VM 1212 – VM 1503 – VM 1704 – VM 1904

TFT-LCD MONITOR WITH VGA & VIDEO

12" – 15" – 17" – 19"

USER'S MANUAL

Rev. 2.0

CONTENTS

1. Introduction

Product Description

Congratulations on your purchase of the LCD monitor with VGA & Video Input out of our VM series. It incorporates high quality display into a small light-weighted module. It has power-saving capabilities and emits no radiation. You will certainly benefit from this monitor in lots of ways; to name some of them: comfort, safety, space-saving and environmental protection.

These LCD monitors incorporates 12"/ 15"/ 17"/ 19" color active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance. For 12" monitor, the maximum resolution is SVGA 800 x 600, for 15" monitor XGA 1024 x 768. For 17" and 19" monitors, the maximum resolution is SXGA 1280 x 1024. They all are ideal for displaying complex graphics and high definition images. Their outstanding capabilities include stereo audio, high image quality with S-video, standard RCA composite video/audio and OSD (On Screen Display) controls.

Package Contents

Included with your LCD monitor as following items:
- TFT LCD monitor
- 15-pin-mini-D-Sub/VGA signal cable
- Audio cable
- AC power cord
- AC/DC power adapter
- User's manual

Product Features

- High brightness, high contrast ratio and wide viewing angle
- Wall mountable with VESA 75 bracket
- Built-in speakers with volume control
- Power management system conforms to VESA DPMS standard
- Advanced OSD control for picture quality adjustment
- Slim bezel design

The monitors of the VM series are not equipped with loud speakers. The housing of the VM series consists of metal. The OSD-Board is mounted on the bottom of the monitor.

Screen Cleaning Techniques

1. Gently clean the screen with a clean camel hair lens brush, or a soft, clean, lint-free cloth, to remove dust and other particles that can scratch the screen.
2. DO NOT apply pressure to the screen surface when wiping it clean.
3. DO NOT pour or spray any liquid directly onto the screen or casing. Chemical cleaners have been reported to damage the screen or case of the LCD monitor.

Additional

Read all of these instructions and save them for later use.
Follow all warnings and instructions on the product.

1. **Product**
   - DO NOT block the vent holes in the case.
   - DO NOT insert sharp objects or spill liquid into the LCD monitor through cabinet slots. They may cause accident fire, electric shock or failure.
   - Disconnect the power plug from the AC outlet if you will not use it for an extended period of time.
   - DO NOT attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.
   - DO NOT touch the screen directly with your fingers. You may damage the screen, and oil from your skin is difficult to remove.
   - DO NOT apply pressure to screen. The LCD panel is very delicate.

2. **Power**
  - Use the type of power indicated on label.
3. **Plugs**
  - DO NOT remove any of the prongs of the monitor's three-pronged power plug.
  - Disconnect the power plug from the AC outlet under following conditions:
    - ➢ If you will not use it for an extended period time.
    - ➢ When the power cord or plug is damaged or frayed.
    - ➢ If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician.
    - ➢ If the product exhibits a distinct change in performance, service may be required.
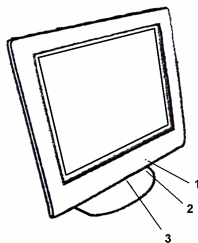4. **Power and extension cords**
  - DO NOT allow anything to rest on the power cord.
  - DO NOT locate this product where persons will walk over the cord.
  - Use the proper power cord with correct attachment plug type. If the power source is 120V AC, use a power cord that has UL and C-UL approvals. If the power source is a 240V AC supply, use the tandem (T blade) type attachment plug with ground conductor power cord that meets the respective European country's safety regulations, such as VDE for Germany.
  - DO NOT over load wall outlets or power cords. Ensure that the total of all units plugged into the wall outlet does not exceed 10 amperes.
  - Ensure that the total ampere ratings on all units plugged into the extension cord is not above the cord's rating.
  - If the power supply cord, which came with your monitor, is to be connected to the PC instead of the wall outlet, Use an UL/TUV approved computers with receptacle rated 100~240V AC, 50/60Hz, 1.0A (minimum) only.
5. **Environment**
  - Place the monitor on a flat and leveled surface.
  - Place the monitor in a well-ventilated place.
  - Keep the monitor away from overly hot, cold or humid places, places directly under sunlight, dusty surroundings, equipment that generate strong magnetic fields.
  - Please adjust the frequency to **60** Hz after setting up the LCD monitor.
  - Then push the OSD menu button and use the auto adjustment function to find the best mode of your computer.

