# Lenovo G24-20 User Guide



# **Product numbers**

A21238FG0 66CF-G\*C1-WW

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# **Safety information**

## **General Safety guidelines**

For tips to help you use your computer safely, go to: http://www.lenovo.com/safety

Before installing this product, read the Safety Information.

#### DANGER

#### To avoid shock hazard:

- Do not remove the covers.
- Do not operate this product unless the stand is attached.
- Do not connect or disconnect this product during an electrical storm.
- The power cord plug must be connected to a properly wired and grounded power outlet.
- Any equipment to which this product will be attached must also be connected to properly wired and grounded power outlets.
- To isolate the monitor from the electrical supply, you must remove the plug from the power outlet. The power outlet should be easily accessible.

To take special precautions to avoid the introduction of hazards when operating, installing, servicing, transporting or storing equipment, the necessary instructions shall be made available.

To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

#### Handling:

• If your monitor weighs more than 18 kg (39.68 lb), it is recommended that it be moved or lifted by two people.

# **Chapter 1.Getting started**

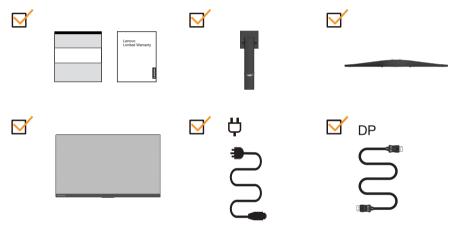
This User's Guide provides detailed operation instructions for the user. For quick instruction overview, please see the Setup Poster for brief information.

Lenovo G24-20 supports Lenovo Display Control Center -Artery.

## **Shipping contents**

The product package should include the following items:

- Information Flyer
- Lenovo Limited Warranty Booklet
- Stand
- Base
- Flat Panel Monitor
- Power Cord
- DisplayPort Cable



## Notice for use

To set up your monitor, please see the illustrations below.

Note: Do not touch the monitor within the screen area. The screen area is glass and can be damaged by rough handling or excessive pressure.



- 1. Place your monitor with the screen face down on a soft flat surface.
- 2. Align the stand assembly bracket to the monitor.
- 3. Insert the base towards the stand until it locks in place.

Note: To install a VESA mount, please see "Wall Mounting (Optional)" on page 2-9.

## **Product overview**

This section will provide information on adjusting monitor positions, setting user controls, and using the cable lock slot.

## Types of adjustments

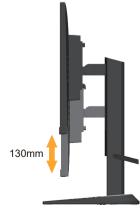
#### Tilt

Please see the illustration below for an example of the tilt range.



### Height Adjustment

For height adjustment, user needs to press down or lift up the monitor.



#### **Monitor controls**

The keypad controls on the panel frame are accesses to various functions.



For information on how to utilize these keypad controls, please see "Adjusting your monitor image" on page 2-3.

## Kensington anti-theft lock

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Your monitor is equipped with a Kensington anti-theft lock located on the rear of your monitor.



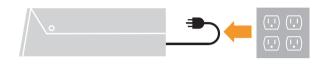
## Setting up your monitor

This section provides information on how to set up your monitor.

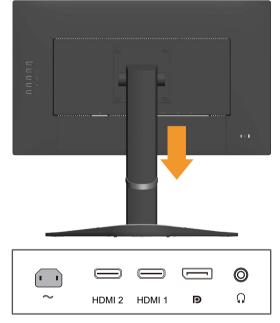
## Connecting and turning on your monitor

**Note:** Be sure to read the Safety information on page iv before carrying out this procedure.

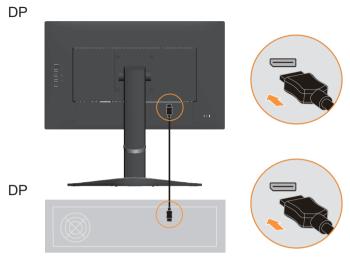
1. Power off your computer and all attached devices, and unplug the computer power cord.



2. Connect the cables according to below icon indication.

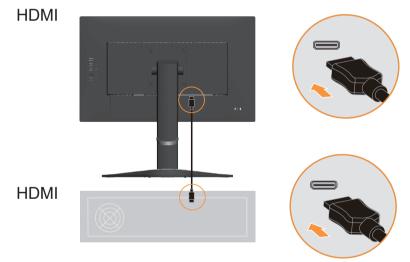


#### 3. For computer in DP connecting.

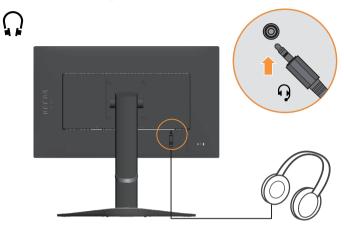


4. For computer in HDMI connecting.

Note: For other regions Lenovo recommends that customers who require to use the HDMI input on their monitor purchase the "Lenovo HDMI to HDMI cable OB47070" http://www.lenovo.com/support/monitoraccessories

