

VP239 Series LCD Monitor

User Guide

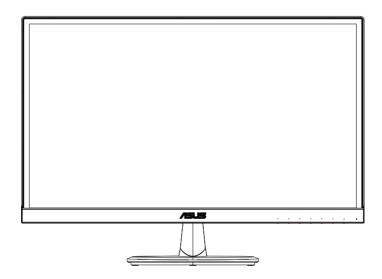




Table of contents

| Notic | es | | iii |
|-------|-------------------------|--|------|
| Safet | ty informa | ation | iv |
| Care | & Cleani | ng | vi |
| 1.1 | Welco | me! | 1-1 |
| 1.2 | Packa | ge contents | 1-1 |
| 1.3 | Assembling the monitor1 | | |
| 1.4 | Conne 1.4.1 | Rear of the LCD monitor | |
| 1.5 | 1.5.1 | Using the Controls button QuickFit Function | 1-4 |
| 2.1 | Detach | ning the arm/stand (for VESA wall mount) | 2-1 |
| 2.2 | Adjust | ting the monitor | 2-2 |
| 3.1 | | On-Screen Display) menu How to reconfigure OSD Function Introduction | 3-1 |
| 3.2 | Specif | ications | 3-10 |
| 3.3 | Troubl | leshooting (FAQ) | 3-11 |
| 3.4 | Suppo | orted Timina List | 3-12 |

Copyright © 2014 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, and
- 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.



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

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.

Made in China

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 extension 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.
- The socket-outlet shall be installed near the equipment and shall be easily accessible
- If you encounter technical problems with the monitor, contact a qualified servic er.
- Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.

WARNING

Usage of other than specified head- or earphones can result in hearing loss due to excessive sound pressures.

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.

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® 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 monitor brings you!

1.2 Package contents

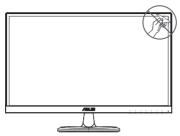
Check your package for the following items:

- ✓ LCD Monitor
- ✓ Monitor Base
- ✓ Quick Start Guide
- ✓ Warranty Card
- ✓ 1x Power Cord
- √ 1x Audio Cable (option)
- √ 1x HDMI Cable (option)
- ✓ 1x VGA Cable
- √ 1x DVI Cable (option)



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

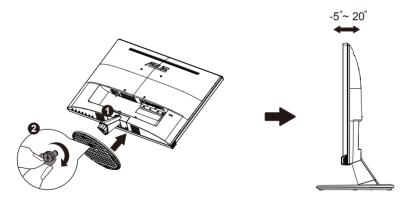




1.3 Assembling the monitor

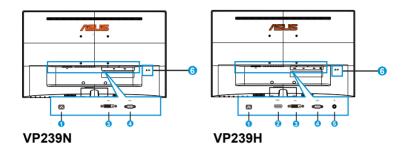
To assemble the monitor:

- 1. 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.



1.4 Connect cables

1.4.1 Rear of the LCD monitor

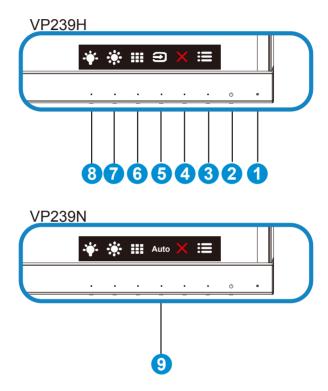


- 1. AC-IN Port
- 2. HDMI Port
- 3. DVI Port
- 4. VGA Port
- 5. Audio in Port
- 6. Kensington Lock

1.5 Monitor introduction

1.5.1 Using the Controls button

Use the control button on the back of the monitor to adjust the image settings.



1. Power Indicator:

• The color definition of the power indicator is as the below table.

| Status | Description |
|--------|--------------|
| White | ON |
| Amber | Standby mode |
| OFF | OFF |

2. **b** Power Button:

Press this button to turn the monitor on/off.

