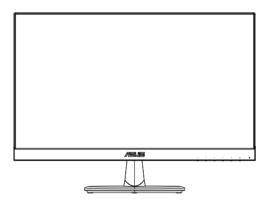


# VT229 Series

## **LCD Monitor**

## **User Guide**





#### Table of contents

Notic	es		iii	
Feder	ral Comn	nunications Commission Statement	iii	
Safet	y informa	ation	iv	
Care	& Cleani	ng	vi	
1.1	Welco	me!	1-1	
1.2	Packa	Package contents1-		
1.3	Assembling the monitor base1-2			
1.4	Connecting cables1-			
1.5	Monito	or introduction	1-3	
	1.5.1	Front of the LCD monitor	1-3	
	1.5.2	Rear of the LCD monitor	1-4	
2.1	Detaching the base/stand (for VESA wall mount)2-1			
2.2	Adjusting the monitor2-		2-2	
3.1	Touch Operation3-		3-1	
4.1	OSD (On-Screen Display) menu		4-1	
	4.1.1	How to reconfigure	4-1	
	4.1.2	OSD Function Introduction	4-1	
4.2	Specif	ications	4-9	
4.3	Troubl	leshooting (FAQ)	4-10	
4.4	Supported Timing List4-1			

Copyright © 2018 ASUSTeK COMPUTER INC. All Rights Reserved.

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTEK COMPUTER INC. ("ASUS").

Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

ASUS PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

#### **Notices**

#### **Federal Communications Commission Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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 manufacturer's instructions, 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 following measures:

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

#### **Canadian Department of Communications Statement**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

#### **Declaration of 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, these harmonized standards published under Directives of Official Journal of the European Union.

#### Safety information

- Before setting up the monitor, carefully read all the documentation that came with the package.
- To prevent fire or shock hazard, never expose the monitor to rain or moisture
- Never try to open the monitor cabinet. The dangerous high voltages inside the monitor may result in serious physical injury.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- Slots and openings on the back or top of the cabinet are provided for ventilation. Do not block these slots. Never place this product near or over a radiator or heat source unless proper ventilation is provided.
- 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 supply to your home, consult your dealer or local power company.
- Use the appropriate power plug which complies with your local power standard.
- Do not overload power strips and extention cords. Overloading can result in fire or electric shock.
- Avoid dust, humidity, and temperature extremes. Do not place the monitor in any area where it may become wet. Place the monitor on a stable surface.
- Unplug the unit during a lightning storm or if it will not be used for a long period of time. This will protect the monitor from damage due to power surges.
- Never push objects or spill liquid of any kind into the slots on the monitor cabinet.
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100-240V AC.
- If you encounter technical problems with the monitor, contact a qualified service technician or your retailer.

• The wall socket shall be installed near the equipment and shall be easily accessible.

Remark: Suitable for entertainment purposes at specially controlled luminous indoor environments, to avoid disturbing reflections from the screen.

#### **Care & Cleaning**

- Before you lift or reposition your monitor, it is better to disconnect the cables and power cord. Follow the correct lifting techniques when positioning the monitor. When lifting or carrying the monitor, grasp the edges of the monitor. Do not lift the display by the stand or the cord.
- Cleaning. Turn your monitor off and unplug the power cord. Clean the monitor surface with a lint-free, non-abrasive cloth. Stubborn stains may be removed with a cloth dampened with mild cleaner.
- Avoid using a cleaner containing alcohol or acetone. Use a cleaner intended for use with the LCD. Never spray cleaner directly on the screen, as it may drip inside the monitor and cause an electric shock.

#### The following symptoms are normal with the monitor:

- The screen may flicker during the initial use due to the nature of the fluorescent light. Turn off the Power Switch and turn it on again to make sure that the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- When the same image is displayed for hours, an afterimage of the previous screen may remain after switching the image. The screen will recover slowly or you can turn off the Power Switch for hours.
- When the screen becomes black or flashes, or cannot work anymore, contact your dealer or service center to fix it. Do not repair the screen by yourself!

