





# **MSI 3PB9 LCD Monitor User Guide**

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**MSI 3PB9 LCD Monitor** 



### **Getting Started**

This chapter provides you with the information on hardware setup procedures. While connecting devices, be careful in holding the devices and use a grounded wrist strap to avoid static electricity.

### **Package Contents**

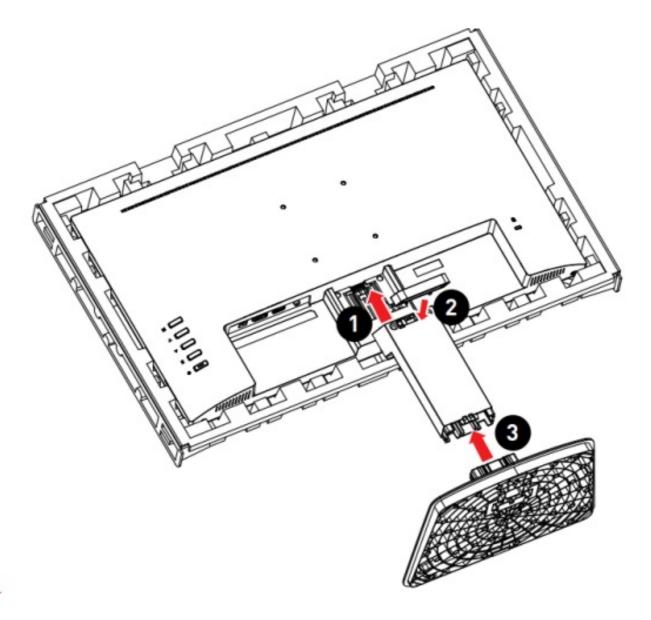
Monitor	PR0 MP223 E2
Documentation	Quick Start Guide
Accessories	Stand
	Stand Base
	External Power Supply
	Power Cord
Cable	High Speed HDMI™ Cable

### **Important**

- Contact your place of purchase or local distributor if any of the items is damaged or missing.
- Package contents may vary by country and model.
- The included power cord is exclusively for this monitor and should not be used with other products.

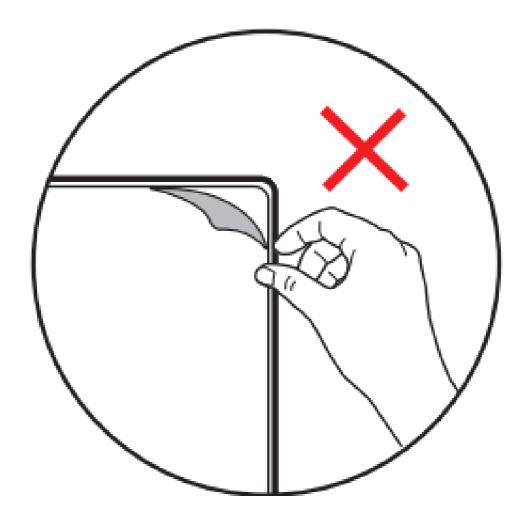
### **Installing the Monitor Stand**

- 1. Leave the monitor in its protective packaging. Align and gently push the stand bracket towards the monitor groove until it locks in place.
- 2. Align and gently push the cable organizer towards the stand until it locks in place.
- 3. Align and gently push the base towards the stand until it locks in place.
- 4. Make sure the stand assembly is properly installed before setting the monitor upright.



### **Important**

- Place the monitor on a soft, protected surface to avoid scratching the display panel.
- Do not use any sharp objects on the panel.
- This product comes with NO protective film to be removed by the user! Any mechanical damages to the product including removal of the polarizing film may affect the warranty!

