

Optix Series

LCD Monitor

Optix MAG321QR (3DB9)

User Guide

Contents

Getting Started	3
Package Contents	3
Installing the Monitor Stand	4
Adjusting the Monitor	5
Monitor Overview	6
Connecting the Monitor to PC	8
OSD Setup	9
Navi Key	
Hot Key	9
OSD Menus	10
Gaming	10
Professional	12
Image	14
Input Source	14
Navi Key	15
Setting	16
Specifications	18
Preset Display Modes	20
Troubleshooting	21
Safety Instructions	22
TÜV Rheinland Certification	24
Regulatory Notices	25

Revision

V1.0, 2021/08

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	Optix MAG321QR	
Documentation	Quick Start Guide	
Documentation	Registration Card	
	Stand with Screw(s)	
Accessories	Stand Base with Screw(s)	
Accessories	Power Cord	
	Power Adapter	
	HDMI Cable (Optional)	
	DisplayPort Cable (Optional)	
Cables	USB Upstream Cable (for USB Type-B Upstream Port) (Optional)	
	USB Type-C Cable (Optional)	



1mportant

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

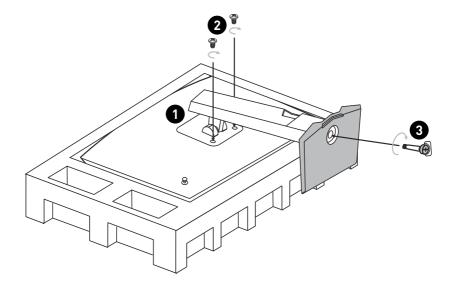
Installing the Monitor Stand

- 1. Leave the monitor in its protective foam packaging. Align the stand bracket to the monitor groove.
- 2. Tighten the stand bracket with screws.
- **3.** Connect the base to the stand and tighten the base screw to secure the base.
- 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.
- The groove for installing the stand bracket can also be used for wall mount. Please contact your dealer for proper wall mount kit.



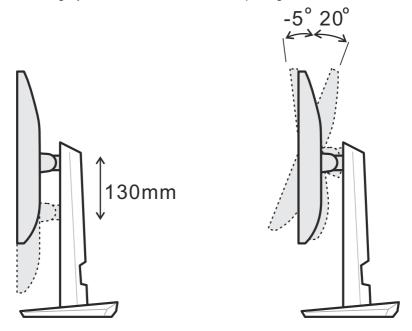
Adjusting the Monitor

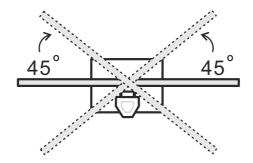
This monitor is designed to maximize your viewing comfort with its adjustment capabilities.



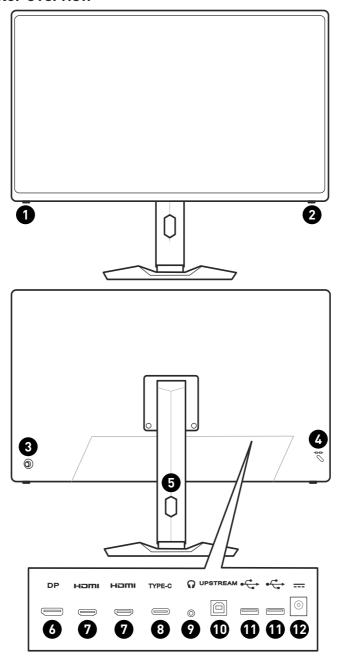
/! Important

- Avoid touching the display panel when adjusting the monitor.
- Please slightly tilt the monitor backwards before pivoting it.





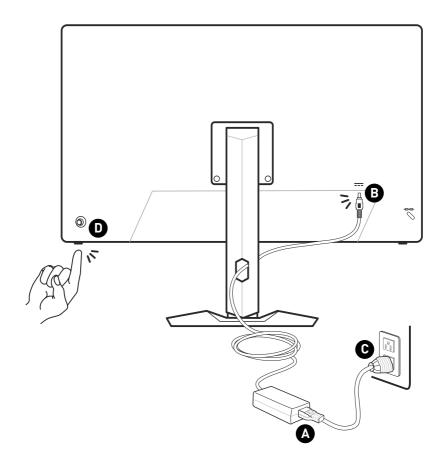
Monitor Overview



n	Масго Кеу
	To activate OSD Application.
2	Power Button
3	Navi Key
4	Kensington Lock
6	Cable Routing Hole
6	DisplayPort 1.2
7	HDMI 2.0 Port HDMI
8	USB Type-C Port
	This port supports DisplayPort Alternate (DP Alt) Mode and up to 5V/3A (15W) power delivery. It only carries video signals and doesn't support data transmission function.
9	Headphone Jack
1	USB 2.0 Type-B Upstream Port
	For USB Upstream Cable.
	Important To Monitor
	Check the package for USB Upstream Cable
	and connect it to the PC and monitor. Once
	this cable is connected, the USB Type-A Downstream Ports on the monitor will be
	ready for use.
•	USB 2.0 Type-A Port
1	Power 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 monitor power adapter & power cord. (Figure A)
- 4. Connect the power adapter 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.

