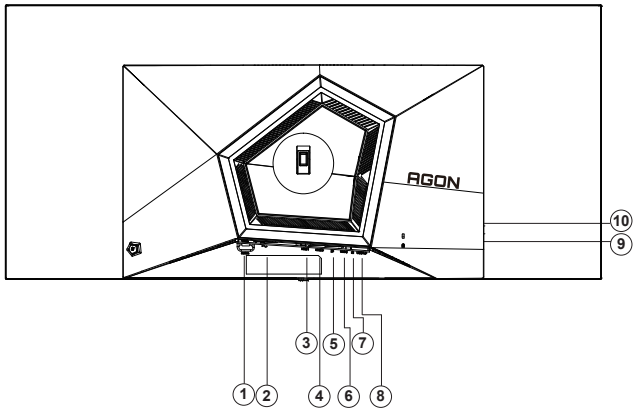
Warning:

To avoid potential screen damage, such as panel peeling, ensure that the monitor does not tilt downward by more than -5 degrees.

1. Do not press the screen while adjusting the angle of the monitor. Grasp only the bezel.

Connecting the Monitor

Cable Connections In Back of Monitor:



1. Power Switch
2. Power
3. HDMI1
4. HDMI2
5. DP
6. USB C
7. Earphone
8. USB3.2 Gen1 upstream
9. USB3.2 Gen1 downstream + fast chargingx1
   USB3.2 Gen1 downstream x1
10. USB3.2 Gen1 downstream x2

Connect to PC

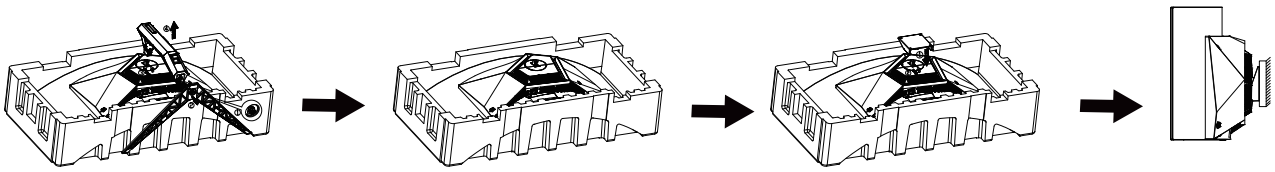
1. Connect the power cord to the back of the display firmly.
2. Turn off your computer and unplug its power cable.
3. Connect the display signal cable to the video connector on your computer.
4. Plug the power cord of your computer and your display into a nearby outlet.
5. Turn on your computer and display.

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 OLED monitor before connecting.

Wall Mounting

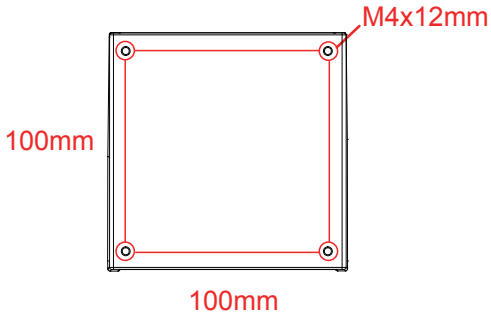
Preparing to Install An Optional Wall Mounting Arm.



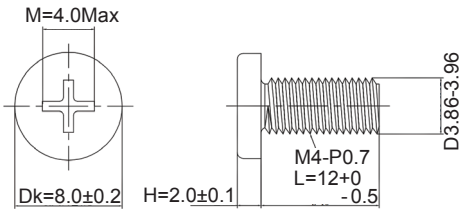
This monitor can be attached to a wall mounting arm you purchase separately. Disconnect power before this procedure.
Follow these steps:

1. Remove the base.
2. Follow the manufacturer's instructions to assemble the wall mounting arm.
3. Place the wall mounting arm onto the back of the monitor. Line up the holes of the arm with the holes in the back of the monitor.
4. Reconnect the cables. Refer to the user's manual that came with the opunting arm for instructions on attaching it to the wall.

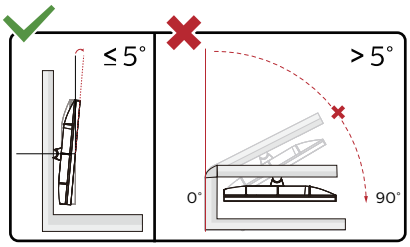
Wall hanger：



Specification of wall hanger screws：M4*12mm



Note: VESA mounting screw holes are not available for all models, please check with the dealer or official department of AOC. Always contact manufacturer for wall-mount installation.



Display design may differ from those illustrated.

Warning:

1. To avoid potential screen damage, such as panel peeling, ensure that the monitor does not tilt downward by more than -5 degrees.
2. Do not press the screen while adjusting the angle of the monitor. Grasp only the bezel.

AMD Freesync Premium function

1. AMD Freesync Premium function is working with DP/HDMI/USB C.
2. Compatible Graphics Card: Recommend list is as the below, also could be checked by visiting www.AMD.com

Graphics Cards

- Radeon™ RX Vega series
- Radeon™ RX 500 series
- Radeon™ RX 400 series
- Radeon™ R9/R7 300 series (excluding R9 370/X)
- Radeon™ Pro Duo (2016 edition)
- Radeon™ R9 Nano
- Radeon™ R9 Fury series
- Radeon™ R9/R7 200 series (excluding R9 270/X, R9 280/X)

Processors

- AMD Ryzen™ 7 2700U
- AMD Ryzen™ 5 2500U
- AMD Ryzen™ 5 2400G
- AMD Ryzen™ 3 2300U
- AMD Ryzen™ 3 2200G
- AMD PRO A12-9800
- AMD PRO A12-9800E
- AMD PRO A10-9700
- AMD PRO A10-9700E
- AMD PRO A8-9600
- AMD PRO A6-9500
- AMD PRO A6-9500E
- AMD PRO A12-8870
- AMD PRO A12-8870E
- AMD PRO A10-8770
- AMD PRO A10-8770E
- AMD PRO A10-8750B
- AMD PRO A8-8650B
- AMD PRO A6-8570
- AMD PRO A6-8570E
- AMD PRO A4-8350B
- AMD A10-7890K
- AMD A10-7870K
- AMD A10-7850K
- AMD A10-7800
- AMD A10-7700K
- AMD A8-7670K
- AMD A8-7650K
- AMD A8-7600
- AMD A6-7400K

G-SYNC Compatible function

1. G-SYNC Compatible function is working with DP
2. To enjoy the perfect gaming experience with G-SYNC, you need to purchase a Separate NVIDIA GPU card that supports G-SYNC.

G-sync system requirements

Desktop computer connected to G-SYNC monitor:

Graphics cards supported: G-SYNC features require NVIDIA GeForce® GTX 650 Ti BOOST or higher graphics cards.

Driver: R340.52 or later

Operating system:

Windows 10

Windows 8.1

Windows 7

System requirements: DisplayPort 1.2 of the GPU must be supported.

Notebook computer connected to G-SYNC monitor:

Supported graphics cards: NVIDIA GeForce® GTX 980M, GTX 970M, GTX 965M GPU or higher graphics cards

Driver: R340.52 or higher

Operating system:

Windows 10

Windows 8.1

Windows 7

System requirements: DisplayPort 1.2 driven directly from the GPU must be supported.

For more information about NVIDIA G-SYNC, please visit: https://www.nvidia.cn/

HDR

It is compatible with input signals in HDR10 format.