#### Conventions used in this guide



WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you MUST follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.



As an Energy Star® Partner, our company has determined that this product meets the Energy Star® guidelines for energy efficiency.

#### Where to find more information

Refer to the following sources for additional information and for product and software updates.

#### 1. ASUS websites

The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to http://www.asus.com

#### 2. Optional documentation

Your product package may include optional documentation that may have been added by your dealer. These documents are not part of the standard package.

#### 1.1 Welcome!

Thank you for purchasing the ASUS® VT229 Series LCD monitor!

The latest widescreen LCD monitor from ASUS provides a crisper, broader, and brighter display, plus a host of features that enhance your viewing experience.

With these features, you can enjoy the convenience and delightful visual experience that the VT229 Series brings you!

#### 1.2 Package contents

Check your VT229 Series LCD package for the following items:

- ✓ LCD monitor.
- ✓ Monitor base
- ✓ Quick start quide
- ✓ 1 x Power cord
- √ 1 x VGA cable
- √ 1 x Audio cable (optional)
- √ 1 x HDMI cable (optional)
- √ 1 x USB type-B cable (only for touch function)
- √ 1 x Warranty card



If any of the above items is damaged or missing, contact your retailer immediately.

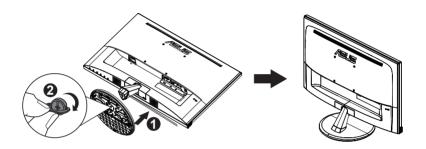
#### 1.3 Assembling the monitor base

#### To assemble the monitor base:

- Place the display flat on a cloth on the table. Then attach the base to the arm and fix with the screw to join them tightly. You can easily tighten the screw by fingers.
- 2. Adjust the monitor to the angle that is most comfortable for you.



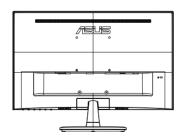
We recommend that you cover the table surface with soft cloth to prevent damage to the monitor.



## 1.4 Connecting cables

#### To connect cables:

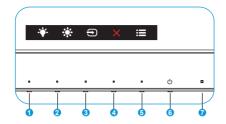
Connect the cables you need based on chapter 1.5.2, page 1-4.



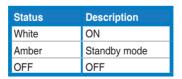
1-2

#### 1.5 Monitor introduction

#### 1.5.1 Front of the LCD monitor

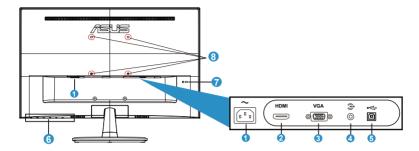


- 1. \* Shortcut key2:
  - This is a Shortcut key. The default setting is Blue Light Filter.
- 2. Shortcut key1:
  - This is a Shortcut key. The default setting is Brightness.
- 3. Input Select:
  - Input Select: Use this hotkey to switch from input signal.
- 4. X Close Button:
  - Exit the OSD menu.
- 5 **≡** MENU Button:
  - Press this button to enter the OSD menu.
- 6. O Power Button:
  - Press this button to turn the monitor on/off.
- 7. Power Indicator:
  - The color definition of the power indicator is as the table below.



ASUS LCD Monitor VT229

#### 1.5.2 Rear of the LCD monitor



- 1. AC-IN port
- 2. HDMI port
- 3. VGA port
- 4. Earphone Out port
- 5. USB type-B port (only for touch function)
- 6. Control buttons
- 7. Kensington Lock
- 8. Screw holes for VESA Wall Mount

## 2.1 Detaching the base/stand (for VESA wall mount)

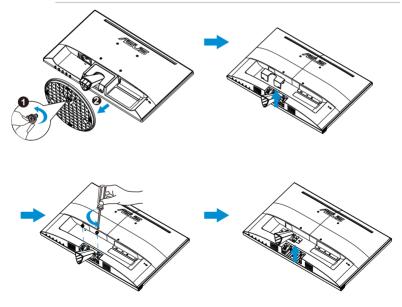
The detachable stand of the LCD monitor is specially designed for VESA wall mount.

