



LCD Monitor
User Manual

Q27V5N/BK



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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.

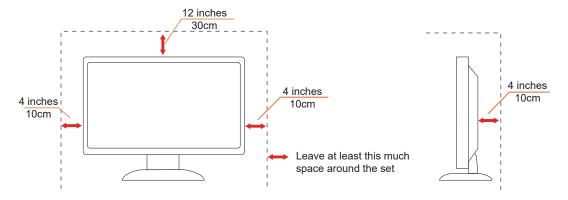
If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.

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.

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 wall or on the stand:

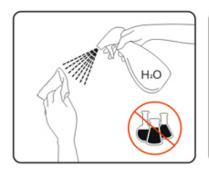
Installed with stand



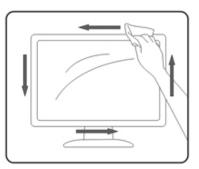
Cleaning

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

Mhen 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.

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

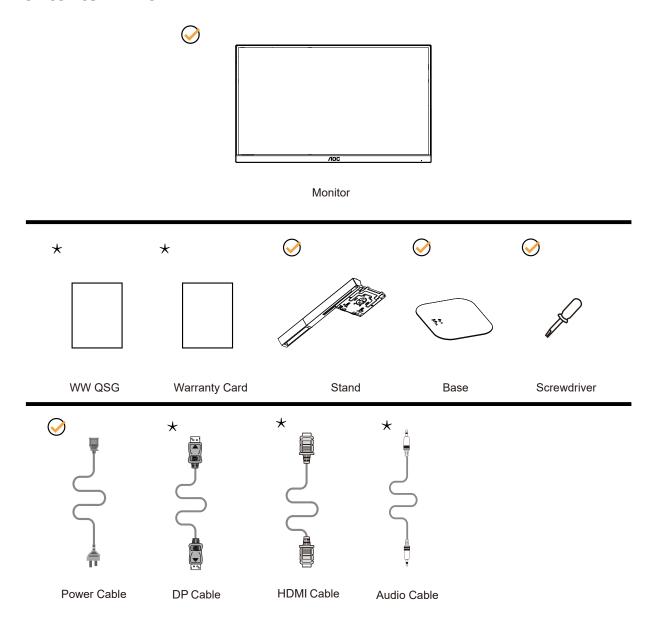
1 Do not knock or drop the monitor during operation or transportation.

The 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.

Excessive 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

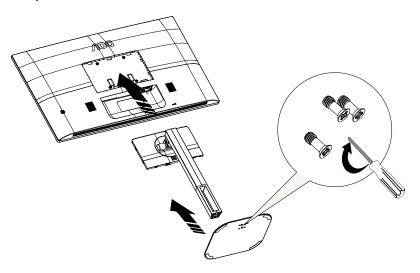


Not all signal cables will be provided for all countries and regions. Please check with the local dealer or AOC branch office for confirmation.

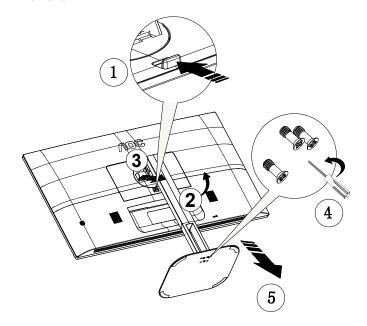
Setup Stand & Base

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

Setup:



Remove:

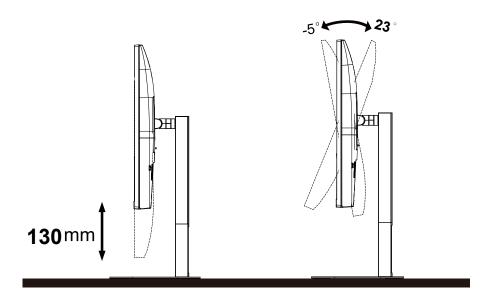


Adjusting Viewing Angle

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:





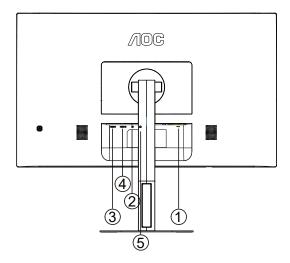
Do not touch the LCD screen when you change the angle. Touching the LCD screen may cause damage.

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.