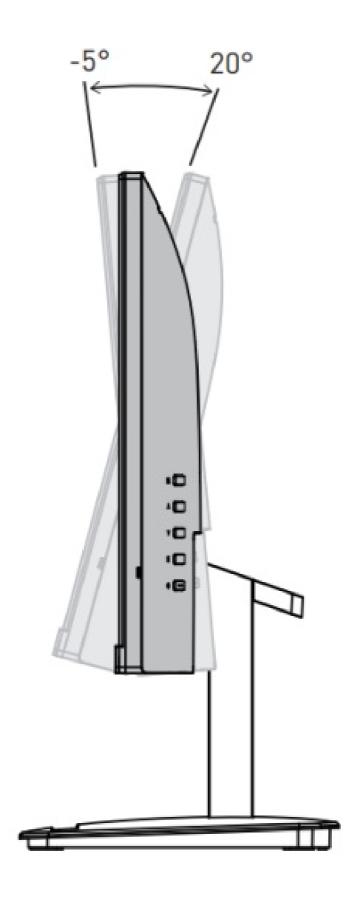


# **Adjusting the Monitor**

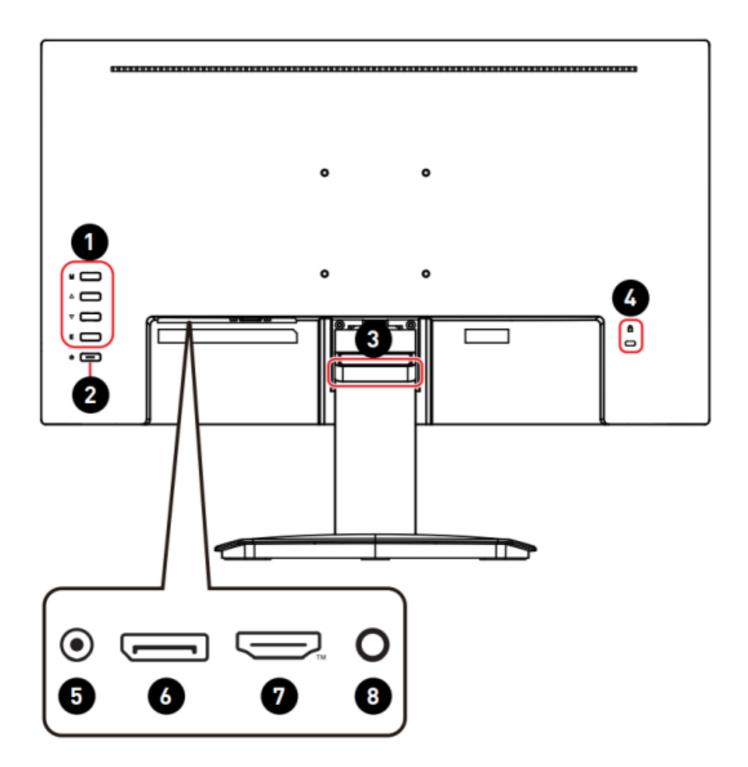
This monitor is designed to maximize your viewing comfort with its adjustment capabilities.

# Important

Avoid touching the display panel when adjusting the monitor.



**Monitor Overview** 



- 1. OSD Keys
- 2. Power Button
- 3. Cable Organizer
- 4. Kensington Lock
- 5. Power Jack



# **DisplayPort**

Supports 1920x1080@100Hz as specified in DisplayPort 1.2a.



# **HDMI™** Connector



Supports 1920x1080@100Hz as specified in HDMI™ 1.4b.



# Important

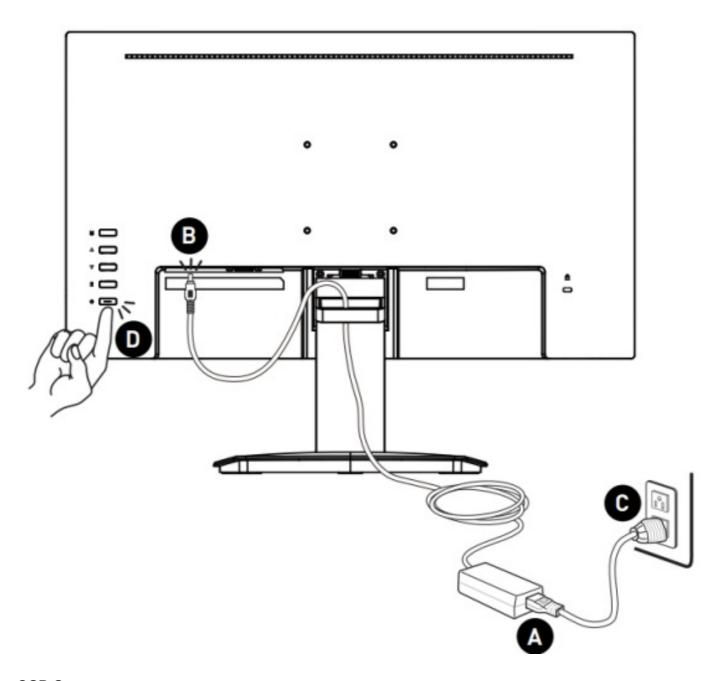
To ensure optimal performance and compatibility, please use only HDMI<sup>™</sup> cables certified with the official HDMI<sup>™</sup> logo when connecting this monitor. For more information, please visit <a href="https://www.hdmi.org/resource/cables">https://www.hdmi.org/resource/cables</a>.