2. Control Functions

The monitor digital control functions are located on the front panel. They are shown in the figure below and described in the following paragraphs.

1. Indicator LED
2. Power switch
3. Function keys

Function Selection

1. Press the knob "MENU/SELECT" to show the OSD menu. Then use the "▲" and "▼" to select a function. Press the knob "AUTO/EXIT" to close the OSD menu.
2. With the knob "▲" and "▼", you can adjust the speaker volume on the monitor.
   - When you press the knop "▼", the speakers are mute. Press the "▼" and then the speakers are active.
   - When you press the knob "▲", the speaker volume OSD is shown. You can increase or decrease the volume by pressing the "▲" and "▼".
3. You can hold the knob "AUTO/EXIT" for more than 3 second to adjust the image quality automatically.

The OSD menu will close automatically after 3-10 seconds without operation and saves any changes you have made.

Function Adjustments

1. Signal Select

When there is no OSD menu display the knob "AUTO/EXIT" can select VGA / CVBS / S-VIDEO.

2. Video

Contrast   - Adjust the difference in luminance between light and dark areas of the image.

Brightness   - Adjust the luminance level of the image.

Colour   - Adjust the Color level of the image

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Tint   - Adjust the Tint level of the image

Sharpness   - Adjust the Sharpness level of the image

Video Mode   - Adjust the Video Mode for Normal/Nature/Cinema/Sport/Vivid

Reset   - Recall the factory setting of the **Video** menu.

VGA

Contrast   - Adjust the difference in luminance between light and dark areas of the image.

Brightness   - Adjust the luminance level of the image.

Sharpness   - Adjust the Sharpness level of the image

Color Temperature - Adjust Color Temperature Cool(9300k)/User/Warm(6500k)/Nature(7500k)

User RGB   - Adjusting R/G/B level of the image

Image

Auto Tune   - Adjust geometry of the image automatically.

Position   - Adjust the vertical & horizontal position of the image.

Phase   - Adjust the horizontal sync phase of signal.

Clocks   - Adjust the horizontal sync size of signal.

Reset   - Recall the factory setting of the **VGA** menu.

3. Audio (Video & VGA)

Volume   - Adjust the speaker volume.

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4. Feature Controls (Video & VGA)

Sleep Timer   - Select 10/20/30/40/50/60/70/80/90/Off

Language   -Select Language English/Fran/Deu/Esp/Ita

OSD Controls   -Select OSD Position /Rotation/Timer

Factory Recall   - Recall Factory setting

3. Installation
<u>Unpacking</u>

Open the shipping carton and check the package contents.

If any items are missing or damaged, contact us immediately.

The package should include the following items:
- TFT LCD monitor
- 15-pin-mini-D-Sub/VGA signal cable
- Audio cable
- AC power cord
- AC/DC power adapter
- User's manual

<u>Installing the Monitor</u>

This monitor is equipped with an auto sensing DC power adapter for voltage ranges of 100-240VAC, 60/50Hz.
Follow these steps to install the monitor:
1. Before you connect the cables, made sure that the monitor and the system unit power switches are off.
2. Plug one end of the 15 pin-signal cable and one end of the video signal cable to the monitor and the other ends to the correct graphics card slot. Tighten the two screws on the cable connector.
3. Connect the AC/DC power cord to the DC jack.
4. Connect the power cable.

4. Display Modes
<u>Controller Features</u>

The controller automatically detects the graphic card installed in your system. When you turn on the monitor, the controller checks the display mode memory stored in the user setting area of the graphic card, and then the factory presetting area. It then adjusts to the proper display mode.
The controller has the memory capacity to store different display modes, including timing formats and display-settings.
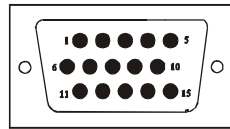
<u>Factory Presetting Area</u>

There are some preferred display modes preset in the controller. These display modes are preset at the factory and include the most popular display modes currently available. The controller searches for a proper display mode in this area if it fails to find a proper display mode in the user setting area.