Connecting the Monitor

Cable Connections In Back of Monitor and Computer:



- 1. Power
- 2. DP
- 3. HDMI-1
- 4. HDMI-2
- 5. Earphone

Connect to PC

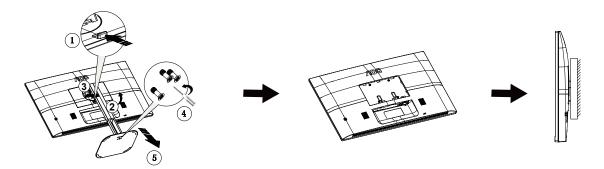
- 1. Connect the power cord to the back of the display firmly.
- 2. Turn off your computer and unplug its power cable.
- 3. Connect the display signal cable to the video connector on the back of your computer.
- 4. Plug the power cord of your computer and your display into a nearby outlet.
- 5. Turn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

Wall Mounting

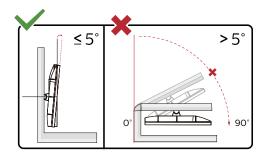
Preparing to Install An Optional Wall Mounting Arm.



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 optional wall mounting arm for instructions on attaching it to the wall.

Noted: VESA mounting screw holes are not available for all models, please check with the dealer or official department of AOC.



^{*} 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 function (Available for selective models)

- 1. AMD FreeSync 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 (R9 370/X, R7 370/X, R7 265 except)
- Radeon™ Pro Duo (2016)
- Radeon™ R9 Nano series
- Radeon™ R9 Fury series
- Radeon™ R9/R7 200 series (R9 270/X, R9 280/X except)

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

Adaptive-Sync function (Available for selective models)

- 1. Adaptive-Sync 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

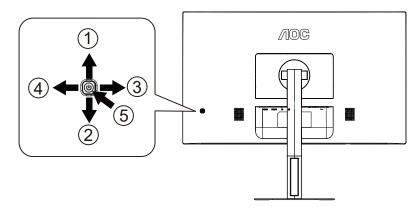
- Radeon™ RX Vega series
- Radeon™ RX 500 series
- Radeon™ RX 400 series
- Radeon™ R9/R7 300 series (R9 370/X, R7 370/X, R7 265 except)
- Radeon™ Pro Duo (2016)
- Radeon™ R9 Nano series
- Radeon™ R9 Fury series
- Radeon™ R9/R7 200 series (R9 270/X, R9 280/X except)

Processors

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- AMD Ryzen™ 3 2300U
- AMD Ryzen™ 3 2200G
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- 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 A8-7650KAMD A8-7600
- AMD A6-7400K

Adjusting

Hotkeys



1	Source/Exit/Up
2	Eco/DCR/Down
3	Clear Vision/Left
4	Volume/Right
5	Power/ Menu/Enter

Menu/Enter

When there is no OSD, Press to display the OSD or confirm the selection. Press about 2 second to turn off the monitor.

Power

Press the Power button to turn on the monitor.

Volume/Right

When there is no OSD, Press Volume button to active volume adjustment bar, Press Left or Right to adjust volume.

Source/Exit

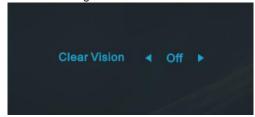
When the OSD is closed, press Source/Exit button will be Source hot key function.

Eco /DCR/Down

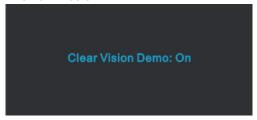
When there is no OSD, Press this button to enter Eco/DCR adjustment. Then press Left or Right button to choose different Eco/DCR.

Clear Vision

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



3. Press and hold "Left" 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 and hold "Left" 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.

Clear Vision	Off	
	Weak	Adjust the Clear 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.



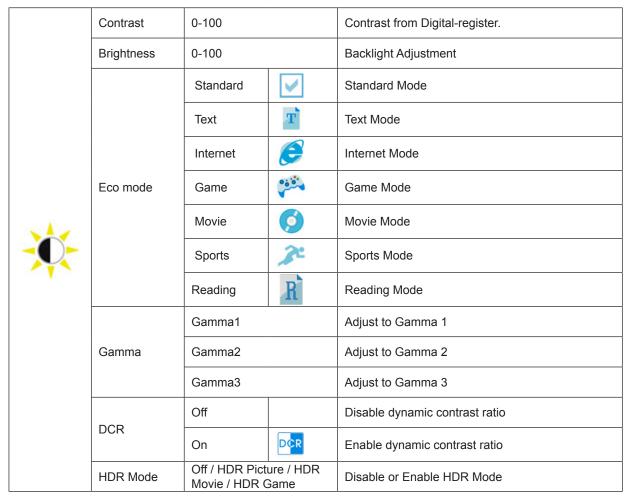
- 1). Press the MENU-button to activate the OSD window.
- 2). Press **Left** or **Right** to navigate through the functions. Once the desired function is highlighted, press the **MENU-button** to activate it, press **Left** or **Right** to navigate through the sub-menu functions. Once the desired function is highlighted, press **MENU-button** to activate it.
- 3). Press **Left** or **Right** to change the settings of the selected function. Press **Exit–button** to exit. If you want to adjust any other function, repeat steps 2-3.
- 4). 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), Clear vision, DCR, DCB mode and Picture Boost, for these states that only one state can exist.