#### To detach the arm/stand:

- Disconnect power and signal cables. Carefully put the front of the monitor face down on a clean table.
- 2. Use your finger to loosen the screw located at the bottom of the base, and remove the base from the stand. And then remove the hinge cover from monitor body by using your fingers.
- 3. Use a screwdriver to remove the four screws on the arm, and then detach the arm/stand from the monitor.



- We recommend that you cover the table surface with soft cloth to prevent damage to the monitor.
- Hold the stand of the monitor while removing the screws.

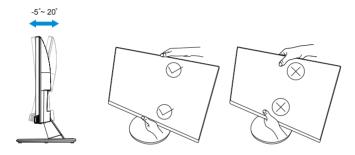




- The VESA wall mount kit (100 x 100 mm) is purchased separately.
- Use only the UL Listed Wall Mount Bracket with minimum weight/ load 4.8kg according to the model listed in the specification table (Screw size: M4 x 10 mm).

#### 2.2 Adjusting the monitor

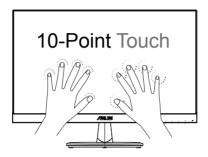
- For optimal viewing, we recommend that you look at the full face of the monitor, then adjust the monitor to the angle that is most comfortable for you.
- Hold the stand to prevent the monitor from falling while changing its angle.
- You can adjust the monitor's angle from -5° to 20°.
- Do not touch the Touch screen when you change the angle. It may cause damage or break the Touch screen and LCD screen.



2-2 Chapter 2: Setup

#### 3.1 Touch Operation

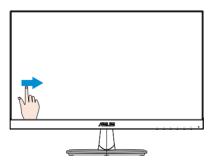
- ASUS VT229 is a touch monitor which uses 10 point touch panel technology. Please use with latest OS like Windows 10.
- You can use either single finger touch, or multi-finger touch up to maximum simultaneous 10 touch points.



- To activate touch functionality, you need to connect the display with the provided USB type-B cable to your computer.
- You do not need to install any other software.
- ASUS VT229 offers you groovy touch gestures like tap, grab, pinch, rotate, zoom, swipe, etc. The gestures allow you to launch programs and access the setting of your ASUS VT229 Display. The functions can be activated by using the hand gestures to ASUS VT229.

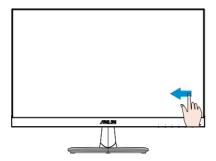
#### Left edge swipe (on Windows 7/8/8.1/10 only)

Swipe from the left edge of the screen to shuffle your running apps.



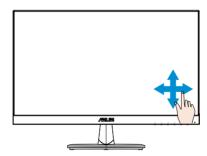
#### Right edge swipe (on Windows 7/8/8.1/10 only)

Swipe from the right edge of the screen to launch the Charm bar.



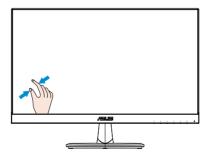
#### Finger slide (on Windows 7/8/8.1/10 only)

Slide your finger to scroll up and down and slide your finger to pan the screen left or right.



#### Zoom out

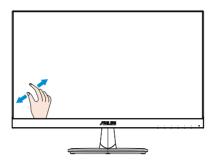
Bring together your two fingers on the touch panel.



#### Zoom in

Spread apart your two fingers on the touch panel.

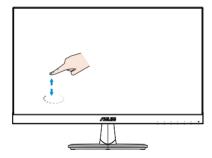
3-2



#### Single Tap/Double tap

#### Single Tap

Touch the target on the screen with one fingertip for one quick tap, then release.

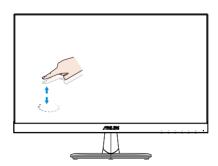


#### **Double Tap**

Touch the target on the screen with one fingertip for two quick taps, then release.