3. **E** MENU Button:

- Press this button to enter the OSD menu.
- 4. X Close Button
 - Exit the OSD menu.
- 5. Input Select Button:
 - Use this hotkey to switch from VGA, DVI, HDMI(only for VP239H) input signal.
- 6. QuickFit Button:
 - This is a hotkey to activate the QuickFit function designed for alignment.
 - The QuickFit function contains 6 pages of common grid patterns, Document, and photo sizes. See page 1-6 for details.
- 7. Shortcut key1
 - This is a Shortcut key. The default setting is Brightness.
- 8. Shortcut key2
 - This is a Shortcut key. The default setting is Blue Light Filter.
- 9. Auto Button
 - AUTO Adjust.: Automatically adjust the image to its optimized position, clock, and phase. (Only available for VGA input.)

1.5.2 QuickFit Function

The QuickFit function contains three patterns: (1) Grid (2) Document (3) Photo size.

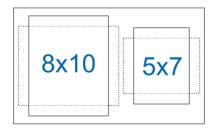
1. Grid pattern: Facilitates designers and users to organize content and layout on one page and achieve a consistent look and feel.

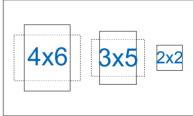


Document: Provides users to view their documents in real size on the screen.



3. Photo size: Provides photographers and other users to accurately view and edit their photos in real size on the screen.





2.1 Detaching the arm/stand (for VESA wall mount)

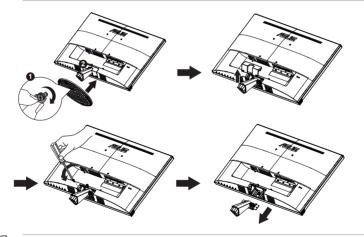
The detachable stand of this monitor is specially designed for VESA wall mount.

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 fingers 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 two screw on the arm (Figure 1), 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.

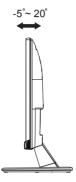




- The VESA wall mount kit (100 x 100 mm) is purchased separately.
- Use only the UL Listed Wall Mount Bracket with minimum weight/load 28.8 kg (Screw size: M4 x 10 mm).

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 when you change its angle.
- You can adjust the monitor's angle from +20° to -5°



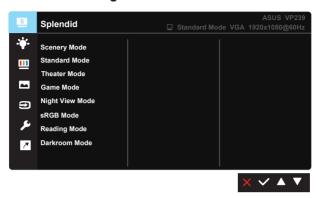


It is normal that the monitor slightly shakes while you adjust the viewing angle.

2-2 Chapter 2: Setup

3.1 OSD (On-Screen Display) menu

3.1.1 How to reconfigure

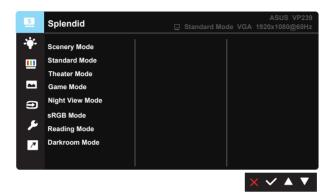


- Press the MENU button to activate the OSD menu.
- Press the ▼ and ▲ buttons to toggle between options in the Menu. As you move from one icon to another, the option name is highlighted.
- 3. To select the highlighted item on the menu press the ✓ button.
- 4. Press the ▼ and ▲ buttons to select the desired parameter.
- Select the ⁵ to return to previous menu or ✓ to accept and return to previous menu.

3.1.2 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.



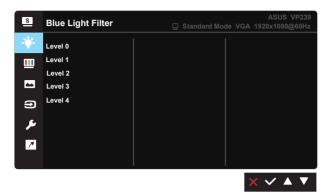
- Scenery Mode: This is the best choice for scenery photo displaying with SPLENDID™ Video Intelligence Technology.
- Standard Mode: This is the best choice for document editing with SPLENDIDTM Video Intelligence Technology.
- Theater Mode: This is the best choice for movie watching with SPLENDID™ Video Intelligence Technology.
- Game Mode: This is the best choice for game playing with SPLENDID™ Video Intelligence Technology.
- Night View Mode: This is the best choice for playing dark-scene game or watching dark-scene movie with SPLENDID™ Video Intelligence Technology.
- sRGB Mode: This is the best choice for viewing photos and graphics from PCs.
- **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, SkinTone, Sharpness, and ASCR functions are not user-configurable.
- In the sRGB, the Saturation, Color Temp., SkinTone, Sharpness, Brightness, Contrast and ASCR functions are not user-configurable.
- In the Reading Mode, the Saturation, SkinTone, Sharpness, ASCR, contrast, and Color Temp functions are not user-configurable.