# Headphone Jack

#### Connecting the Monitor to PC

- 1. Turn off your computer.
- 2. Connect the video cable from the monitor to your computer.
- 3. Assemble the external power supply & power cord. (Figure A)
- 4. Connect the external power supply to the monitor power jack. (Figure B)
- 5. Plug the power cord into the electrical outlet. (Figure C)
- 6. Turn on the monitor. (Figure D)
- 7. Power on the computer and the monitor will auto detect the signal source.



# **OSD Setup**

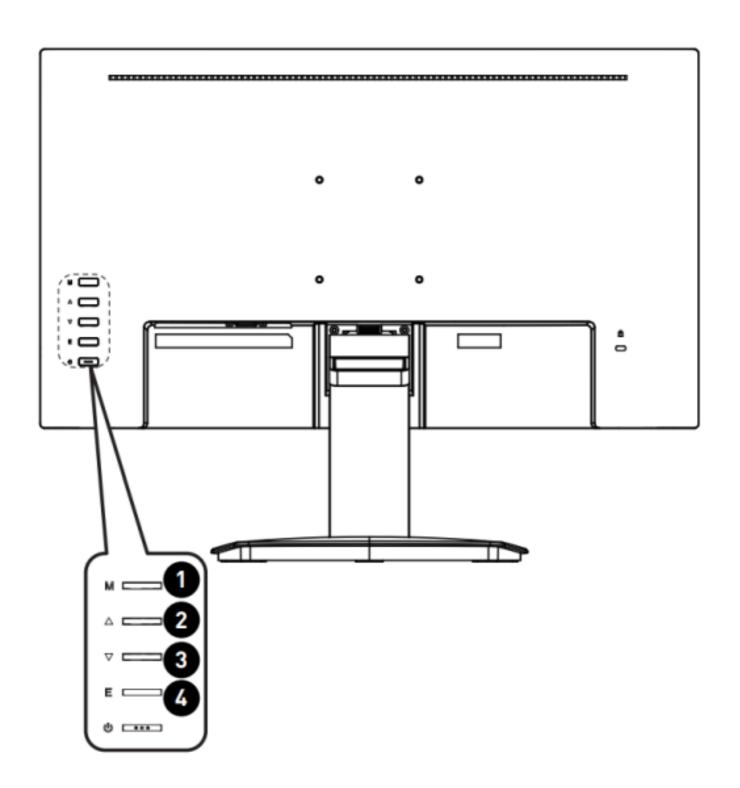
This chapter provides you with essential information on OSD Setup.

# **Important**

All information is subject to change without prior notice.

# **OSD Keys**

The monitor comes with a set of OSD Keys that help to control the On-Screen Display (OSD) menu.



OSD Keys Hot Key (When OSD is OFF) OSD Setup (When OSD		OSD Setup (When OSD is ON)	
0	M	Activating the OSD Main Menu	Returning to the previous menu
			Exiting from the OSD Main Menu
0	<b>A</b>		Used as the Up/Right button to select function menus and items
		Used as the designated	Allowing upward adjustment in function values
0	•	shortcut hotkey	Used as the Down/Left button to select function menus and items
			Allowing downward adjustment in function values
4	Е		Used as the Enter button to enter function items
			Confirming the selection

#### **OSD Menus**

Press the M key to launch the On-Screen Display (OSD) main menu and use the OSD keys to tune the desired function to suit your personal preferences.