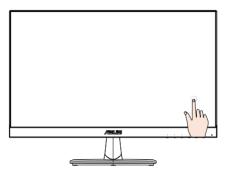
Tap an app to launch it (on Windows 7/8/8.1/10 only).

Double-tap an item to launch it.



#### Tap and hold

To move an app, tap and hold the app tile and drag it to a new location. To close an app (on Windows 7/8/8.1/10 only), tap and hold the top side of the running app and drag it down to the bottom of the screen to close it.





NOTE:• You can access to OS website to get more description on touch operation.

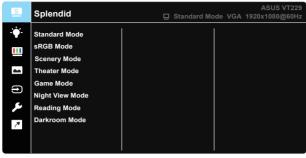
- Do not touch the screen with sharp objects, it may result in damage, and void warranty.
- Do not push hard, or rest anything on the glass surface (if in horizontal position) as it will damage the screen and void warranty.
- Please keep your hands clean and dry before touching the screen to ensure fluid touch operation.
- The touch function works only on OS and applications which support touch functions.

Chapter 3: Touch operation

3-4

#### 4.1 OSD (On-Screen Display) menu

#### 4.1.1 How to reconfigure



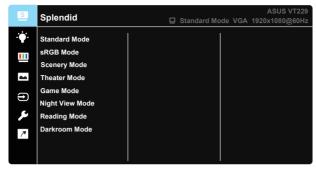


- 1. Press the [MENU] button to activate the OSD menu.
- Press ▼ and ▲ buttons to toggle between options in the Menu. As you move from one icon to another, the option name is highlighted.
- 3. To select the highlighted item on the menu press the ✓ button.
- 4. Press ▼ and ▲ buttons to select the desired parameter.
- Press the 
   button to return to previous menu or 
   to close OSD menu.

#### 4.1.2 OSD Function Introduction

#### 1. Splendid

This function contains eight sub-functions that you can select for your preference. Each mode has the Reset selection, allowing you to maintain your setting or return to the preset mode.





- Standard Mode: This is the best choice for document editing with SPLENDID™ Video Enhancement.
- sRGB: This is the best choice for viewing photos and graphics from PCs.
- Scenery Mode: This is the best choice for scenery photo displaying with SPLENDID™ Video Enhancement.
- Theater Mode: This is the best choice for movie watching with SPLENDID™ Video Enhancement.
- Game Mode: This is the best choice for game playing with SPLENDID™ Video Enhancement.
- Night View Mode: This is the best choice for playing darkscene game or watching movie with SPLENDID™ Video Enhancement.
- Reading Mode: This is the best choice for book reading.
- Darkroom Mode: This is the best choice for a weak ambient light environmen.

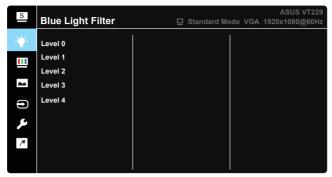


In the **Standard Mode**, the **Saturation**, **Skin Tone**, **Sharpness**, and **ASCR** functions are not user-configurable.

In the sRGB, the Brightness, Contrast, Saturation, Color Temp., Skin Tone, Sharpness, and ASCR functions are not user-configurable.

#### 2. Blue Light Filter

Adjust the energy level of blue light emitted from LED backlight.





- Level 0: No change.
- Level 1~4: The higher the level, the more blue light will be reduced.



- When Blue Light Filter is activated, the default settings of Standard Mode will be automatically imported.
- Between Level 1 to Level 3, the Brightness function is userconfigurable.
- Level 4 is optimized setting. It is compliance with TUV Low Blue Light Certification. The Brightness function is not user-configurable.