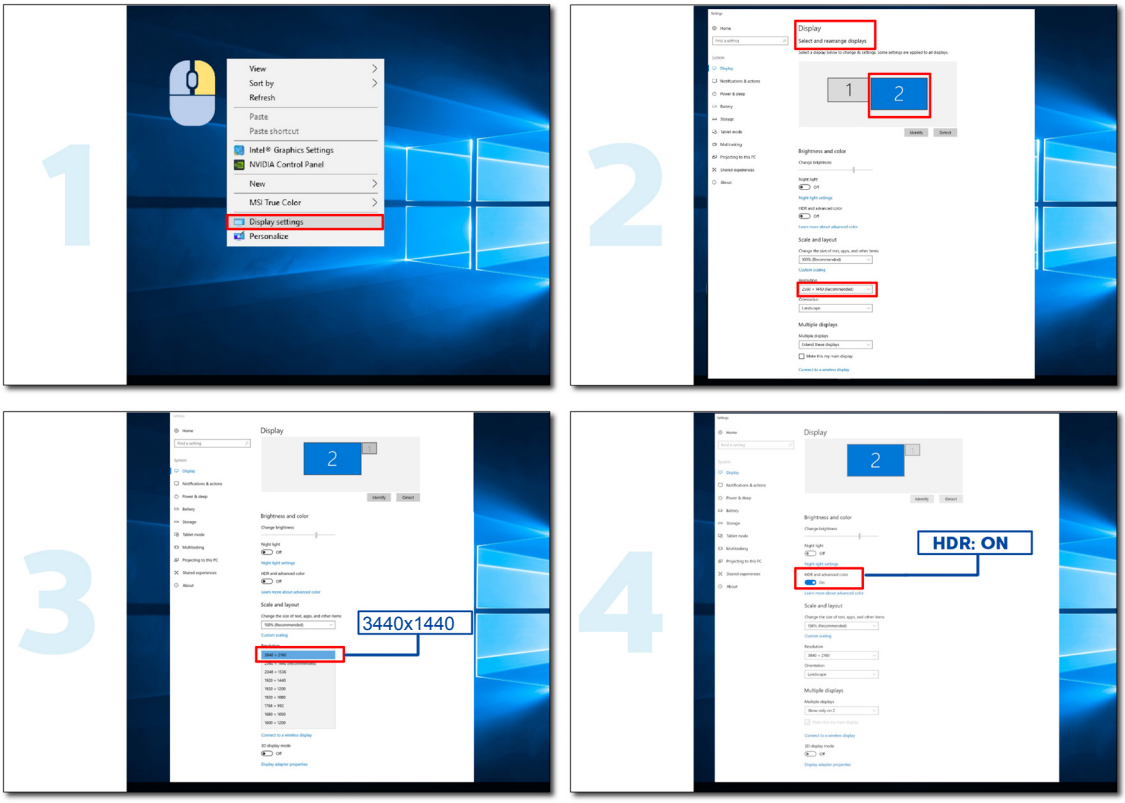
The display may automatically activate the HDR function if the player and content are compatible. Please contact the device manufacturer and the content provider for information on the compatibility of your device and content. Please select “OFF” for the HDR function when you have no need for automatical activation function.

Note:

1. 3840×2160@50Hz/60Hz is only available on devices such as UHD players or Xbox/PS.
2. Display Settings:

a. The display resolution is set to 3440x1440, and HDR is preset to ON. Under these conditions, the screen may slightly dim, indicating HDR has been activated.

b. After entering an application, the best HDR effect can be achieved when the resolution is changed to 3440x1440 (if available).



KVM function

What is KVM?

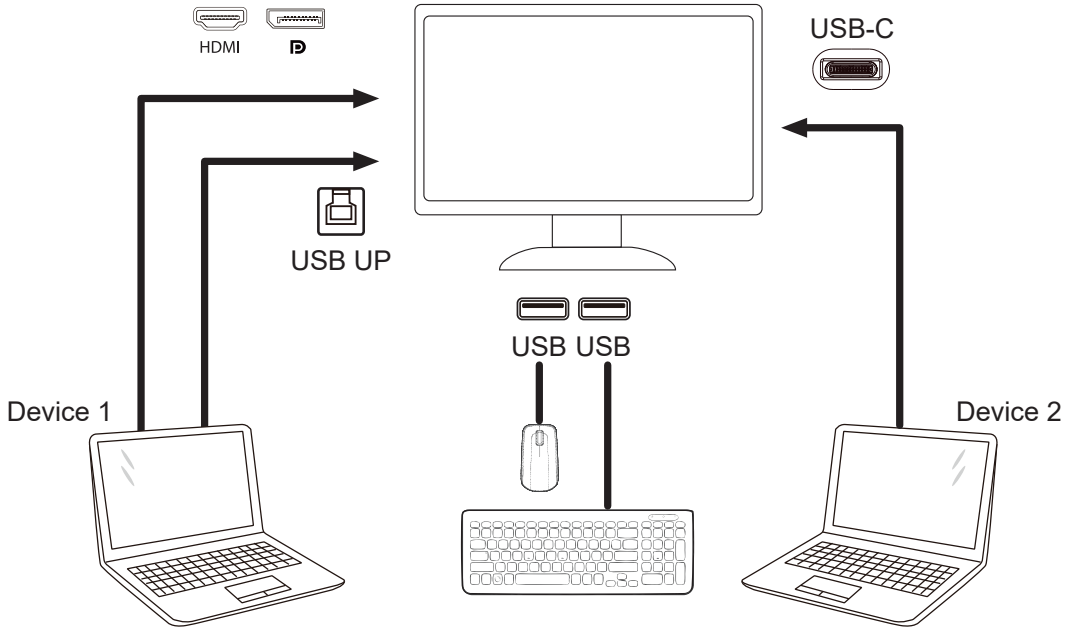
With KVM function, you can show two PCs, or two notebooks, or one PC and one notebook on one AOC monitor and control the two devices with one set of keyboard and mouse. Switch your control over your PC or notebook devices by choosing input signal source on “Input Select” of OSD menu.

How to use KVM?

Step 1: Please connect one device (PC or notebook) to monitor via USB C.

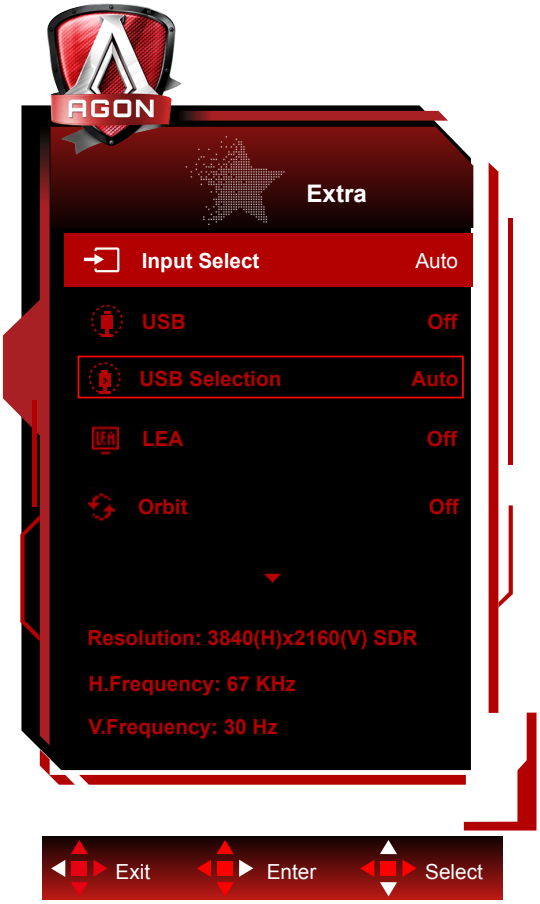
Step 2: Please connect the other device to monitor via HDMI or DisplayPort. Then please also connect this device to monitor with USB upstream.

Step 3: Please connect your peripherals (keyboard and mouse) to monitor via USB port.



Note: Display design may differ from that illustrated

Step 4: Enter to Extra menu. Go to Extra page and select “Auto”, “USB C”, or “USB UP” of USB Selection tab.



USB Selection	Function Description
Auto	Auto selects USB C or USB Up depending on the input source.
USB C	Provides USB Hub function through Type-C cable.
USB Up	Provides USB Hub function through USB B cable.

Screen Maintenance

To reduce the risk of image retention on the screen, regularly conduct the following maintenance. Not following these instructions may void your warranty.

• Avoid displaying a still image for extended periods.

A still image refers to an image that does not change over time, such as a photograph.