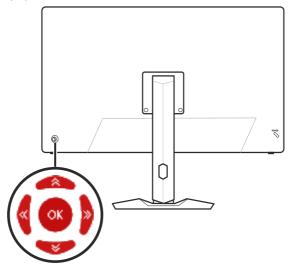


Important

All information is subject to change without prior notice.

Navi Key

The monitor comes with a Navi Key, a multi-directional control that helps navigate the On-Screen Display (OSD) menu.



Up/Down/Left/Right:

- · selecting function menus and items
- adjusting function values
- entering into/exiting from function menus

Press (OK):

- launching the On-Screen Display (OSD)
- · entering submenus
- confirming a selection or setting

Hot Key

- Users may enter into Game Mode, Smart Crosshair, KVM and Input Source function menus by moving the Navi Key up, down, left or right when the OSD menu is inactive.
- Users may customize their own Hot Keys to enter into different function menus.

OSD Menus



Gaming

1st Level Menu	2nd/3rd Level Menu	Description
Game Mode	User	All items can be adjusted by users.
		Use Up or Down Button to select and preview mode effects.
	Racing	Press the OK Button to confirm and
	RTS	apply your mode type.
	RPG	
Night Vision	OFF	This function optimizes background
	Normal	brightness and is recommended for FPS games.
	Strong	
	Strongest	
	A.I.	
Response Time	Normal	Users can adjust Response Time in any mode.
	Fast	Response Time will be grayed out
	Fastest	while MPRT is enabled.

1st Level Menu	2nd/3rd L	evel Menu	Description
MPRT	OFF ON		 When MPRT is enabled, Brightness cannot be enabled and will be grayed out. HDCR and MPRT cannot be enabled simultaneously. Response time will be grayed out while MPRT is enabled. MPRT has to be disabled while Adaptive-Sync is set to ON. MPRT is available when the refresh rate is over 85Hz.
Refresh Rate	OFF ON	Right Top Left Bottom Right Bottom Customize	Users can adjust Refresh Rate in any mode. Default Refresh Rate Location is Left Top. Location is adjustable in OSD Menu. Press the OK Button to confirm and apply your Refresh Rate Location. This monitor follows and works at the Operating System's preset Screen Refresh Rate.
Alarm Clock	OFF 15:00 30:00 45:00 60:00	Left Top Right Top Left Bottom Right Bottom Customize	Users can adjust Alarm Clock in any mode. After setting the time, press the OK Button to activate the timer. Default Alarm Clock Location is Left Top. Users can select their own location.

1st Level Menu	2nd/3rd Level Menu		Description
KVM	Auto (Default)		Auto allows the monitor to
	Upstream		automatically switch between USB input sources, such as keyboards,
	Type-C		mice or other USB devices.
			Users can also designate Upstream port or USB Type-C as the only USB signal source.
Smart Crosshair	Icon	None	Through AI algorithm, this function enhances the visibility of in-game crosshair.
			Users can select the color and position of the crosshair.
		1	
	Color	White	
		Red	
		Auto	
	Position		
	Reset		
Adaptive-Sync	orc OFF ON		Adaptive-Sync prevents screen
			tearing.
			MPRT will be disabled if Adaptive- Sync is enabled.

Professional

1st Level Menu	2nd Level Menu	Description
Pro Mode	User (Default)	All items can be adjusted by users.
	Anti-Blue	Use Up or Down Button to select and preview mode effects.
	Movie	Press the OK Button to confirm and apply
	Office	your mode type.
	sRGB	
	Eco	

1st Level Menu	2nd Level Menu	Description
Low Blue Light	OFF ON	Low Blue Light protects your eyes against blue light. When enabled, Low Blue Light adjusts the screen color temperature to a more yellow glow. Users can adjust Low Blue Light in any
		Mode. When Pro Mode is set to Anti-Blue, it is mandatory to enable Low Blue Light.
HDCR	OFF	Users can adjust HDCR in any mode.
	ON	HDCR enhances image quality by increasing the contrast of images.
		When HDCR is set to ON, Brightness will be grayed out.
		HDCR and MPRT cannot be enabled simultaneously.
MPRT	OFF	When MPRT is enabled, Brightness cannot be enabled and will be grayed out.
ON	ON	HDCR and MPRT cannot be enabled simultaneously.
		Response time will be grayed out while MPRT is enabled.
		MPRT has to be disabled while Adaptive- Sync is set to ON.
		MPRT is available when the refresh rate is over 85Hz.
Image Enhancement	OFF	Image Enhancement enhances image edges to improve their acutance.
Limancement	Weak	Users can adjust Image Enhancement in
	Medium	any mode.
	Strong	
	Strongest	