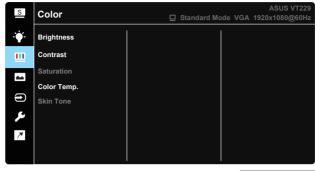


Please refer to the following to alleviate eve strains:

- Users should take some time away from the display if working for long hours. It is advised to take short breaks (at least 5 mins) after around 1 hour of continuous working at the computer. Taking short and frequent breaks is more effective than a single longer break.
- To minimize eye strain and dryness in your eyes, users should rest the eye periodically by focusing on objects that are far away.
- Eye exercises can help to reduces eye strain. Repeat these
  exercises often. If eye strain continues please consult a physician.
  Eye exercises: (1) Repeating look up and down (2) Slowly roll your
  eyes (3) Move your eyes diagonal.
- High energy blue light may lead to eye strain and AMD (Age-Related Macular Degeneration). Blue light Filter to reduce 70% (max.) harmful blue light to avoiding CVS (Computer Vision Syndrome).

#### 3. Color

Select the image color you like from this function.





- Brightness: The adjusting range is from 0 to 100.
- **Contrast**: The adjusting range is from 0 to 100.
- **Saturation**: The adjusting range is from 0 to 100.
- Color Temp.: Contain three preset color modes (Cool, Normal, Warm) and one User Mode.
- Skin Tone: Contain three color modes including Reddish, Natural, and Yellowish.



In the **User Mode**, colors of **R (Red)**, **G (Green)**, and **B (Blue)** are userconfigurable; the adjusting range is from  $0 \sim 100$ .

#### 4. Image

You can adjust the image Sharpness, Trace Free, Aspect Control, VividPixel, ASCR, Position, Focus and Auto Adjust from this main function.





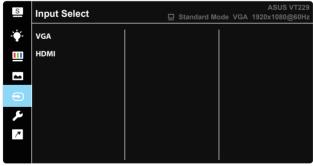
- Sharpness: Adjust the picture sharpness. The adjusting range is from 0 to 100. (Only disable for selecting "Standard Mode" and "sRGB Mode" in Splendid menu.)
- Trace Free: Speeds up the response time by Over Drive technology. The adjusting range is from lower 0 to faster 100.
- Aspect Control: Adjust the aspect ratio to "Full", "4:3", "OverScan".
- VividPixel: ASUS Exclusive Technology that brings lifelike visuals for crystal-clear and detail-oriented enjoyment. The adjusting range is from 0 to 100.
- ASCR: Select ON or OFF to enable or disable dynamic contrast ratio function. (ASCR: ASUS Smart Contrast Ratio. Disabled at "Standard Mode", "sRGB Mode" and "Reading Mode.)
- Position: Adjust the horizontal postition (H-Position) and the vertical position (V-Position) of the image. The adjusting range is from 0 to 100. (Only available for VGA input.)
- Focus: Reduce Horizonal-line noise and Vertical-line noise of the image by adjusting (Phase) and (Clock) separately. The adjusting range is from 0 to 100. (Only available for VGA input.)
- Auto Adjust: Automatically adjust the image to its optimized position, clock, and phase. (Only available for VGA input.)



4:3 is only available when input source is in 4:3 format.

#### 5. Input Select

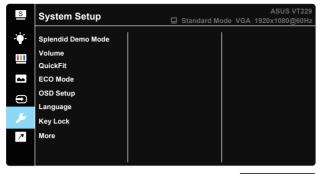
Select the input source from VGA, HDMI.



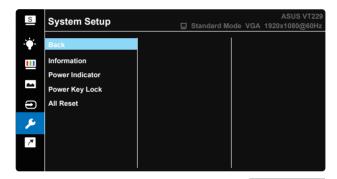


#### 6. System Setup

Adjust the system configuration.







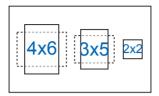


- Splendid Demo Mode: Activate the demo mode for the Splendid function.
- Volume: Adjust the output volume level.
- QuickFit: Contains two patterns: (1) Grid (2) Photo size.
  - Grid patterns: The grid patterns facilitate designers and users to organize content and layout on a page and achieve a consistent look and feel.