A still image may result in permanent damage to the OLED screen, causing the image to continue to appear when no longer actively being shown.

For best results:

1. No Static Images. Do not display a still image for an extended time (4 hours). This may cause screen image residue (burn-in). If an image needs to be displayed for an extended time, reduce the brightness and contrast as much as possible.

2. Use Full Screen. When watching video that is letterboxed or pillar-boxed, such as 4:3 video, may result in artifacts. Use full screen mode to reduce this issue.

3. No Stickers. Do not put labels or stickers directly on the screen. This may cause screen damage.

• Do not use this display for more than four hours continuously.

This product uses many technologies to reduce or eliminate image retention (burn-in). Use the default screen settings to avoid image retention and maintain image quality.

• LEA (Logo Extraction Algorithm)

LEA automatically adjusts the brightness of areas of the display to reduce the possibility of image retention.

This function is “On” by default, and can be changed in the OSD menu.

• TPC (Temporal Peak Luminance Control)

This function automatically adjusts the luminance of the screen when continuous still images are detected.

This function is “Always On.”

• Pixel Orbiting (Image Shift)

Orbit will slightly shift the displayed image at the pixel level, once a second to prevent image retention.

This function is “On (Weak)” by default, “Weak” moves the least, “Strongest” moves the most, “Off” disables the movement and increases the chance of image retention. This can be set in the OSD menu.

• CPC (Convex Power Control)

This function reduces image retention by automatically adjust power gain for different images, by following a mathematical model that is high in the middle and low at the ends.

This function is “Always On.”

• LBC (Local Brightness Control)

This function reduces image retention by automatically reducing brightness in local areas of the display where the accumulative mean brightness is detects as overly high.

This function is “Always On.”

• Pixel Refresh(Elimination of image retention)

OLED displays begin to show image retention when a still image is displayed for a long time, about 4 hours of continuous use.

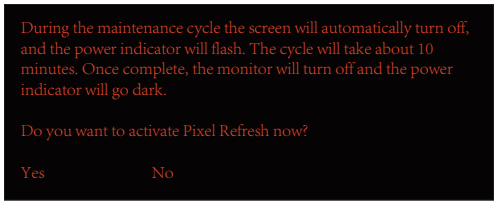
To eliminate image residue that is beginning to appear, run the screen compensation correction and image residue elimi-

nation functions regularly for best display performance.

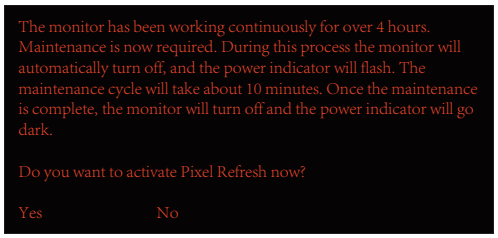
Maintenance cycle (EU only)

You may run this function in one of the following ways:

1). From the OSD menu, manually turn on the image residue elimination function, and select “Yes” from the menu.



2). From the warning message dialog that appears after every 4 hours of cumulative operation, and select “Yes.”



After every 4 hours of cumulative operation, the screen compensation correction and image residue elimination function will automatically run when the display is turned off, or has been in standby for 2 hours.

During this operation keep the power on.

The monitor will first run the screen compensation correction function which will take about 30 seconds. The power indicator will flash white (3 seconds on, then 3 seconds off) during this operation.

Then the image residue elimination function will run which will take about 10 minutes. During this operation the power indicator will flash white (1 second on and 1 second off).

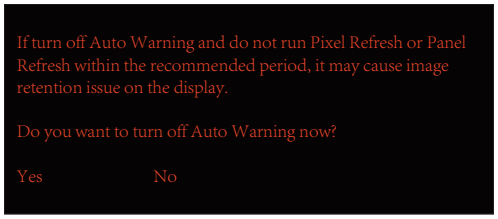
When complete, the power indicator will turn orange for standby mode, or will be off for switch-off state.

During the maintaining, if the user presses the power button to turn the monitor on, the maintaining process will be interrupted and the display will take extra about 5 seconds to turn on.

You may check the number of time the image residue elimination function has run under the “Extra” section of the OSD menu.

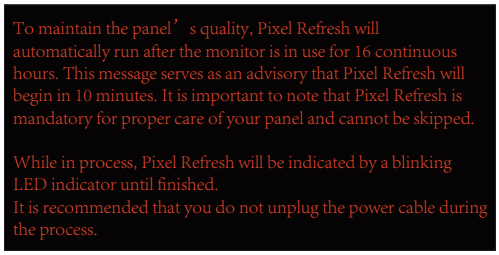
- Auto Warning

If turn off Auto Warning and do not run Pixel Refresh or Panel Refresh within the recommended period, it may cause image retention issue on the display.



When the cumulative usage time reaches 16 hours, countdown warnings will start to appear 10 minutes before. (from 10 minutes to 1 minute remaining).

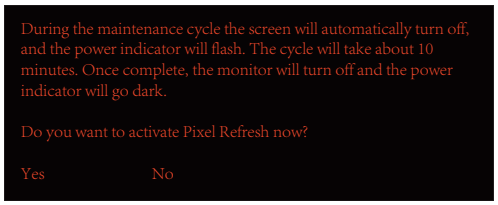
it is reminding you that the Monitor will go into maintaining process ,strongly suggest you save the files.



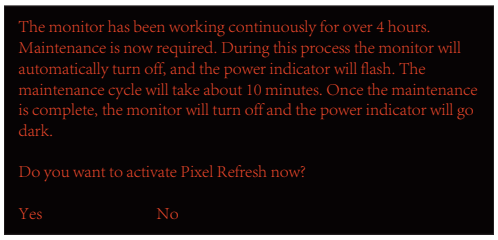
Maintenance cycle (NON EU)

You may run this function in one of the following ways:

1). From the OSD menu, manually turn on the image residue elimination function, and select “Yes” from the menu.



2). From the warning message dialog that appears after every 4 hours of cumulative operation, and select “Yes.”



If “No” is selected, you will be prompted every hour after the monitor has run for 24 hours until “Yes” is selected.

If neither “Yes” nor “No” is selected, the warning message will be repeated every hour after the monitor has run for 24 hours until the user selects “Yes.”

After every 4 hours of cumulative operation, the screen compensation correction and image residue elimination function will automatically run when the display is turned off, or has been in standby for 15 minutes.

During this operation keep the power on.

The monitor will first run the screen compensation correction function which will take about 30 seconds. The power indicator will flash white (3 seconds on, then 3 seconds off) during this operation.

Then the image residue elimination function will run which will take about 10 minutes. During this operation the power indicator will flash white (1 second on and 1 second off).

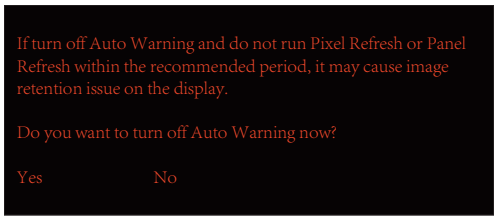
When complete, the power indicator will turn orange for standby mode, or will be off for switch-off state.

During the maintaining, if the user presses the power button to turn the monitor on, the maintaining process will be interrupted and the display will take extra about 5 seconds to turn on.

You may check the number of time the image residue elimination function has run under the “Extra” section of the OSD menu.

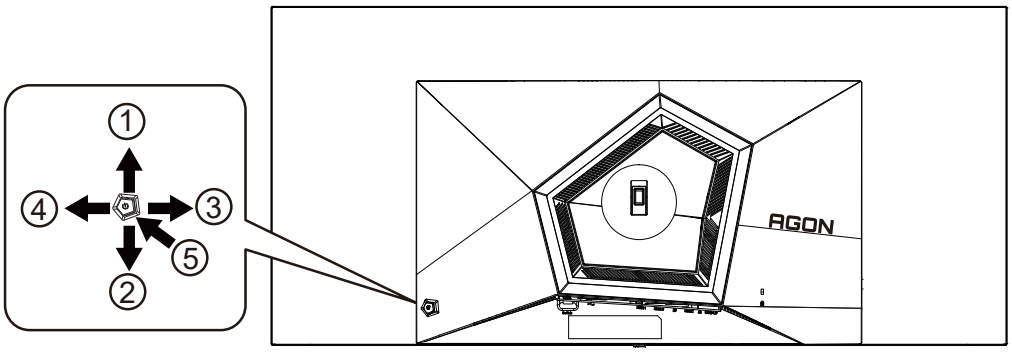
- Auto Warning

If turn off Auto Warning and do not run Pixel Refresh or Panel Refresh within the recommended period, it may cause image retention issue on the display.