Image

1st Level Menu	2nd/3rd Level Menu		Description
Brightness	0-100		Users can adjust Brightness in User, RTS, RPG and Anti-Blue mode.
			Brightness will be grayed out when MPRT or HDCR are enabled.
Contrast	0-100		Users can adjust Contrast in any mode.
Sharpness	0-5		Users can adjust Sharpness in any mode.
			Sharpness improves clarity and details of images.
Color	Cool		Use Up or Down Button to select
Temperature	Normal (Default)		and preview mode effects. • Press the OK Button to confirm
	Warm		and apply your mode type.
	Customization	R (0-100)	Users can adjust Color Temperature in Customization
		G (0-100)	mode.
		B (0-100)	
Screen Size	Auto (Default)		Users can adjust Screen Size in
	4:3		any mode, any resolution and any screen refresh rate.
	16:9		

Input Source

1st Level Menu	2nd Level Menu	Description
HDMI1		Users can adjust Input Source in any mode.
HDMI2		
DP		
Type-C		

Auto Scan	OFF	• Users can use the Navi Key to select Input
	ON	 Source at below status: 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
Up / Down / Left	OFF	Up Button default is Game Mode.
/ Right	Brightness	Down Button default is Smart Crosshair.
	Game Mode	Left Button default is KVM.
	Alarm Clock	 Right Button default is Input Source. All Navi Key items can be adjusted via
	Smart Crosshair OSD Menus.	OSD Menus.
	Input Source	
	Refresh Rate	
	Info. On Screen	
	Night Vision	
	KVM	

Setting

1st Level Menu	2nd Level Menu	Description	
Language	繁體中文	Users have to press the OK Button to	
	English (Default)	confirm and apply the Language setting. • Language is an independent setting.	
	Français	Users' own language setting will override	
	Deutsch	the factory default. When users set Reset to Yes, Language will not be changed.	
	Italiano		
	Español		
	한국어		
	日本語		
	Русский		
	Português		
	简体中文		
	Bahasa Indonesia		
	Türkçe		
	(More languages coming soon)		
Transparency	0~5	Users can adjust Transparency in any mode.	
OSD Time Out	5~30s	Users can adjust OSD Time Out in any mode.	
RGB LED	OFF	• Users can adjust RGB LED to ON or OFF.	
	ON (Default)		
Power Button	OFF	When set to OFF, users can press the power button to turn off the monitor.	
	Standby	When set to Standby, users can press the power button to turn off the panel and backlight.	
Info. On Screen	OFF (Default)	The information of the monitor status will	
	ON	 be shown on the right side of the screen. Users can enable or disable the Info. On Screen. 	

1st Level Menu	2nd Level Menu	Description	
HDMI CEC	OFF	HDMI CEC (Consumer Electronics Control)	
	ON	supports Sony PlayStation®, Nintendo® Switch™, Xbox Series X/S, and various audio-visual devices that are CEC-capable	
		• If HDMI CEC is set to ON:	
		 The monitor will automatically power on when the CEC device is turned on. The CEC device will enter power saving mode when the monitor is turned off. 	
		 When Sony PlayStation®, Nintendo® Switch™, or Xbox Series X/S is connected, Game and Pro Mode will be automatically set to User mode (Default) and can be adjusted to users' preferred modes later. 	
Reset	YES	Users can Reset and restore settings to original OSD Default in any mode.	
	NO		

Specifications

Model	Optix MAG321QR		
Size	31.5 inch		
Curvature	Flat		
Panel Type	IPS		
Resolution	2560 x 1440 @165Hz		
Aspect Ratio	16:9		
Brightness (nits)	350 (typ.)		
USB Type-C Power Delivery	5V/3A		
Contrast Ratio	1200:1		
Refresh Rate	165Hz		
Response Time	1ms (MPRT)		
1/0	 HDMI 2.0 Port x2 DisplayPort 1.2 x1 USB Type-C Port x1 USB 2.0 Type-A Port x2 USB 2.0 Type-B Upstream Port x1 Headphone Jack x1 		
View Angles	178°(H) , 178°(V)		
DCI-P3*/ sRGB	93% / 126%		
Surface Treatment	Anti-glare		
Display Colors	1.07B (8 bit + FRC)		
Monitor Power Options	19V 4.74A		
Power Adapter Specs	Model: DA-90J19		
Power Input	100~240Vac, 50~60Hz, 1.5A		
Power Output	19V 4.74A		
Adjustment (Tilt)	-5° ~ 20°		
Adjustment (Height)	0 ~ 130mm		
Adjustment (Swivel)	-45° ~ 45°		