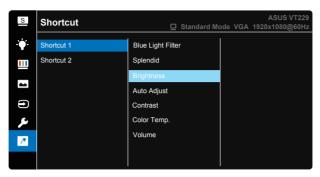
Photo size: The various real photo sizes displayed in the QuickFit function provides photographers and other users to accurately view and edit their photos in real size on the screen.



- **ECO Mode**: Activate the ecology mode for power saving.
- OSD Setup: Adjusts the OSD Timeout, DDC/CI, and Transparency of the OSD screen.
- Language: Select OSD language. The selections are: English, French, German, Spanish, Italian, Dutch, Russian, Poland, Czech, Croatia, Hungary, Romania, Portugal, Turkey, Simplified Chinese, Traditional Chinese, Japanese, Korean, Persian, Thai and Indonesian.
- Key Lock: Disable all key functions. Pressing the second button on the right for more than five seconds to disable key lock function
- More: Return the next page of System Setup.
- Back: Return the previous page of System Setup.
- **Information**: Displays the monitor information.
- Power Indicator: Turn the power LED indicator on/off.
- Power Key Lock: To disable / enable power key.
- All Reset: Selects "Yes" to revert all settings to the factory default mode.

#### 7. Shortcut

Selecting this option allows you to set one shortcut key.





- **Shortcut 1**: User can select from "Blue Light Filter" "Splendid", "Brightness", "Auto Adjust", "Contrast", "Color Temp.", "Volume", and set as shortcut key. The default setting is Brightness.
- Shortcut 2: User can select from "Blue Light Filter" "Splendid",
   "Brightness", "Auto Adjust", "Contrast", "Color Temp.", "Volume",
   and set as shortcut key. The default setting is Blue Light Filter.

## 4.2 Specifications

Model	VT229H		
Panel Size	21.5"W(54.61 cm)		
Max. Resolution	1920 x 1080		
Brightness (Typ.)	250cd/m <sup>2</sup>		
Intrisinc Contrast Ratio (Typ.)	1000:1		
Viewing Angle (CR=10) (Typ.)	≥178°(H) / ≥178°(V)		
Display Colors	16.7 M (6bit+FRC)		
Response Time(Typ.)	5ms		
DVI input	No		
HDMI input	Yes		
D-Sub input	Yes		
USB type-B port(only for touch function)	Yes		
Power ON Consumption	18.56 W		
Note	base on EPA7.0		
Power Saving Mode	< 0.5 W		
Power OFF Mode	< 0.5 W		
Tilt	-5° ~ +20°		
VESA Wall Mounting	Yes (100mm x 100mm)		
Phys. Dimension (WxHxD)	491.5 x 367.7 x 204.4mm		
Box Dimension (WxHxD)	558 x 425 x 137mm		
Net Weight (Esti.)	3.7Kg		
Gross Weight (Esti.)	6.0Kg		
Voltage Rating	AC 100~240V(Built-in)		

<sup>\*</sup>Specifications subject to change without notice.

## 4.3 Troubleshooting (FAQ)

Problem	Possible Solution
Power LED is not ON	<ul> <li>Press the  button to check if the monitor is in the ON mode.</li> <li>Check if the power cord is properly connected to the monitor and the power outlet.</li> </ul>
The power LED lights Amber and there is no screen image	<ul> <li>Check if the monitor and the computer are in the ON mode.</li> <li>Make sure the signal cable is properly connected the monitor and the computer.</li> <li>Inspect the signal cable and make sure none of the pins are bent.</li> <li>Connect the computer with another available monitor to check if the computer is properly working.</li> </ul>
Screen image is too light or dark	Adjust the Contrast and Brightness settings via OSD.
Screen image is not centered or sized properly	Press the auto button to automatically adjust the image.     Adjust the H-Position or V-Position settings via OSD.
Screen image bounces or a wave pattern is present in the image	<ul> <li>Make sure the signal cable is properly connected to the monitor and the computer.</li> <li>Move electrical devices that may cause electrical interference.</li> </ul>
Screen image has color defects (white does not look white)	<ul> <li>Inspect the signal cable and make sure that none of the pins are bent.</li> <li>Perform Reset via OSD.</li> <li>Adjust the R/G/B color settings or select the Color Temperature via OSD.</li> </ul>
Screen image is blurry or fuzzy	<ul> <li>Press the auto button to automatically adjust the image (for VGA mode only).</li> <li>Adjust the Phase and Clock settings via OSD.</li> </ul>
No sound or sound is low	<ul> <li>Make sure the earphone cable is properly connected to the monitor.</li> <li>Adjust the volume settings of both your monitor and computer.</li> <li>Make sure the computer sound card driver is properly installed and activated.</li> <li>Make sure the audio source is correct on the OSD.</li> </ul>