Adjusting

Hotkeys



1	Source/Up
2	Dial Point/Down
3	Game Mode/Left
4	Light FX /Right
5	Power/ Menu/Enter

Power/Menu/Enter

Press the Power button to turn on the monitor.
When there is no OSD, Press to display the OSD or confirm the selection. Press about 2 seconds to turn off the monitor.

Dial Point/Down

When there is no OSD, press Dial Point button to show / hide Dial Point.

Game Mode/Left

When there is no OSD, press ”Left” key to open game mode function, then press ”Left” or “Right” key to select game mode (FPS, RTS, Racing, Gamer 1, Gamer 2 or Gamer 3) basing on the different game types.

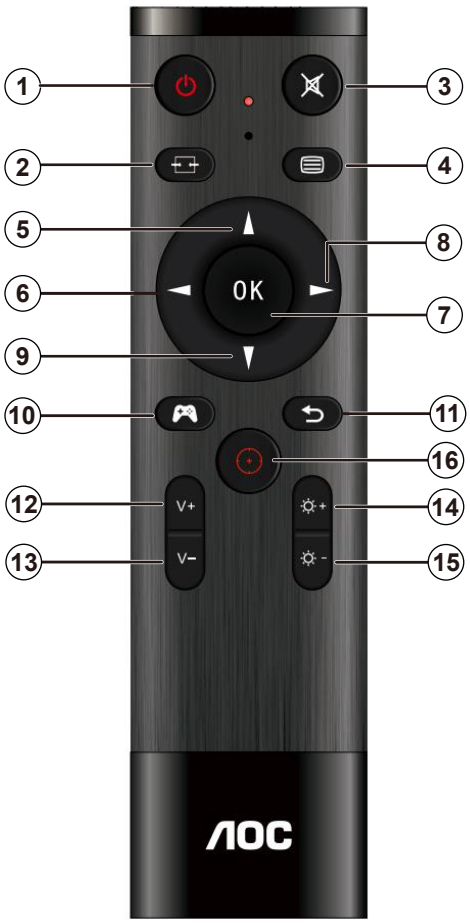
Light FX/Right

When there is no OSD, press “Right” key to active Light FX function.

Source/Up

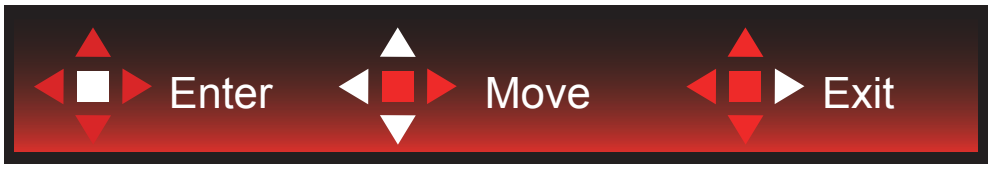
When the OSD is closed, press Source/Auto/Up button will be Source hot key function.

Description of the remote control buttons

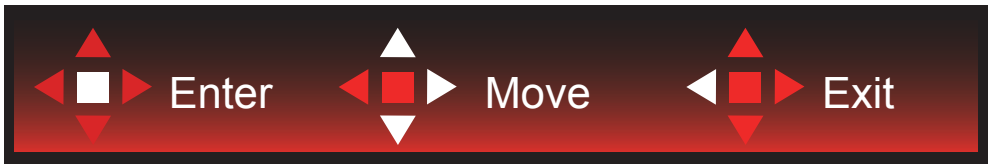


1		Press to switch power on and off。
2		Change the signal input source.
3		Mute。
4		Access the OSD menu。
5		Adjust the OSD options upwards。.
6		Return to previous OSD level。
7	OK	Confirm the OSD adjustment/ Access the OSD menu。
8		Access the OSD menu. /Confirm the OSD adjustment。.
9		Adjust the OSD options down。
10		Open gaming mode。
11		Exit OSD menu.。
12	+	Turn up the volume。
13	−	Turn down the volume。
14	+	Turn up the brightness。
15	−	Turn down the brightness。
16		Dial Point。

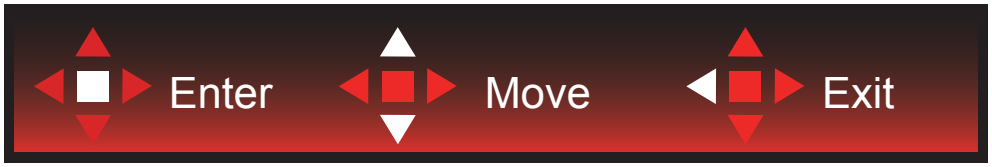
OSD Key Guide (Menu)



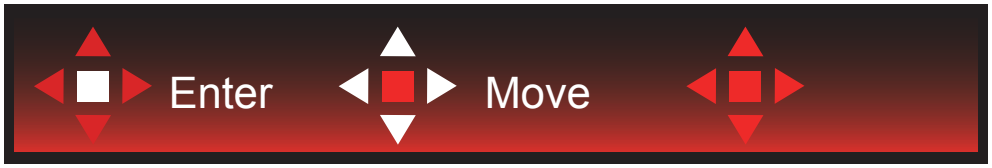
Enter : Use Enter key to enter the next OSD level
Move : Use Left / Up / Down key to move OSD selection
Exit : Use Right key to exit OSD



Enter : Use Enter key to enter the next OSD level
Move : Use Right / Up / Down key to move OSD selection
Exit : Use Left key to exit OSD



Enter : Use Enter key to enter the next OSD level
Move : Use Up / Down key to move OSD selection
Exit : Use Left key to exit OSD



Move : Use Left / Right / Up / Down Key to move OSD selection

Exit : Use Left key to exit OSD to previous OSD level
Enter : Use Right key to enter next OSD level
Select : Use Up / Down key to move OSD selection

Enter : Use Enter key to apply the OSD setting and back to previous OSD level
Select : Use Down key to adjust OSD setting