	MODE	Resolution (Dots*lines)	Horizontal Freq. (KHz)	Vertical Freq. (Hz)	Is relevant for the sizes:	Remark
1.	VGA	640×350	31.5	70	12" – 19"	Non-interlaced
2.	VGA	720x400	31.5	70	12" – 19"	Non-interlaced
3.	VGA	640x480	31.5	60	12" – 19"	Non-interlaced
4.	VESA/75	640x480	37.5	75	12" – 19"	Non-interlaced
5.	VESA/60	800x600	37.9	60	12" – 19"	Non-interlaced
6.	VESA/75	800x600	46.9	75	12" – 19"	Non-interlaced
7.	VESA/60	1024x768	48.4	60	15" – 19"	Non-interlaced
8.	VESA/70	1024x768	56.5	70	15" – 19"	Non-interlaced
9.	VESA/75	1024x768	60.0	75	15" – 19"	Non-interlaced
10.	VESA/60	1280x1024	64.0	60	17" – 19"	Non-interlaced
11.	VESA/75	1280x1024	80.0	75	17" – 19"	Non-interlaced

5. Signal Connector Pin-outs

To connect VGA, 8514A or IBM-compatible graphics adapters, use a 15 pin mini D-type male connector.

15-pin Mini D-type Male Connector		
Pin Assignment		
1 Red Video	6 Red Ground	11 Ground
2 Green Video	7 Green Ground	12 Serial Data/I/O
3 Blue Video	8 Blue Ground	13 H. Sync
4 Ground	9 No Connection	14 V. Sync
5 No Connection	10 Sync Ground	15 Serial Clock Input

6. Power Saving Features

When the power saving is active, the power indicator LED will be from Green Light to Amber. The power saving feature complies with these VESA power saving modes:

Mode	H. Sync.	V. Sync.	LED	Power Consumption
Normal	On	On	Green	< 50 Watts
Stand-by	Off	On	Amber	< 15 Watts
Suspend	On	Off	Amber	< 15 Watts
Off	Off	Off	Amber	< 5 Watts

The monitor uses the H. Sync and V. Sync signals to determine the operation mode to enter.

The monitor power-saving feature automatically turns off H. Sync and V. Sync if there is no input from the system for a certain period of time. To use this feature, you need a green PC that is compliant with the VESA power saving feature or a software utility to detect system input such as keyboard or mouse.

Time Settings

Time settings are adjusted from the system unit by software. To fulfill the requirements in the NUTEK specification 803299/94 the total time from indicated inactivity to Power Saving position A2 (VESA OFF) must not be set more than 70 minutes. We recommend you switch off the monitor when you do not intend to use it for a while.

7. Product Specifications

7.1 Product specifications: 12inch

Model	1212
LCD Panel Size	12"
Maximum viewable size	12 inch(30.5cm)
Video Input	Analog:15-pin, D-sub connector x1 S-Video x1, RCA composite x1
Display area	246mmx184mm

Power supply (Universal)
  Input voltage
  Consumption
	12V DC/2.5A
	30watts maximum

External controls	Power-switch, VGA, Brightness, Contrast, Volume, Color temperature (User,6500°K, 9300°K), Tone, Saturation, H-width, H-phase, H-position, V-position, OSD control, Recall, Sharpness, Exit
Horizontal frequency	30-47KHz
Vertical frequency	50-75Hz
Max. Resolution	800×600 / SVGA
Power Saving	With EPA standard
Plug & Play	DDC 1/2B

Ambient temperature
  Operation
  Non-operating
	5°C – 35°C
	-20°C – 60°C

Humidity
  Operating
  Storage
	20%-80%
	10%-90%

*Specifications are subject to change without notice.