Model		Optix MAG321QR		
Kensington Lock		Yes		
VESA Mounting		• Plate Type: 100 x 100 mm		
		• Screw Type: M4 x 10 mm		
		Thread Diameter: 4 mm		
		• Thread Pitch: 0.7 mm		
		Thread Length: 10 mm		
Dimension (W x H x D)		716.2 x 606.5 x 233.7 mm		
Weight		8.23 Kg (net) / 11.28 Kg (gross)		
		• Temperature: 0°C to 40°C		
	Operating	Humidity: 20% to 90%, non-condensing		
Environment		• Altitude: 0 ~ 5000m		
	Storage	• Temperature: -20°C to 60°C		
		• Humidity: 10% to 90%, non-condensing		

^{*} Based on CIE1976 test standards.

Preset Display Modes

Character of	Bereloften		Optix MAG321QR	
Standard	Resolution		HDMI	DP/ Type-C
VGA	640x480	@60Hz	V	V
		@67Hz	V	V
		@72Hz	V	V
		@75Hz	V	V
Dos-Mode	720x480	@60Hz	V	V
	720x576	@50Hz	V	V
SVGA	800x600	@56Hz	V	V
		@60Hz	V	V
		@72Hz	V	V
		@75Hz	V	V
XGA	1024x768	@60Hz	V	V
		@70Hz	V	V
		@75Hz	V	V
SXGA	1280x1024	@60Hz	V	V
		@75Hz	V	V
WXGA+	1440x900	@60Hz	V	V
WSXGA+	1680x1050	@60Hz	V	V
Full HD	1920x1080	@60Hz	V	V
QHD	2560x1440	@60Hz	V	V
		@120Hz	V	Х
		@144Hz	V	V
		@165Hz	X	V
Video	480P		V	V
Timing Resolution	576P		V	V
resolution	720P		V	V
	1080P @60Hz		V	V
	1080P @120Hz		V	V
	2160P @30Hz		V	V
	2160P @50Hz		V	V
	2160P @60Hz	2	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.

Battery

Please take special precautions if this device comes with a battery.

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, which can result in an explosion.
- Avoid leaving a battery in an extremely high temperature or extremely low air pressure environment that can result in an explosion or the leakage of flammable liquid or gas.
- Do not ingest battery. If the coin/button cell battery is swallowed, it can cause severe internal burns and can lead to death. Keep new and used batteries away from children.

European Union:



Batteries, battery packs, and accumulators should not be disposed of as unsorted household waste. Please use the public collection system to return, recycle, or treat them in compliance with the local regulations.

Taiwan:



廢電池請回收

For better environmental protection, waste batteries should be collected separately for recycling or special disposal.

California. USA:



The button cell battery may contain perchlorate material and requires special handling when recycled or disposed of in California. For further information please visit: https://dtsc.ca.gov/perchlorate/

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 into 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.

TÜV Rheinland Certification

TÜV Rheinland Low Blue Light Certification

Blue light has been shown to cause eye fatigue and discomfort. MSI now offers monitors with TÜV 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.



Floker Free

- 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.
- Use the Reader/Anti-Blue mode or turn on the optional Low Blue Light function.

TÜV Rheinland Flicker Free Certification

- TÜV 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.
- TÜVISTeinland • TÜV Rheinland has defined a catalogue of tests, CERTIFIED APPRILIA DEL which sets out minimum standards at various frequency ranges. The test catalogue 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 products.)

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

WFFF 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 the information of chemical substances in products at:

https://storage-asset.msi.com/html/popup/csr/evmtprtt_pcm.html

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://storage-asset.msi.com/html/popup/csr/cemm jp.html

India RoHS

This product complies with the "India E-waste (Management and Handling) Rule 2011" 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 requirements of the Technical Regulation, approved by the Resolution of Cabinet of Ministry of Ukraine as of December 3, 2008 № 1057, 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 gpcontdev@msi.com 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.

Copyright and Trademarks Notice

Copyright © Micro-Star Int'l Co., Ltd. All rights reserved. The MSI logo used is a registered trademark of Micro-Star Int'l Co., Ltd. All other marks and names mentioned may be trademarks of their respective owners. No warranty as to accuracy or completeness is expressed or implied. MSI reserves the right to make changes to this document without prior notice.

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 https://www.msi.com/support/ for further guidance.