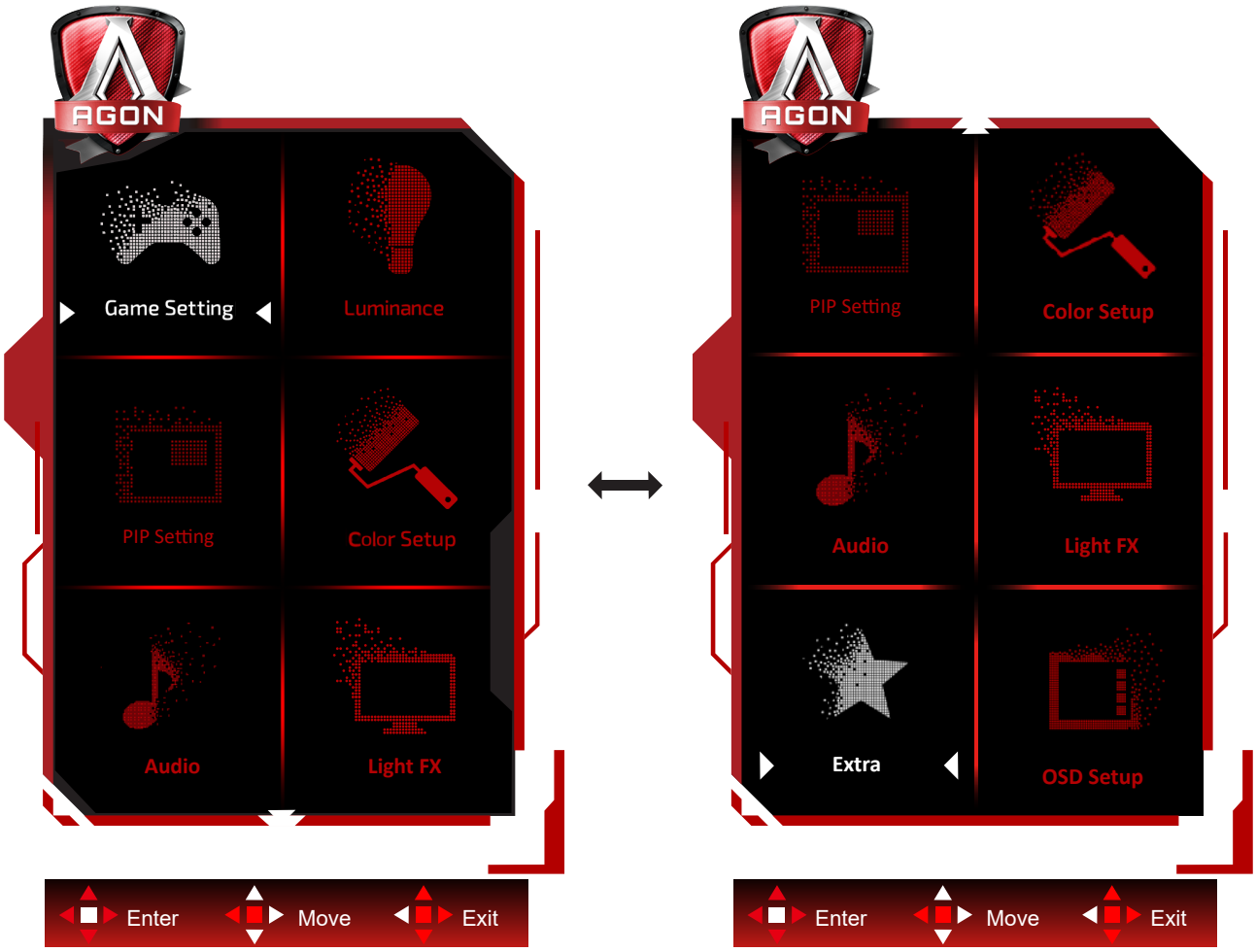
Select : Use Up / Down key to adjust OSD setting

Enter : Use Enter key to exit OSD to previous OSD level

Select : Use Left / Right key to adjust OSD setting

OSD Setting

Basic and simple instruction on the control keys.

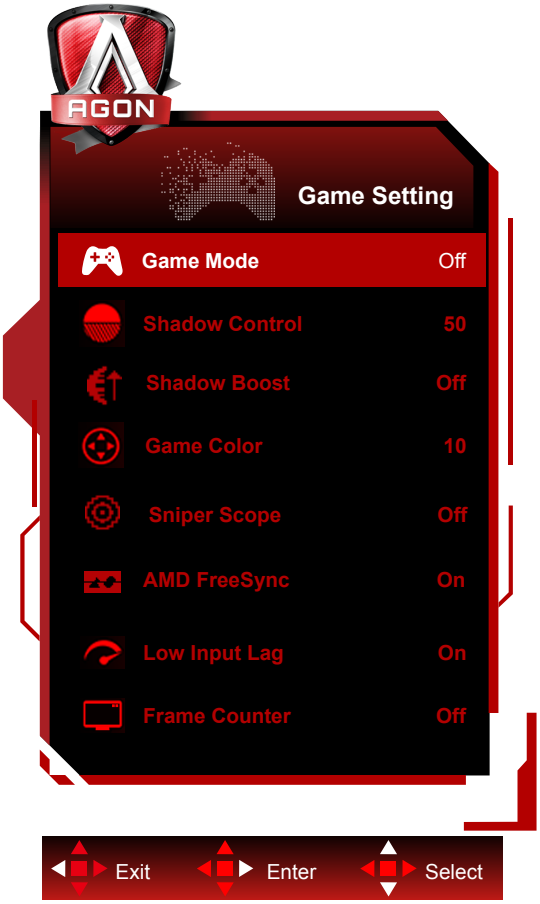


1). Press the Menu-button to activate the OSD window.
2). Follow Key Guide to move or select (adjust) OSD settings
3). OSD Lock/Unlock Function: To lock or unlock the OSD, press and hold the Down–button for 10s while OSD function is not active.

Notes:

1). If the product has only one signal input, the item of “Input Select” is disable to adjust.
2). ECO modes (except Standard mode), DCR and DCB mode , for these three states that only one state can exist.

Game Setting



	Game Mode	Off	No optimization by Game Mode.
		FPS	For playing FPS (First Person Shooters) games. Improves dark theme black level details.
		RTS	For playing RTS (Real Time Strategy). Improves the image quality.
		Racing	For playing Racing games, Provides fastest response time and high color saturation.
		Gamer 1	User's preference settings saved as Gamer 1.
		Gamer 2	User's preference settings saved as Gamer 2.
		Gamer 3	User's preference settings saved as Gamer 3.
	Shadow Control	0-100	Shadow Control Default is 50, then end-user can adjust from 50 to 100 or 0 to increase contrast for clear picture. 1. If picture is too dark to be saw the detail clearly, adjusting from 50 to 100 for clear picture. 2. If picture is too white to be saw the detail clearly, adjusting from 50 to 0 for clear picture
	Shadow Boost	Off /Level 1 /Level 2 /Level 3	Enhance the screen details in the dark or bright area to adjust the brightness in the bright area and ensure that it is not oversaturated.
	Game Color	0-20	Game Color will provide 0-20 level for adjusting saturation to get better picture.
	Sniper Scope	Off /1.0 /1.5 /2.0	Zoom in locally to make it easier to target when shooting.
	AMD FreeSync	On / Off	Disable or Enable AMD FreeSync Premium/G-SYNC.

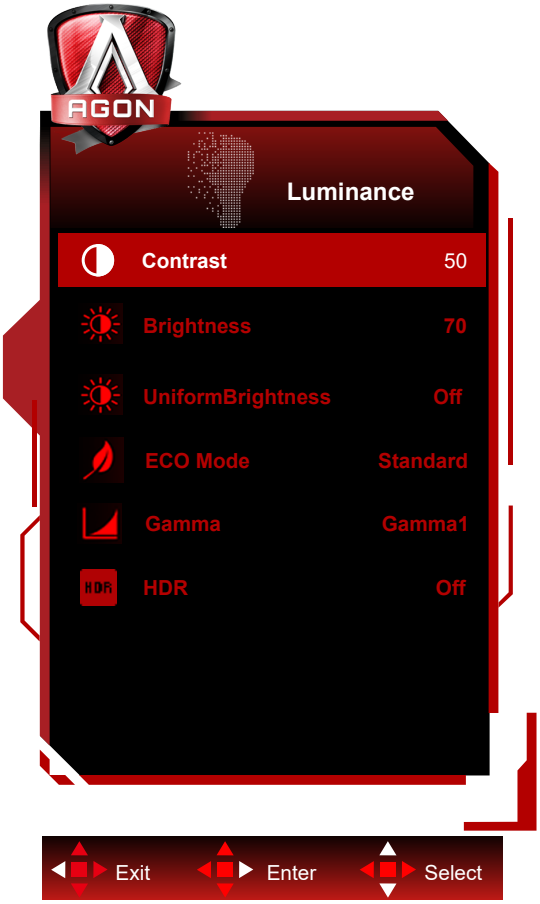
	Low Input lag	On / Off	Shutting down the frame buffer can reduce input delay. Note: Low input delay is disabled by default and unadjustable when the field frequency is less than 120 Hz; and it is enabled by default and unadjustable when the field frequency is equal to 120 Hz and in the AMD FreeSync Premium/ G-SYNC state.
	Frame Counter	Off / Right-Up / Right-Down / Left-Down / Left-Up	Display V frequency on the corner selected (Frame counter feature only works with AMD graphic card.)