2. Blue Light Filter

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



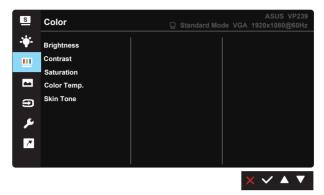
- Level 0: No change.
- Level 1~4: The higher the level, the more blue light will be reduced.



- 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 user-configurable.
- Level 4 is optimized setting. It is compliance with TUV Low Blue Light Certification. The Brightness function is not user-configurable.

3. Color

Select the image color you like from this function.



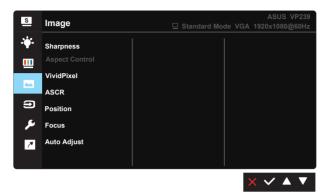
- Brightness: The adjusting range is from 0 to 100.
- Contrast: The adjusting range is from 0 to 100.
- **Saturation**: The adjusting range is from 0 to 100.
- Color Temp.: Contains three preset color modes (Cool, Normal, Warm) and User Mode.
- Skin Tone: Contains three color modes including Reddish,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



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

4. Image

You can adjust the image Sharpness, Aspect Control, VividPixel, ASCR, Position (VGA only), Focus (VGA only), and Auto Adjust (VGA only), from this main function.



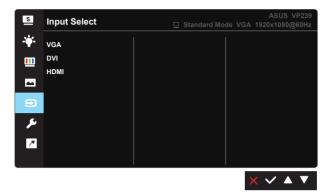
- Sharpness: Adjusts the picture sharpness. The adjusting range is from 0 to 100.
- Aspect Control: Adjusts the aspect ratio to "Full", "4:3", "Overscan".
- VividPixel: ASUS Exclusive Technology that brings lifelike visuals for crystal-clear and detail-oriented enjoyment. The adjusting range is from 0 to 100.
- ASCR: Select ON or OFF to enable or disable dynamic contrast ratio function.
- Position: Adjusts the horizontal position (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: Reduces 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. OverScan is only available for the HDMI input source
- Phase adjusts the phase of the pixel clock signal. With a wrong phase adjustment, the screen shows horizontal disturbances.
- Clock (pixel frequency) controls the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the image is not proportional.

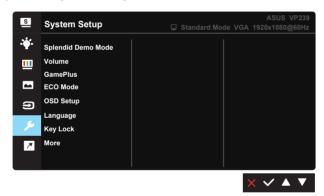
5. Input Select

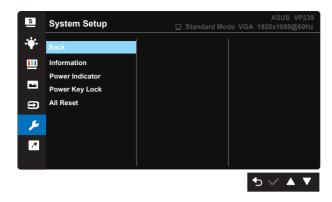
Select the input source from **VGA**, **DVI**, **HDMI(only for VP239H)** input signal.



6. System Setup

Adjusts the system configuration.





- Splendid Demo Mode: Activate the demo mode for the Splendid function.
- **Volume**: Adjusts the output volume level.(only for VP239H)
- GamePlus: The GamePlus Function provides a toolkit and creates a
 better gaming environment for users when playing different types of
 games. Particularly, Aimpoint function is specially designed for new
 gamers or beginners interested in First Person Shooter (FPS) games.

To active GamePlus:

- Select ON to enter the GamePlus main menu.
- Press ✓ to confirm the function you choose. Press [★] to go back.
 Press × to go off, and exit.

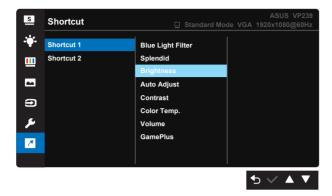


- **ECO Mode**: Activate the ecology mode for power saving.
- OSD Setup: Adjusts the OSD Timeout, DDC/CI, and Transparency of the OSD screen.