## **Professional**

1st Level Menu	2nd/3rd Level Menu	Description	
Mode	Eco	Use Up or Down Button to select and preview	
	User	mode effects.  • Press the Middle Button to confirm and apply	
	sRGB	your mode type.	
	Anti-Blue	The default setting "Eco" mode meets the requirements of TÜV Rheinland's "Low Blue"	
	Movie	Light" standard and Eyesafe certification.	
	Office		
	Black-White		
Response Time	Normal	Setting to Fastest will reach the shortest response time and help improve blurred images when playing very fast games.	
	Fast		
	Fastest		
MPRT	OFF	MPRT is available when the refresh rate is	
	ON	over 85 Hz.      Activating MPRT will affect:	
		Affected Function Function Status	
		<ul> <li>Response Time</li> <li>Brightness</li> <li>Unable to select</li> </ul>	
		» HDCR » Adaptive-Sync	

1st Level Menu	2nd/3rd Level Menu		Description	
		Left Top	<ul> <li>Location is adjustable in OSD Menu. Press the Middle Button to confirm and apply your Refresh Rate Location.</li> <li>This monitor follows and works at the Operating S</li> </ul>	
	Location	Right Top		
Refresh Rate	Location	Left Bottom		a apply your Heiresh Hale
neiresti nate		Right Bottom		
	OFF		ystem's preset Screen Re	efresh Rate.
	ON		-	
		Left Top	-	ress the Middle Button to a
	Lasatian	Right Top	ctivate the timer.	
	Location	Left Bottom	<ul> <li>Users have to manually restore their preset A Clock after any AC power loss and reconnection</li> </ul>	
		Right Bottom	Affected Function Function Status	Function Status
Alarm Clock	OFF		» Refresh Rate	T dilotion States
	15:00	00:01 ~ 99:59	» Alarm Clock     » Screen Assistance     » Info. On Screen	
	30:00			Set to OFF
	45:00			
	60:00			
	OFF		Select OFF to disable E     Activating Eye-Q Check	
Eye-Q Check	Amsler Grid		Select Amsler Grid to c d.	heck your central vision fiel
	Astigmatism		Select Astigmatism to containing	heck your blurred vision.
	Posture Correction		Select Posture Correcti when sitting.	on to improve your posture

1st Level Menu	2nd/3rd Level Menu	Description
Screen Assistance	None  [+] [+]	Users can adjust Screen Assistance in any mode.
Screen Size	Auto 4:3 16:9	Users can adjust Screen Size in any mode, any resolution and any screen refresh rate.
Adaptive-Sync	OFF ON	Adaptive-Sync prevents screen tearing.     Activating Adaptive-Sync will affect:      Affected Function Function Status     MPRT Set to OFF

# Image

1st Level Menu	2nd/3rd Level Menu	Description
Brightness	0-100	Properly adjust Brightness according to the surroun ding lighting.
Contrast	0-100	Properly adjust Contrast to relax your eyes.
Sharpness	0-5	Sharpness improves clarity and details of images.
	OFF	
	Weak	
Image Enhancement	Medium	Image Enhancement enhances image edges to implore their acutance.
	Strong	
	Strongest	
	OFF	Low Blue Light protects your eyes against blue light  We are applied. Low Blue Light adjusts the agree against.
Low Blue Light		. When enabled, Low Blue Light adjusts the screen co lor temperature to a more yellow glow.
	ON	When Mode is set to Anti-Blue, it is mandatory to e nable Low Blue Light.

1st Level Menu	2nd/3rd Level Menu		Description	
	OFF		HDCR enhances image quality by increasing the cont rast of images.	
	ON		Activating HDCR will affect:	
HDCR			Affected Function	Function Status
			» Brightness	Unable to select
			» MPRT	Set to OFF
	Cool		Use Up or Down Button to select and preview mod e effects.	
	Normal			
Color Temperature	Warm			
	Customization	R (0-100)	Press the E Button to confirm and apply your mod type.	confirm and apply your mode
		G (0-100)		
		B (0-100)		

# **Input Source**

1st Level Menu	2nd Level Menu	Description	
HDMI™			
DP		Users can adjust Input Source in any mode.	
	OFF	Users can use the Navi Key to select Input Source at below status:	
Auto Scan	ON	While "Auto Scan" is set to "OFF" with the monitor at power saving mode;	
		While "No Signal" message box is shown on the monitor.	