Note:

When “HDR Mode”or “HDR” under “Luminance” is set to non-off, “Game Mode”, “Shadow Control” and “Game Color” can’t be adjusted.

When the Color Space under Color Settings is set to sRGB or DCI-P3, the Game Mode, Dark Field Control, and Game Tone items are not adjustable.

Luminance



	Contrast	0-100	Contrast from Digital-register.
	Brightness	0-100	Backlight Adjustment
	UniformBrightness	On/Off	Turn on Uniform Brightness, which equalizes the peak brightness in SDR mode, even when the white-screen window size changes.
	Eco mode	Standard	Standard Mode
		Text	Text Mode
		Internet	Internet Mode
		Game	Game Mode
		Movie	Movie Mode
		Sports	Sports Mode
		Reading	Reading Mode
	Gamma	Gamma1	Adjust to Gamma 1
		Gamma2	Adjust to Gamma 2
		Gamma3	Adjust to Gamma 3
	HDR	Off	Set the HDR profile according to your usage requirements. Note: When HDR is detected, the HDR option is displayed for adjustment.
		DisplayHDR	
		HDR Picture	
		HDR Movie	
		HDR Game	
	HDR Mode	Off	Optimized for the color and contrast of the picture, which will simulate showing the HDR effect. Note: When HDR is not detected, the HDR Mode option is displayed for adjustment.
		HDR Picture	
		HDR Movie	
		HDR Game	

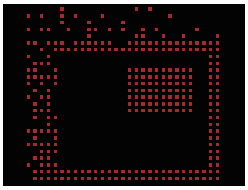
Note:

When “HDR Mode” under “Luminance” is set to non-off, “Contrast”, “Eco Mode” and “Gamma” can’t be adjusted.

When “HDR” under “Luminance” is set to non-off, all items under “Luminance” can’t be adjusted.

When the Color Space under Color Settings is set to sRGB or DCI-P3, the Contrast, Brightness Scenario Mode, Gamma, and HDR/HDR Mode items are not adjustable.

PIP Setting

	PIP	Off / PIP / PBP	Disable or Enable PIP or PBP.
	Main Source		Select main screen source.
	Sub Source		Select sub screen source.
	Size	Small / Middle / Large	Select screen size.
	Position	Right-up	Set the screen location.
		Right-down	
		Left-up	
		Left-down	
	Audio	On: PIP Audio	Disable or Enable Audio Setup.
		Off: Main Audio	
	Swap	On: Swap	Swap the screen source.
		Off: non action	

Note:

1) When “HDR” under “Brightness” is set to non-off state, all items under “PIP Setting” cannot be adjusted.

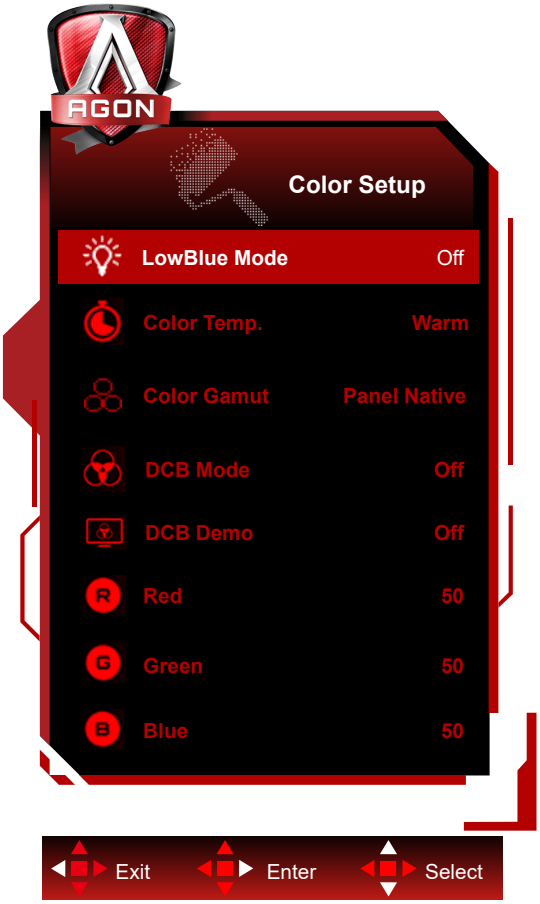
2) When PIP/PBP is enabled, some color-related adjustments in the OSD menu are valid only for the main screen, while the sub-screen is not supported. Hence, the main screen and the sub-screen may have different colors.

3) Set the input signal resolution to 1720x1440@60Hz at PBP to achieve the desired display effect.

4) When PBP/PIP is enabled, the compatibility of the main screen/sub-screen input source is shown in the following table:

PBP/PIP		Main source			
		HDMI1	HDMI2	DP	USB C
Sub source	HDMI1	V	V	V	V
	HDMI2	V	V	V	V
	DP	V	V	V	V
	USB C	V	V	V	V

Color Setup



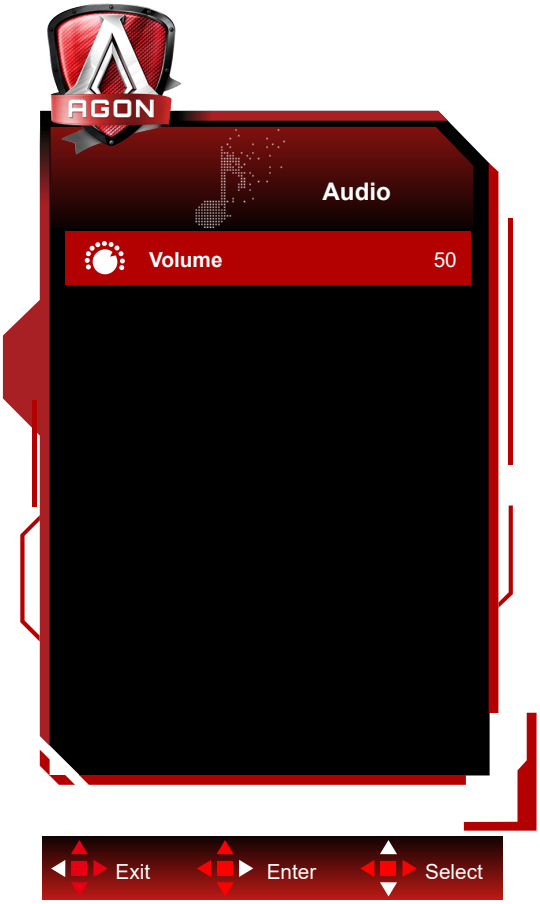
	LowBlue Mode	Off / Multimedia / Internet / Office / Reading	Decrease blue light wave by controlling color temperature.
	Color Temp.	Warm	Recall Warm Color Temperature from EEPROM.
		Normal	Recall Normal Color Temperature from EEPROM.
		Cool	Recall Cool Color Temperature from EEPROM.
		User	Restore user color temperature from EEPROM.
	Color Gamut	Panel Native	Standard color space panel.
		sRGB	Recall sRGB Color Temperature from EEPROM.
		DCI-P3	DCI-P3 color space.
	DCB Mode	Off	Disable DCB Mode.
		Full Enhance	Enable Full Enhance Mode.
		Nature Skin	Enable Nature Skin Mode.
		Green Field	Enable Green Field Mode.
		Sky-blue	Enable Sky-blue Mode.
		Auto Detect	Enable AutoDetect Mode.
	DCB Demo	On or Off	Disable or Enable Demo.
	Red	0-100	Red gain from Digital-register.
	Green	0-100	Green gain from Digital-register.
	Blue	0-100	Blue gain from Digital-register.

Note:

When “HDR Mode” or “HDR” under “Luminance” is set to non-off, all items under “Color Setup” can’t be adjusted.