- Language: Select OSD language. The selections are: English, French, German, Spanish, Italian, Dutch, , Russian, Poland, Czech, Croacia, Hungary, Romania, Portugal, Turkey, Simplified Chinese, Traditional Chinese, Japanese, Korean, Persian, Thai, 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 Setting.
- Back: Return the previous page of System Setting.
- **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 two shortcut keys.



- Shortcut 1: User can select from "Blue Light Filter" "Splendid",
 "Brightness", "Auto Adjust"(only for VP239H), "Contrast", "Color
 Temp.", "Volume(Only for VP239H)", "GamePlus", and set as
 shortcut key. The default setting is Brightness.
- Shortcut 2: User can select from "Blue Light Filter" "Splendid",
 "Brightness", "Auto Adjust" (only for VP239H), "Contrast", "Color
 Temp.", "Volume" (only for VP239H), "GamePlus", and set as
 shortcut key. The default setting is Blue Light Filter.

3.2 Specifications

| Model | VP239H | VP239N |
|---|------------------------------------|----------|
| Panel Size | 23.0"W (58.42 cm) | |
| Max. Resolution | 1920x1080 | |
| Brightness (Typ.) | 2500 | cd/m² |
| Intrinsic Contrast Ratio (Typ.) | 100 | 0:1 |
| Viewing Angle (CR>10) | 178°(V) | /178°(H) |
| Display Colors | 16.7 M(6 | bit+FRC) |
| Response Time | 5ms (G | Το G σ) |
| Satellite Speaker | 1.5W x 2 stereo | No |
| Sound from HDMI | Yes | No |
| HDMI input | Yes | No |
| DVI input | Ye | es |
| D-Sub input | Ye | es |
| Audio Line-in | Yes | No |
| Power ON Consumption | < 22 W* | |
| Note | *Based on Energy Star 6.0 standard | |
| Chassis Colors | Black | |
| Power saving mode | < 0.5W | |
| Power off mode | < 0.5W | |
| Tilt | -5° ~ +20° | |
| VESA Wall Mounting | Yes (100mm x 100mm) | |
| Phys. Dimension with stand (WxHxD) | 533.2 x 387.11 x 204.42 mm | |
| Phys. Dimension without stand (WxHxD) (For VESA Wall Mount) | 533.2 x 322.11 x 54.83 mm | |
| Box Dimension (WxHxD) | 591 x 455 x 133 mm | |
| Net Weight (Esti.) | 3.5 kg | |
| Gross Weight (Esti.) | 5.75 kg | |
| Voltage Rating | AC 100~240V(Built-in) | |

3.3 Troubleshooting (FAQ)

| Problem | Possible Solution |
|--|---|
| Power LED is not ON | Press the button to check if the monitor is in the ON mode. Check if the power cord is properly connected to the monitor and the power outlet. Check Power Indicator function in main menu OSD. Select "ON" to turn on power LED. |
| The power LED lights amber and there is no screen image | Check if the monitor and the computer are in the ON mode. Make sure the signal cable is properly connected the monitor and the computer. Inspect the signal cable and make sure none of the pins are bent. Connect the computer with another available monitor to check if the computer is properly working. |
| Screen image is too light or dark | Adjust the Contrast and Brightness settings via OSD. |
| Screen image bounces or a wave pattern is present in the image | Make sure the signal cable is properly connected to the monitor and the computer. Move electrical devices that may cause electrical interference. |
| Screen image has color defects (white does not look white) | Inspect the signal cable and make sure that none of the pins are bent. Perform Reset via OSD. Adjust the R/G/B color settings or select the Color Temperature via OSD. |
| No sound or sound is low (VP239H) | Make sure the audio cable is properly connected to the monitor. Adjust the volume settings of both your monitor and computer. Make sure the computer sound card driver is properly installed and activated. Make sure the audio source is correct on the OSD. |

Supported Timing List 3.4

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

| 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)

| | , | 3 (1 7/ |
|------------|--------------|----------------------|
| 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 |

^{*} 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.