7.2 Product specifications: 15inch

Model	1503
LCD Panel Size	15"
Maximum viewable size	15 inch(38.1cm)
Video Input	Analog:15-pin, D-sub connector x1 S-Video x1, RCA composite x1
Display area	304mmx228mm

Power supply (Universal)
  Input voltage
  Consumption
	12V DC/2A
	25watts maximum

External controls	Power-switch, VGA, Brightness, Contrast, Volume, Color temperature (User,6500°K, 9300°K), Tone, Saturation, H-width, H-phase, H-position, V-position, OSD control, Recall, Sharpness, Exit
Horizontal frequency	30-60KHz
Vertical frequency	50-75Hz
Max. Resolution	1024×768 / XGA
Power Saving	With EPA standard
Plug & Play	DDC 1/2B

Ambient temperature
  Operation
  Non-operating
	5°C – 35°C
	-20°C – 60°C

Humidity
  Operating
  Storage
	20%-80%
	10%-90%

*Specifications are subject to change without notice.

7.3 Product specifications: 17inch

Model	1704
LCD Panel Size	17"
Maximum viewable size	17 inch (43.2cm)
Video Input	Analog:15-pin, D-sub connector x1 S-Video x1, RCA composite x1
Display area	338mmx270mm(H×V)

Power supply (Universal)
    Input voltage
    Consumption
	12V DC / 3 A
	36watts maximum

External controls	Power-switch, VGA, Brightness, Contrast, Volume, Color temperature (User,6500°K, 9300°K), Tone, Saturation, H-width, H-phase, H-position, V-position, OSD control, Recall, Sharpness, Exit
Horizontal frequency	30-82KHz
Vertical frequency	50-75Hz
Max. Resolution	1280×1024 / SXGA
Power Saving	With EPA standard
Plug & Play	DDC 1/2B

Ambient temperature
    Operation
    Non-operating
	5°C – 35°C
	-20°C – 60°C

Humidity
    Operating
    Storage
	20%-80%
	10%-90%

*Specifications are subject to change without notice.

7.4 Product specifications: 19inch

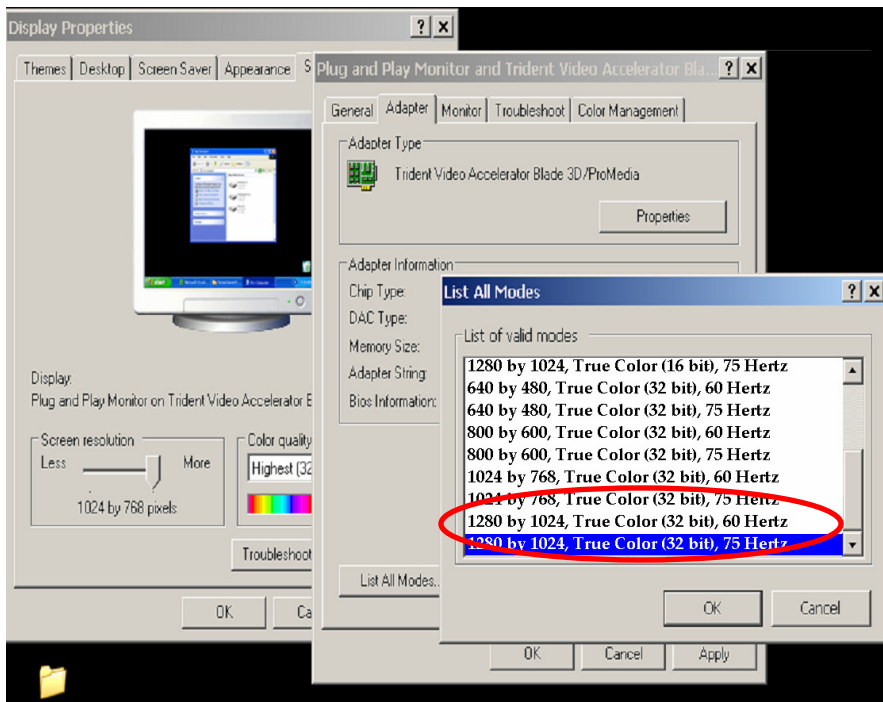| Model	1904
LCD Panel Size	19"
Maximum viewable size	19 inch (48.3cm)
Video Input	Analog:15-pin, D-sub connector x1 S-Video x1, RCA composite x1
Display area	376mmx301mm(H×V)

Power supply (Universal)
    Input voltage
    Consumption
	12V DC / 3.3A
	40watts maximum