# Navi Key

1st Level Menu	2nd Level Menu	Description
Enter Up Down	OFF	
	Brightness	
	Mode	
	Alarm Clock	All Navi Key items can be adjusted via OSD Menus.
	Input Source	
	Refresh Rate	
	Info. On Screen	

# Settings

1st Level Menu	2nd Level Menu	Description
Language	English Français Deutsch Italiano Español  Русский Português  Bahasa Indonesia Türkçe (More languages coming soon)	<ul> <li>Users have to press the E Button to confirm and apply the Language setting.</li> <li>Language is an independent setting. Users' own language setting will override the factory default. When users set Reset to Yes, Language will not be changed.</li> </ul>
Transparency	0~5	Users can adjust Transparency in any mode.
OSD Time Out	5~30s	Users can adjust OSD Time Out in any mode.
B	OFF	When set to OFF, users can press the power button to turn off the monitor.
Power Button	Standby	When set to Standby, users can press the power button to turn off the panel and backlight.

1st Level Menu	2nd Level Menu	Description	
	OFF	HDMI <sup>TM</sup> CEC (Consumer Electronics Control) supports So ny PlayStation®, Nintendo® Switch <sup>TM</sup> , Xbox Series X S con soles and various audio-visual devices that are CEC-capable.	
		• If HDMI™ CEC is set to ON:	
HDMI™ CEC	ON	The monitor will automatically power on when the CEC de vice is turned on.	
		The CEC device will enter power saving mode when the m onitor is turned off.	
		• When Sony PlayStation®, Nintendo® Switch™, or Xbox S eries X S console is connected, Mode will be automatically s et to default mode and can be adjusted to users' preferred mode later.	
	OFF	The information of the monitor status will be shown on the right sidWe of the screen.	
Info. On Screen	ON	Activating Info. On Screen will affect:	
Reset	YES	Users can Reset and restore settings to original OSD	
neset	NO	Default in any mode.	

# Specifications

Monitor		PRO MP223 E2	
Size		21.45 inch	
Curvature		Flat	
Panel Type		VA	
Resolution		1920 x 1080 (FHD)	
Aspect Ratio		16:9	
Brightness		250 nits (typ.)	
Contrast Ratio		3000:1	
Refresh Rate		100Hz	
		• 1ms (MPRT)	
Response Time		• 4ms (GTG)	
		HDMI™ Connector x1	
I/O		DisplayPort x1	
		Headphone Jack x1	
View Angles		178°(H), 178°(V)	
DCI-P3*/ sRGB		78% / 99%	
Surface Treatment		Anti-glare	
Display Colors		16.7M	
Monitor Power Opt	ions	12V ==== 2.5A	
External Power Sup	pply	30W, 12V	
Power Input		100~240V, 50/60Hz, 1A	
Power Output		12V === 2.5A	
Adjustment (Tilt)		-5° ~ 20°	
Kensington Lock		Yes	
VESA Mounting		Plate Type: 75 x 75 mm	
Dimension (W x H x D)		494.7 x 385.5 x 182 mm	
Weight	Net	2.4 Kg	
weigin	Gross	4.1 Kg	

Monitor		PRO MP223 E2	
Environment	Operating	<ul> <li>Temperature: 0°C ~ 40°C</li> <li>Humidity: 20% ~ 90%, non-condensing</li> <li>Altitude: 0 ~ 5000m</li> </ul>	
	Storage	<ul> <li>Temperature: -20°C ~ 60°C</li> <li>Humidity: 10% ~ 90%, non-condensing</li> </ul>	

# **Preset Display Modes**

**Important**All information is subject to change without prior notice.

Standard	Resolution		НОМІ™	DP
VGA	640×480	@60Hz	V	V
		@67Hz	V	V
		@72Hz	V	V
		@75Hz	V	V
Dos-Mode	720×480	@60Hz	V	V
	720×576	@50Hz	V	V
SVGA	800×600	@56Hz	V	V
		@60Hz	V	V
		@72Hz	V	V
		@75Hz	V	V
		@60Hz	V	V
XGA	1024×768	@70Hz	V	V
		@75Hz	V	V
SXGA	1280×1024	@60Hz	V	V
		@75Hz	V	V
WXGA+	1440×900	@60Hz	V	V
WSXGA+	1680×1050	@60Hz	V	V
Full HD	1920×1080	@60Hz	V	V
		@85Hz	V	V
		@100Hz	V	V
Video Timing Resolu tion	480P		V	V
	576P		V	V
	720P		V	V
	1080P @60Hz		V	V

# **Troubleshooting**

# The power LED is off.

- Press the monitor power button again.
- Check if the monitor power cable is properly connected.

### No image.

• Check if the computer graphics card is properly installed.