Luminance



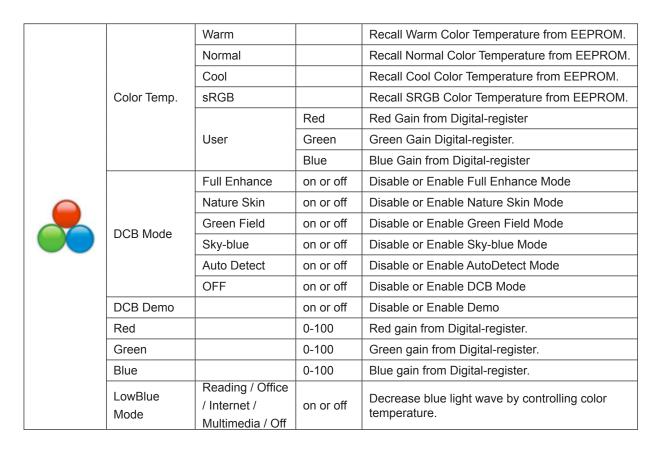


Note:

When HDR is detected, the HDR option is displayed for adjustment; when HDR is not detected, the HDR Mode option is displayed for adjustment.

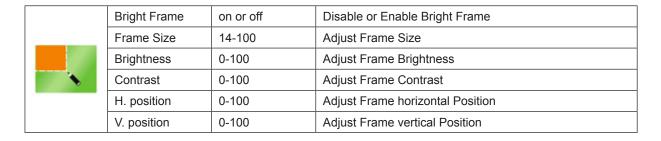
Color Setup





Picture Boost





Note:

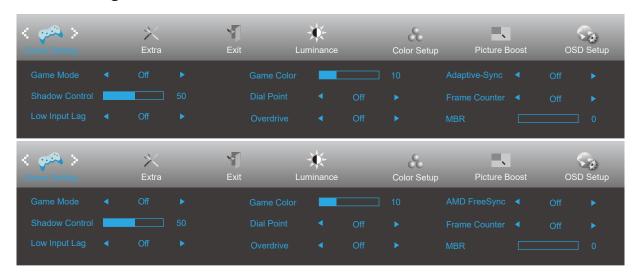
Adjust the brightness, contrast, and position of the Bright Frame for better viewing experience.

OSD Setup



	Language		Select the OSD language		
	Timeout	5-120	Adjust the OSD Timeout		
	DD Canability	1.1/1.2	Please be noted that only DP1.2 support Adaptive-		
	DP Capability	1.1/1.2	Sync/AMD FreeSync Premium 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		
Prook Domindor	Break Reminder	on or off	Break reminder if the user continuously work for more		
	Dieak Reminuer On or on		than 1hrs		

Game Setting



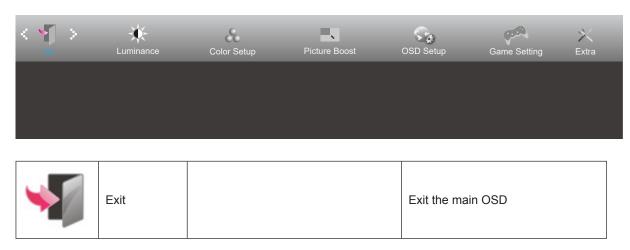
		FPS	For playing FPS (First Person Shooters) games. Improves dark theme black level details.		
		RTS	For playing RTS (Real Time Strategy). Improves the image quality.		
		Racing	For playing Racing games, Provides fastest response time and high color saturation.		
	Game Mode	Gamer 1	User's preference settings saved as Gamer 1.		
		Gamer 2	User's preference settings saved as Gamer 2.		
		Gamer 3	User's preference settings saved as Gamer 3.		
		off	No optimization by Smart image game		
	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		
	Low Input Lag	On/Off	Turn off frame buffer to decrease input lag		
الكنون		Weak Medium			
	Overdrive	Strong	Adjust the response time.		
		Boost			
		Off			
	Game Color	0-20	Game Color will provide 0-20 level for adjusting saturation to get better picture.		
	MBR	0 ~ 20	Adjust the Motion Blur Reduction.		
	Dial Point	On/Off	The "Dial Point" function places an aiming indicator in the center of screen for helping gamers to play First Person Shooter (FPS) games with an accurate and precise aiming.		
	Adaptive-Sync/ AMD FreeSync (Available for selective models)	On/Off	Adjust the Adaptive-Sync/AMD FreeSync.		
	Frame Counter	Off / Right-up / Right-Down / Left- Down / Left-Up	Display V frequency on the corner selected		