External controls	Power-switch, VGA, Brightness, Contrast, Volume, Color temperature (User,6500°K, 9300°K), Tone, Saturation, H-width, H-phase, H-position, V-position, OSD control, Recall, Sharpness, Exit
Horizontal frequency	30-82KHz
Vertical frequency	50-75Hz
Max. Resolution	1280×1024 / SXGA
Power Saving	With EPA standard
Plug & Play	DDC 1/2B

Ambient temperature
    Operation
    Non-operating
	5°C – 35°C
	-20°C – 60°C

Humidity
    Operating
    Storage
	20%-80%
	10%-90%

*Specifications are subject to change without notice.
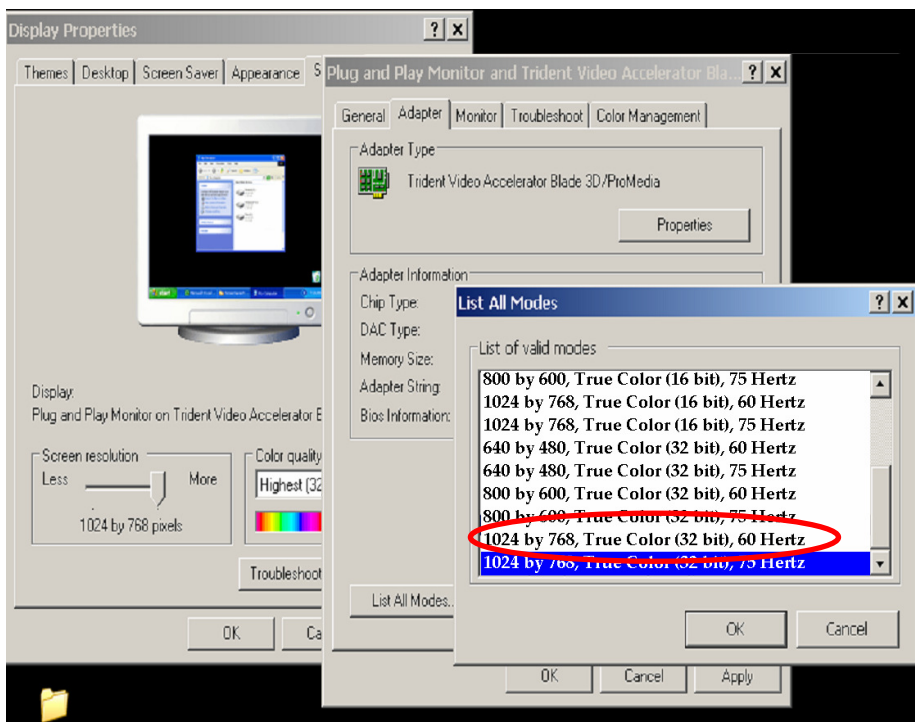
8. Windows setup

For the best display quality, please set the monitor type in Windows.

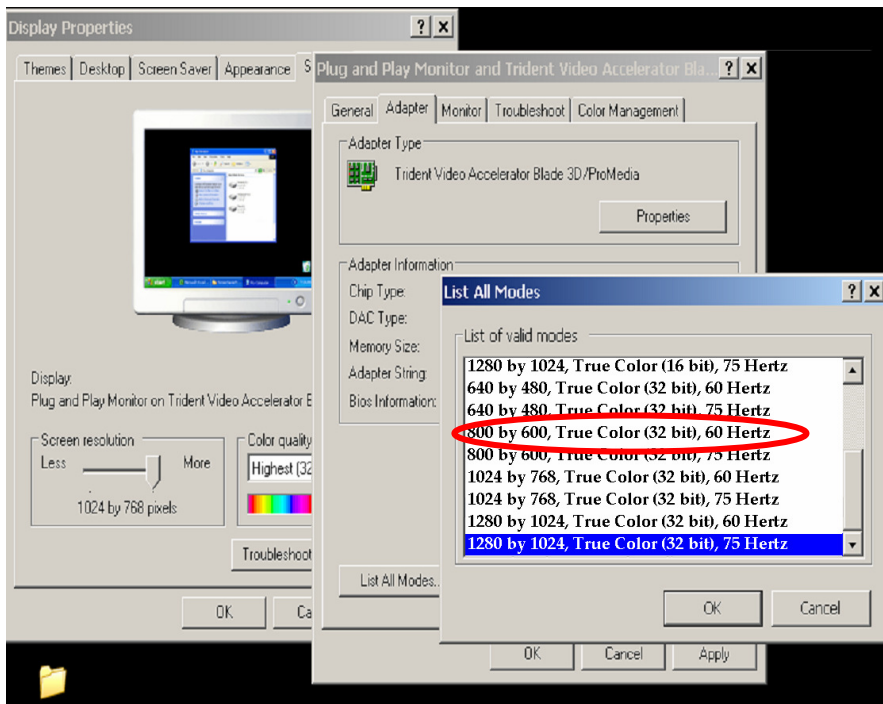Control Panel > Display > Settings > Advanced > List All Modes