- Check if the computer and monitor are connected to electrical outlets and are turned on.
- Check if the monitor signal cable is properly connected.
- The computer may be in Standby mode. Press any key to activate the monitor.

#### The screen image is not properly sized or centered.

Refer to Preset Display Modes to set the computer to a setting suitable for the monitor to display.

#### No Plug & Play.

- Check if the monitor power cable is properly connected.
- Check if the monitor signal cable is properly connected.
- Check if the computer and graphics card are Plug & Play compatible.

#### The icons, font or screen are fuzzy, blurry or have color problems.

- Avoid using any video extension cables.
- · Adjust brightness and contrast.
- Adjust RGB color or tune color temperature.
- Check if the monitor signal cable is properly connected.
- Check for bent pins on the signal cable connector.

#### The monitor starts flickering or shows waves.

- Change the refresh rate to match the capabilities of your monitor.
- Update your graphics card drivers.
- Keep the monitor away from electrical devices that may cause electromagnetic interference (EMI).

#### **Safety Instructions**

- · Read the safety instructions carefully and thoroughly.
- All cautions and warnings on the device or User Guide should be noted.
- · Refer servicing to qualified personnel only.

#### **Power**

- Make sure that the power voltage is within its safety range and has been adjusted properly to the value of 100~240V before connecting the device to the power outlet.
- If the power cord comes with a 3-pin plug, do not disable the protective earth pin from the plug. The device must be connected to an earthed mains socket-outlet.
- Please confirm the power distribution system in the installation site shall provide the circuit breaker rated 120/240V, 20A (maximum).
- Always disconnect the power cord or switch the wall socket off if the device would be left unused for a certain time to achieve zero energy consumption.

- Place the power cord in a way that people are unlikely to step on it. Do not place anything on the power cord.
- If this device comes with an adapter, use only the MSI provided AC adapter approved for use with this device.

#### **Environment**

- To reduce the possibility of heat-related injuries or of overheating the device, do not place the device on a soft, unsteady surface or obstruct its air ventilators.
- Use this device only on a hard, flat and steady surface.
- To prevent the device from tipping over, secure the device to a desk, wall or fixed object with an anti-tip fastener that helps to properly support the device and keep it safe in place.
- To prevent fire or shock hazard, keep this device away from humidity and high temperature.
- Do not leave the device in an unconditioned environment with a storage temperature above 60°C or below -20°C, which may damage the device.
- The maximum operating temperature is around 40°C.
- When cleaning the device, be sure to remove the power plug. Use a piece of soft cloth rather than industrial
  chemical to clean the device. Never pour any liquid the opening; that could damage the device or cause electric
  shock.
- Always keep strong magnetic or electrical objects away from the device.
- If any of the following situations arises, get the device checked by service personnel:
  - The power cord or plug is damaged.
  - Liquid has penetrated into the device.
  - The device has been exposed to moisture.
  - The device does not work well or you can not get it working according to the User Guide.
  - The device has dropped and damaged.
  - The device has obvious sign of breakage.

#### **Rheinland Certification**

#### **Rheinland Low Blue Light Certification**



Blue light has been shown to cause eye fatigue and discomfort. MSI now offers monitors with Rheinland Low Blue Light certification to ensure users' eye comfort and well-being. Please follow the instructions below to reduce

the symptoms from extended exposure to the screen and blue light.

- Place the screen 20 28 inches (50 70 cm) away from your eyes and a little below eye level.
- Consciously blinking the eyes every now and then will help to reduce eye strain after extended screen time.
- Take breaks for 20 minutes every 2 hours.
- Look away from the screen and gaze at a distant object for at least 20 seconds during breaks.
- Make stretches to relieve body fatigue or pain during breaks.
- Turn on the optional Low Blue Light function.

#### **Rheinland Flicker Free Certification**



- Rheinland has tested this product to ascertain whether the display produces visible and invisible flicker for the human eye and therefore strains the eyes of users.
- Rheinland has defined a catalog of tests, which sets out minimum standards at various frequency ranges. The
  test catalog is based on internationally applicable standards or standards common within the industry and
  exceeds these requirements.
- The product has been tested in the laboratory according to these criteria.
- The keyword "Flicker Free" confirms that the device has no visible and invisible flicker defined in this standard within the range of 0 3000 Hz under various brightness settings.
- The display will not support Flicker-Free when Anti Motion Blur/MPRT is enabled. (The availability of Anti Motion Blur/MPRT varies by product.)