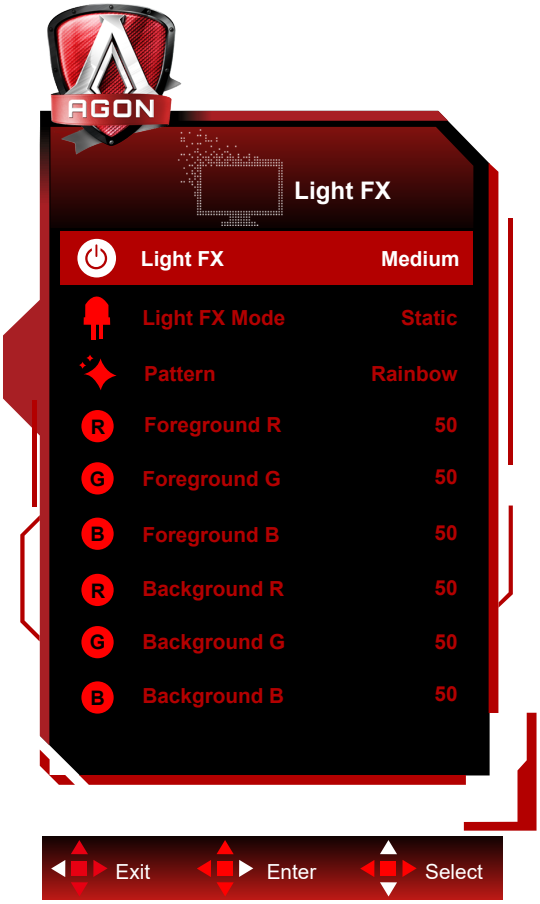
When Color Space is set to sRGB or DCI-P3, all other items under Color Settings cannot be adjusted.

Audio



	Volume	0-100	Adjust volume setting

Light FX



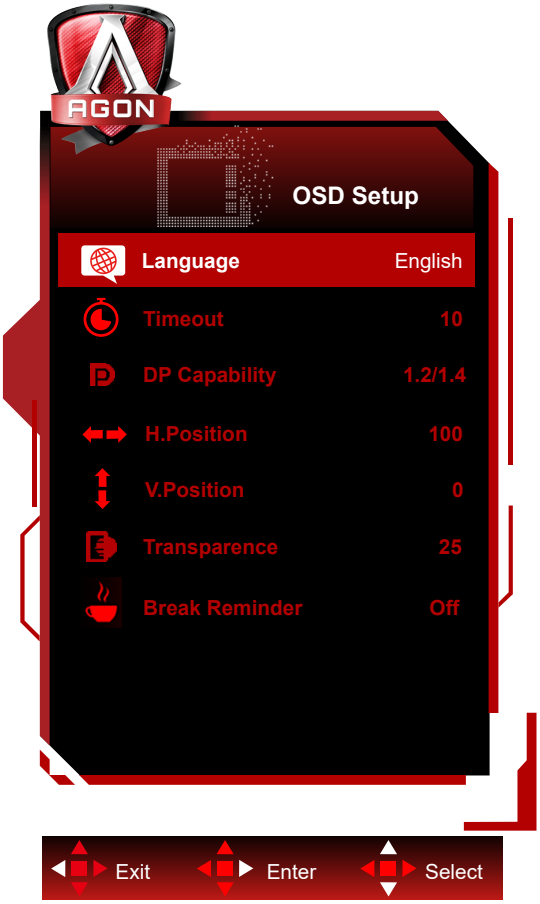
	Light FX	Off / Low / Medium / Strong	Select the intensity of Light FX.
	Light FX Mode	Audio1 / Audio2 / Static / Dark Point Sweep / Gradient Shift / Spread Fill / Drip Fill / Spreading Drip Fill / Breathing / Light Point Sweep / Zoom / Rainbow / Wave / Flashing / Demo	Select Light FX Mode
	Pattern	Red / Green / Blue / Rainbow / User Define	Select Light FX Pattern
	Foreground R	0-100	User can adjust Light FX foreground color, when Pattern setting to user define
	Foreground G		
	Foreground B		
	Background R	0-100	User can adjust Light FX background color, when Pattern setting to user define
	Background G		
	Background B		

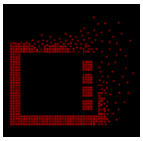
Extra

	Input Select	Auto/ HDMI1 / HDMI2 / DP/ USB C	Select Input Signal Source
	USB	Off/ High Resolution/High Data Speed	For model need to turn on/off USB power during power saving. The default USB setting is Off. If you want to connect USB-C device, please adjust the USB setting to High Resolution or High Data Speed.
	USB Selection	Auto / USB C / USB up	Select the USB upstream data path.
	LEA (Prevention of local image retention)	On/ Off	It is used to turn on the LEA function to reduce the risk of generating image retention. Recommended function settings: “On.” After this function is enabled, the screen will be automatically narrowed to fix the brightness of the display area, so as to reduce possible image retention.
	Pixel Orbiting (Image shift)	Off / Weak / Medium /Strong / Strongest	It is used to turn the Pixel Orbiting function on to reduce the risk of generating image retention. Recommended function setting: “On.” After this function is enabled, image pixels will circularly move as a whole. The movement amplitude is based on the settings. The moved character may be side cut. When “Strongest” is selected, image retention is most unlikely generated, but possible side cut may be most notable.
	Auto Warning	Off / On	When Off is selected, this warning will pop up, and the warning will not be set to Time out until the user selects Yes or No. If End user selects No, Auto Warning will be set back to On

	Pixel Refresh (Elimination of image retention)	On/ Off	It is used to enable and run the Pixel Refresh function to eliminate image retention which has been generated. After startup, select “Yes” according to menu prompts, and then the display will automatically shut down the screen. Keep power on, and do not operate any keys. The power indicator will flash white (white a second/off a second). This process lasts for about 10 min. The power indicator turns off at the end, and the display enters standby state.
	Off Timer	0-24hrs	Select DC off time
	Image Ratio	Wide /Aspect/ 4:3/1:1 /17”(4:3) / 19”(4:3) / 19”(5:4) / 19”W(16:10) / 21.5”W(16:9) / 22”W(16:10) / 23”W(16:9) / 23.6”W(16:9) /24”W(16:9) //27"W (16:9) /30”W (21:9) /32”W (16:9) /34”W (21:9) /40” W(16:9) /42” W(16:9)	Select image ratio for display.
	DDC/CI	Yes or No	Turn On/Off DDC/CI Support
	Reset	Yes or No	Reset the menu to default
	Time after Pixel Refresh (Time after elimination of image retention)		It refers to the time that the screen lights up after the last Pixel Refresh operation is executed, in units of hours. A prompt of executing Pixel Refresh will be automatically sent to the user every four hours.
	Pixel Refresh Counts (Number of times of eliminating image retention)		It is used to record the number of times of executing Pixel Refresh.

OSD Setup



	Language		Select the OSD language
	Timeout	5-120	Adjust the OSD Timeout
	DP Capability	1.1/1.2/1.4	Please be noted that only DP1.2/DP1.4 support AMD FreeSync Premium/G-SYNC function
	H. Position	0-100	Adjust the horizontal position of OSD
	V. Position	0-100	Adjust the vertical position of OSD
	Transparence	0-100	Adjust the transparence of OSD
	Break Reminder	On /Off	Break reminder if the user continuously work for more than 1hrs

LED Indicator

Status	LED Color
Full Power Mode	White
Active-off Mode	Orange
Pixel Refresh under process	White indicator flashes (on a second and off a second alternatively)
Panel Refresh under process	White indicator flashes (on for 3 seconds and off for 3 seconds alternatively)
OLED panel malfunction	Orange indicator flashes (on a second and off a second alternatively)
Shutdown mode	The indicator is not lit.