For 1280 ×1024, please set to "SXGA 1280 × 1024 @ 60Hz" [17"+19" Monitor]

For 1024 ×768, please set to "XGA 1024 × 768 @ 60Hz [15" Monitor]

For 800 ×600, please set to "SVGA 800 × 600 @ 60Hz" [12" Monitor]

9. Trouble Shooting

1) Power on but no picture

→ Make sure the VGA cable is tightly connected from the video output connector on the video card to the video input connector on the monitor.

→ Make sure you are using the standard power adapter coming with the monitor.

→ Check your video card if the driver is correctly installed. If there is no video signal from the video card, "NO IN-PUT SIGNAL" will show on the screen.

2) Wrong or abnormal colors

→ If any color (red, green, or blue) is missing, check video cable to make sure it is securely connected. Loose pins in the cable connector can cause a bad connection.

3) The text and icon look blurry

→ LCD monitor has a native resolution which pixels are produced by cells in fixed positions. When a resolution different from the native resolution is chosen, the LCD monitor uses various interpolation methods to achieve the pseudo resolution. To achieve the optimum viewing quality, choose the native resolution of the panel is recommended.

→ Use "Auto Tuning" function to adjust image quality on the OSD menu or you can hold button 2 for 3 seconds to do auto tuning.

4) Display position is incorrect

→ Use "Auto Tuning" function to adjust image position on the OSD menu or you can hold button 2 for 3 seconds to do auto tuning.

5) Speakers have no sound

→ Detect the audio cable is linked from the audio output jack on the PC to the audio input jack on the monitor.

6) Residue image

→ If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave a residue image. It is characteristic of liquid crystal and is not malfunction or deterioration of the liquid crystal. The residue image will disappear after a period of time. It is recommended to set up the screen saver for your LCD monitor.

7) Out of Rang

→ The first thing you need to check is the screen resolution. Usually "Out of Range" is caused by improper resolution setting. You can recover the proper screen resolution as the following steps for Windows:

Boot the computer into **VGA Mode** (F8) [repeatedly] at startup.
Go to "**Control Panel**", double click on "**Display**", click on the **SETTINGS** TAB, and click on the **ADVANCED** button.
Then Click on the **Adapter** TAB, click "**List All Modes**" and change the screen resolution. (You can select 16 bit or 32 bit color which depends on your video card capability.)
Click on the **"OK"** and "**APPLY"**.
After clicking the **APPLY** button, a message will be displayed "Your desktop has been reconfigured. Do you want to keep these settings?"
Click "**Yes**" and **"OK"**. Then click "OK" on the Display Properties window.
Restart your PC
After you restart, go back to "List All Modes" to adjust your screen refresh rate to 60 Hertz.

The "Out of Range" may happen if you switch monitor A to monitor B for your PC. Whenever you change the monitor for your PC, your PC may detect it as a new hardware and automatically install a proper driver for the monitor. So, you will have both monitor A and monitor B drivers on your PC. Sometimes the two monitor drivers may conflict each other and cause "Out of Range". You can resolve "Out of Range" by uninstalling both monitor drivers and reboot your PC. The Windows will automatically detect the new hardware and install a proper driver for the monitor. Here is a quick way to uninstall the monitor drivers:

Right click on "**My Computer**", select "**Properties**" and click on "**Hardware**". Click on "**Device Manager**", select "**Monitor**" and click on "+" in front of "Monitor". Then you can see one of the monitor drivers called "**Plug and Play Monitor**". A quick way is to uninstall all the monitor drivers and then let Windows automatically detect the new hardware. (Right click on the monitor driver and select "Uninstall"). Restart your PC.

10. Vendor

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