4-10 Chapter 4: General Instruction

### 4.4 Supported Timing List

#### **PC Supported Primary Timing**

Resolution	Refresh Rate	Horizontal Frequency
640x480	60Hz	31.469kHz
640x480	72Hz	37.861kHz
640x480	75Hz	37.5kHz
800x600	56Hz	35.156kHz
800x600	60Hz	37.879kHz
800x600	72Hz	48.077kHz
800x600	75Hz	46.875kHz
1024x768	60Hz	48.363kHz
1024x768	70Hz	56.476kHz
1024x768	75Hz	60.023kHz
1152x864	75Hz	67.5kHz
1280x960	60Hz	60kHz
1280x1024	60Hz	63.981kHz
1280x1024	75Hz	79.976kHz
1440x900	60Hz	55.935kHz
1440x900	75Hz	70.635kHz
1680x1050	60Hz	65.29kHz
1920x1080	60Hz	67.5kHz

#### IBM Modes, Factory Preset Timing

Resolution	Refresh Rate	Horizontal Frequency
640x350	70Hz	31.469kHz
720x400	70Hz	31.469kHz

#### MAC Modes, Factory Preset Timing

MAC Modes, Factory Preset Tilling			
Resolution	Refresh Rate	Horizontal Frequency	
640x480	67Hz	35kHz	
832x624	75Hz	49.725kHz	

#### VESA Modes, User Available Timing

Resolution	Refresh Rate	Horizontal Frequency
848x480	60Hz	31.02kHz
1280x720(RB)	60Hz	44.444kHz
1280x720	60Hz	44.772kHz
1280x720	75Hz	56.456kHz
1280x768(RB)	60Hz	47.396kHz
1280x800(RB)	60Hz	49.306kHz
1280x800	60Hz	49.702kHz
1280x800	75Hz	62.795kHz
1366x768	60Hz	47.712kHz
1440x900(RB)	60Hz	55.469kHz
1440x900	75Hz	70.635kHz
1680x1050(RB)	60Hz	64.674kHz
1920x1080	60Hz	66.587kHz

#### **SD/HD Timings (HDMI input only)**

HDMI 1.3,CEA-861B Formats, SD/HD Supported Primary Timings of (HDMI input only)

Resolution	Refresh Rate	Horizontal Frequency
640x480P	59.94 / 60Hz	31.469 / 31.5kHz
720x480P	59.94 / 60Hz	31.469 / 31.5kHz
720x576P	50Hz	31.25kHz
1280x720P	50Hz	37.5kHz
1280x720P	59.94 / 60Hz	44.955 /45kHz
1920x1080i	50Hz	28.125kHz
1920x1080i	59.94 / 60Hz	33.716 / 33.75kHz

HDMI 1.3,CEA-861B Formats, SD/HD Supported Optional Timings of (HDMI input only)

Resolution	Refresh Rate	Horizontal Frequency
1440x480P	59.94 / 60Hz	31.469 / 31.5kHz
1440x576P	50Hz	31.25kHz
1920x1080P	50Hz	56.25kHz
1920x1080P	59.94 / 60Hz	67.433 / 67.5kHz

<sup>\*</sup> The modes not listed in the above tables may not be supported. For optimal resolution, we recommend that you choose a mode listed in the above tables.

4-12 Chapter 4: General Instruction