Troubleshoot

Problems	Possible solutions
The power indicator is not lit.	• Check if the power is turned on. • Check if the power cord is connected.
The power indicator is lit, but there is no image display.	• Check if the computer power is turned on. • Check if the graphics card of the computer is well plugged. • Check that the signal wire of the display has been correctly connected to the computer. • Check the plug of the signal wire of the display, and make sure all pins are not bent. • Observe the indicator through the Caps Lock key on the keypad of the computer to confirm if the computer is working.
There is no image, but the power indicator flashes orange.	• The OLED panel malfunctions and fails to work properly. Seek advice from AOC after-sales service persons.
Failure to realize plug-to-use.	• Check if it supports plug-to-use. • Check if the adapter supports plug-to-use.
Dim image.	• Adjust luminance and contrast ratio.
The image is bouncing or rippled.	• There may be electrical appliances and devices at the periphery that may cause electronic interference.
The screen displays “the signal wire is not available” or “no signal.”	• Check if the signal wire is correctly connected. • Check if the pin of the signal wire plug is damaged. • The Pixel Refresh function can be enabled and run in the display menu to eliminate image retention which has been generated. Running this function for several times can obtain a desirable image display effect. For other instructions regarding screen maintenance, refer to the User Instructions in the official website.
The screen displays “invalid input”.	• Check if your computer is set in an improper display mode Please re-set your computer in the display mode listed in the detailed user instructions.
Image retention.	• Based on the characteristics of the OLED panel, the Pixel Refresh function can be enabled and run in the display menu to eliminate image retention which has been generated. It is recommended to run this function for several times to obtain a desirable image display effect. For other instructions regarding screen maintenance, please refer to the User Instructions in the official website.
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

Panel	Model Name	AG456UCZD	
	Driving System	OLED	
	Viewable Image Size	113cm Diagonal	
	Pixel Pitch	0.303mm(H) x 0.303mm(V)	
	Display Color	1.07B	
Others	Horizontal Scan Range	30k-185kHz(HDMI) 30k~385kHz(DP/USB C)	
	Horizontal scan Size(Maximum)	1042.66 mm	
	Vertical Scan Range	48~120Hz (HDMI) 48~240Hz(DP/USB C)	
	Vertical Scan Size(Maximum)	436.46mm	
	Optimal Preset Resolution	3440x1440@60Hz	
	Max Resolution	3440x1440@100Hz(HDMI) 3440x1440@240Hz (DP/USB C)	
	Plug & Play	VESA DDC2B/CI	
	Connector	HDMIX2/DP/USB C/USBx4/USB upstream/Earphone	
	Power Source	100-240V~ 50/60Hz 3.5A	
	Power Consumption	Typical(Default Brightness And Contrast)	103W
		Max. (Brightness = 100, Contrast =100)	≤310W
		Standby Mode	≤ 0.5 W
USB C	USB C	Reversible Plug Connector	
	High-Speed	Data and Video Transfer	
	DP	Built-in DisplayPort Alt mode	
	Power Delivery	USB PD version 3.0	
	USB C Power Delivery	Up to 90W*(5V/3A, 7V3A,9V/3A, 10V/3A, 12V/3A, 15V/3A, 20V/4.5A)	
Environmental	Temperature	Operating	0°C~ 40°C
		Non-Operating	-25°C~ 55°C
		Perform Panel Refresh Function to Recommend Temperature	0°C~ 40°C
	Humidity	Operating	10% ~ 85% (Non-Condensing)
		Non-Operating	5% ~ 93% (Non-Condensing)
	Altitude	Operating	0m~ 5000m(0ft~16404ft)
		Non-Operating	0m~12192m(0~40000ft)

Note:

1)The maximum number of display colors supported by this product is 1.07 billion, and the setting conditions are as follows (there may be differences due to the output limitation of some graphics cards):

Signal Version / Color Format / State / Color Bit	HDMI2.0		DisplayPort1.4		USB C @USB High Data Speed	USB C @USB High Resolution	USB C @USB High Data Speed	USB C @USB High Resolution
	YCbCr422 YCbCr420	YCbCr444 RGB	YCbCr422 YCbCr420	YCbCr444 RGB	YCbCr422 YCbCr420	YCbCr422 YCbCr420	YCbCr444 RGB	YCbCr444 RGB
3440x1440 240Hz 10bits	\	\	OK	OK	\	OK	\	OK
3440x1440 240Hz 8bits	\	\	OK	OK	\	OK	\	OK
3440x1440 200Hz 10bits	\	\	OK	OK	\	OK	\	OK
3440x1440 200Hz 8bits	\	\	OK	OK	\	OK	\	OK
3440x1440 144Hz 10bits	\	\	OK	OK	\	OK	\	OK
3440x1440 144Hz 8bits	\	\	OK	OK	\	OK	\	OK
3440x1440 120Hz 10bits	\	\	OK	OK	\	OK	\	OK
3440x1440 120Hz 8bits	\	\	OK	OK	\	OK	\	OK
3440x1440 100Hz 10bits	OK	\	OK	OK	OK	OK	\	OK
3440x1440 100Hz 8bits	OK	OK	OK	OK	OK	OK	OK	OK
3440x1440 60Hz 10bits	OK	OK	OK	OK	OK	OK	OK	OK
3440x1440 60Hz 8bits	OK	OK	OK	OK	OK	OK	OK	OK
3440x1440 30Hz 10bits	OK	OK	OK	OK	OK	OK	OK	OK
Low resolution 2560x1080 50Hz 10bits	OK	OK	OK	OK	OK	OK	OK	OK
Low resolution 2560x1080 50Hz 8bits	OK	OK	OK	OK	OK	OK	OK	OK

2) In order to reach WQHD 240Hz 1.07 billion colors (in RGB/YCbCr 4:4:4 format) for DP 1.4 (HBR3) signal input, a DSC-enabled graphics card must be used. Consult the graphics card manufacturer for DSC support.

3) .3440x1440@240Hz A graphics card that supports DSC must be used. Due to some graphics card output limitations, there may be differences. Please consult the graphics card manufacturer for DSC support

4) Multi functional USB C interface, with a maximum output power of 90W. The output power may vary depending on the usage scenario, environment, or when connected to different models of laptops. The specific data is subject to the actual situation.

Preset Display Modes

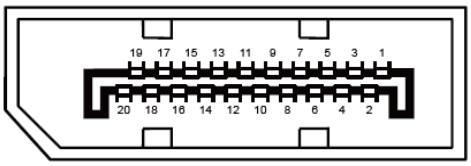
STANDARD	RESOLUTION (±1Hz)	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
VGA	640×480@60Hz	31.469	59.940
	640x480@72Hz	37.861	72.809
	640x480@75Hz	37.500	75.000
	640x480@100Hz	51.080	99.769
	640x480@120Hz	60.938	119.720
SVGA	800x600@56Hz	35.156	56.250
	800×600@60Hz	37.879	60.317
	800x600@72Hz	48.077	72.188
	800x600@75Hz	46.875	75.000
	800x600@100Hz	62.760	99.778
	800x600@120Hz	76.302	119.972
XGA	1024x768@60Hz	48.363	60.004
	1024x768@70Hz	56.476	70.069
	1024x768@75Hz	60.023	75.029
	1024x768@100Hz	80.450	99.811
	1024x768@120Hz	97.550	119.989
SXGA	1280x1024@60Hz	63.981	60.020
	1280x1024@75Hz	79.976	75.025
FHD	1920×1080@60Hz	67.500	60.000
	1920x1080@100Hz	112.500	100.000
	1920x1080@120Hz	137.260	119.982
	1920x1080@240Hz	278.400	240.000
WQHD	3440×1440@60Hz	96.180	60.000
	3440x1440@120Hz	192.360	120.000
	3440x1440@144Hz	222.056	143.912
	3440x1440@165Hz	242.543	164.995
	3440x1440@240Hz	384.722	240.001
PBP	1280x1440@60Hz	89.450	59.913
	1280x1440@75Hz	111.972	74.998
	1280x1440@100Hz	149.300	100.000
	1280x1440@120Hz	179.157	119.998
	1280x1440@144Hz	214.994	144.002
	1280x1440@240Hz	358.320	240.000
IBM MODES			
DOS	720x400@70Hz	31.469	70.087
MAC MODES			
VGA	640x480@67Hz	35.000	66.667
SVGA	832x624@75Hz	49.725	74.551

Note: According to the VESA standard, different operating systems and graphics cards may have certain errors (+/-1Hz) on resoution.Actual please refer to the actual product.

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.