#### **ENERGY STAR Certification**



ENERGY STAR is a program run by the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) to promote energy efficiency. This product qualifies for ENERGY STAR in the "factory default" settings through which power savings will be achieved. Changing the factory default picture settings or enabling other features will increase power consumption, which could exceed the limits necessary to qualify for ENERGY STAR rating.

For more information on ENERGY STAR, refer to <a href="https://www.energystar.gov/">https://www.energystar.gov/</a>.

### **Regulatory Notices**

#### **CE Conformity**

This device complies with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2014/30/EU), Low-voltage Directive (2014/35/EU), ErP Directive (2009/125/EC) and RoHS directive (2011/65/EU). This product has been tested and found to comply with the harmonized standards for Information Technology Equipment published under Directives of Official Journal of the European Union.

#### **FCC-B Radio Frequency Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the measures listed below:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

#### Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### Notice 2

Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

#### **MSI** Computer Corp.

901 Canada Court, City of Industry, CA 91748, USA 626-913-0828 www.msi.com

#### **WEEE Statement**

Under the European Union ("EU") Directive on Waste Electrical and Electronic Equipment, Directive 2012/19/EU, products of "electrical and electronic equipment" cannot be discarded as municipal waste anymore and manufacturers of covered electronic equipment will be obligated to take back such products at the end of their useful life.



#### **Chemical Substances Information**

In compliance with chemical substances regulations, such as the EU REACH Regulation (Regulation EC No. 1907/2006 of the European Parliament and the Council), MSI provides information of chemical substances in products at: https://csr.msi.com/global/index

#### **RoHS Statement**

#### Japan JIS C 0950 Material Declaration

A Japanese regulatory requirement, defined by specification JIS C 0950, mandates that manufacturers provide material declarations for certain categories of electronic products offered for sale after July 1, 2006. https://csr.msi.com/global/Japan-JIS-C-0950-Material-Declarations

#### **India RoHS**

This product complies with the "India E-waste (Management and Handling) Rule 2016" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

#### **Turkey EEE Regulation**

Conforms to the EEE Regulations of the Republic Of Turkey

#### **Ukraine Restriction of Hazardous Substances**

The equipment complies with the requirements of the Technical Regulation, approved by the Resolution of Cabinet of the Ministry of Ukraine as of 10 March 2017, № 139, in terms of restrictions for the use of certain dangerous substances in electrical and electronic equipment.

#### **Vietnam RoHS**

As from December 1, 2012, all products manufactured by MSI comply with Circular 30/2011/TT-BCT temporarily regulating the permitted limits for a number of hazardous substances in electronic and electric products.

#### **Green Product Features**

- Reduced energy consumption during use and stand-by
- Limited use of substances harmful to the environment and health
- · Easily dismantled and recycled
- Reduced use of natural resources by encouraging recycling
- · Extended product lifetime through easy upgrades
- Reduced solid waste production through take-back policy

#### **Environmental Policy'**



- The product has been designed to enable proper reuse of parts and recycling and should not be thrown away at its end of life.
- Users should contact the local authorized point of collection for recycling and disposing of their end-of-life products.
- Visit the MSI website and locate a nearby distributor for further recycling information.
- Users may also reach us at <u>gpcontdev@msi.com</u> for information regarding proper disposal, take-back, recycling, and disassembly of MSI products.

#### Warning!

Overuse of screens is likely to affect eyesight.

#### **Recommendations:**

- 1. Take a 10-minute break for every 30 minutes of screen time.
- 2. Children under 2 years of age should have no screen time. For children aged 2 years and over, screen time should be limited to less than one hour per day.

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#### **Technical Support**

If a problem arises with your product and no solution can be obtained from the user's manual, please contact your place of purchase or local distributor. Alternatively, please visit <a href="https://www.msi.com/support/">https://www.msi.com/support/</a> for further guidance.

#### **Documents / Resources**

MSI 3PB9 LCD Monitor [pdf] User Guide cc, 3PB9, 3PB9 LCD Monitor, 3PB9, LCD Monitor, Monitor

#### References

- ♣ Homepage | ENERGY STAR
- HDMI Cables Different Cable Types
- User Manual

Manuals+, Privacy Policy

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