Extra



	Input Select		Select Input Signal Source
	Off timer	0-24hrs	Select DC off time
		Wide	
2772		4:3	
	Image Ratio	1:1	Select image ratio for display.
		Movie1	
		Movie2	
	DDC/CI	yes or no	Turn ON/OFF DDC/CI Support
	Deset	yes or no	Reset the menu to default. (ENERGY STAR® available for selective
	Reset	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 video 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.) 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 hot-key (AUTO) to auto-adjust. Make sure you are not using an extension cable or switch box. We recommend plugging the monitor directly to the video card output connector on the back.		
Picture Bounces, Flickers Or Wave Pattern Appears In The Picture	Move electrical devices that may cause electrical interference as far away from the monitor as possible. Use the maximum refresh rate your monitor is capable of at the resolution you are using.		
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 cominspect the monitor's video cable and make sure no pin is bent. Make sure your computer is operational by hitting the CAPS LOCK ket the keyboard while observing the CAPS LOCK LED. The LED should 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	d 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 hot-key (AUTO) 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

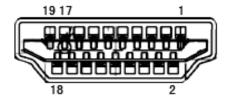
	Model name	Q27V5N/BK			
Panel	Driving system	TFT Color LCD			
	Viewable Image Size	68.5 cm diagonal			
	Pixel pitch	0.2331mm(H) x 0.2331mm(V)			
	Display Color	16.7M Colors			
	Horizontal scan range	30k-114kHz			
	Horizontal scan Size(Maximum)	596.736mm			
	Vertical scan range	48-75Hz			
	Vertical Scan Size(Maximum)	335.664mm			
	Optimal preset resolution	2560x1440@60Hz			
Others	Max resolution	2560x1440@75Hz			
	Plug & Play	VESA DDC2B/CI			
	Power Source	100-240V~, 50/60Hz, 1.5A			
	Power Consumption	Typical(default brightness and contrast) 30W			
		Max. (brightness = 100, o	contrast =100) ≤ 50W		
		Standby mode	≤ 0.5W		
Physical	Connector Type	HDMI/DP/Earphone out			
Characteristics	Signal Cable Type	Detachable			
	Tomporaturo	Operating	0°~ 40°		
	Temperature	Non-Operating	-25°~ 55°		
Environmental	Humidity	Operating	10% ~ 85% (non-condensing)		
Environmental	Humidity	Non-Operating	5% ~ 93% (non-condensing)		
	Altitude	Operating	0~ 5000 m (0~ 16404ft)		
	Ailliude	Non-Operating	0~ 12192m (0~ 40000ft)		



Preset Display Modes

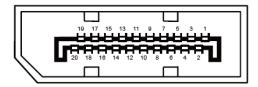
STANDARD	RESOLUTION	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
	640x480@60Hz	31.469	59.94
VGA	640x480@72Hz	37.861	72.809
	640x480@75Hz	37.5	75
	800x600@56Hz	35.156	56.25
SVC A	800x600@60Hz	37.879	60.317
SVGA	800x600@72Hz	48.077	72.188
	800x600@75Hz	46.875	75
	1024x768@60Hz	48.363	60.004
XGA	1024x768@70Hz	56.476	70.069
	1024x768@75Hz	60.023	75.029
0004	1280x1024@60Hz	63.981	60.02
SXGA	1280x1024@75Hz	79.976	75.025
MN/QA -	1440x900@60Hz	55.935	59.887
WXGA+	1440x900@60Hz	55.469	59.901
\MQ\/QA	1680x1050@60Hz	65.29	59.954
WSXGA	1680x1050@60Hz	64.674	59.883
FHD	1920x1080@60Hz	67.5	60
QHD	2560x1440@60Hz	0@60Hz 88.787 59.951	
QHD	2560x1440@75Hz	111.028	74.968
	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.