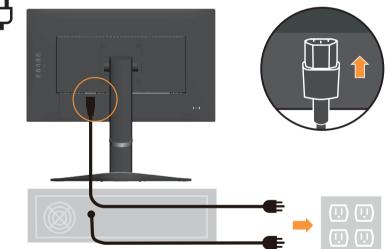


5. Connect the speaker's audio cable and audio jack of monitor to transfer audio source from HDMI/DP.



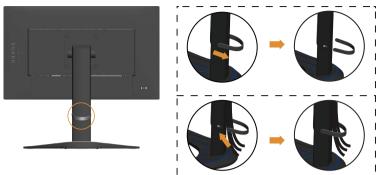
6. Insert the power cord into the monitor, then plug the monitor power cord and the computer cord into grounded electrical outlets.

**Note:** A certified power supply cord has to be used with this equipment. The relevant national installation and or equipment regulations shall be considered. A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75mm2 or H05VVH2-F2 3G 0.75mm2 ) shall be used. Alternative a flexible cord be of synthetic rubber according to IEC 60245 (designation H05RR-F 3G 0.75mm2 ) shall be used.

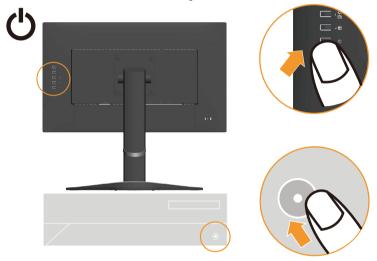


Note: The audio output in HDMI/DP modoes.

7. Connect the cables with cable clip.



8. Power on the monitor and the computer.



9. When you install the monitor driver, download the driver that corresponds to your monitor model from the Lenovo website https://pcsupport.lenovo.com/solutions/g24\_20. Refer to the ""Manually installing the monitor driver" on page 3-5" section to install the driver.





# Chapter 2.Adjusting and using your monitor

This section will give you information on adjusting and using your monitor.

## **Comfort and accessibility**

Good ergonomic practice is important to get the most from your personal computer and to avoid discomfort. Arrange your workplace and the equipment you use to suit your individual needs and the kind of work that you perform. In addition, use healthy work habits to maximize your performance and comfort while using your computer.

### Arranging your work area

Use a work surface of appropriate height and available working area to allow you to work in comfort.

Organize you work area to match the way you use materials and equipment. Keep your work area clean and clear for the materials that you typically use and place the items that you use most frequently, such as the computer mouse or telephone, within the easiest reach. Equipment layout and setup play a large role in your working posture. The following topics describe how to optimize equipment setup to achieve and maintain good working posture.

## Positioning and viewing your monitor

Position and adjust your computer monitor for comfortable viewing by considering the following items:

- Viewing distance: Recommended viewing distance between the eye and the monitor screen is 1.5 x the diagonal of the screen. Solutions in meeting this required distance in cramped office situations include pulling desk away from wall or divider to make room for monitor, using flat panel or compact displays placing the monitor in the desk corner, or placing the keyboard in an adjustable drawer to create a deeper working surface.
- Monitor height: Position the monitor so your head and neck are in a comfortable and neutral (vertical, or upright) position. If your monitor does not have height adjustments, you might have to place books or other sturdy objects under the base of the monitor to achieve the desired height. A general guideline is to position the monitor such that the top of the screen is at or slightly below your eye-height when you are comfortably seated. However, be sure to optimize your monitor height so the line of site between your eyes and the center the monitor suits your preferences for visual distance and comfortable viewing when your eye muscles are in a relaxed state.
- Tilt: Adjust the tilt of your monitor to optimize the appearance of the screen content and to accommodate your preferred head and neck posture.
- General location: Position your monitor to avoid glare or reflections on the screen from overhead lighting or nearby windows.

The following are some other tips for comfortable viewing of your monitor:

- Use adequate lighting for the type of work you are performing.
- Use the monitor brightness, contrast, and image adjustment controls, if equipped, to optimize the image on your screen to meet your visual preferences.
- Keep your monitor screen clean so you can focus on the screen's contents.

Any concentrated and sustained visual activity can be tiring for your eyes. Be sure to periodically look away from your monitor screen and focus on a far object to allow your eye muscles to relax. If you have questions on eye fatigue or visual discomfort, consult a vision care specialist for advice.

#### Quick tips for healthy work habits

The following information is a summary of some important factors to consider to help you remain comfortable and productive while you use your computer.

- **Good posture starts with equipment setup:** The layout of your work area and the setup of your computer equipment have a large effect on your posture while using your computer. Be sure to optimize the position and orientation of your equipment by following the tips outlined in "Arranging your work area " on page 2-1 so you can maintain a comfortable and productive posture. Also, be sure to use the adjustment capabilities of your computer components and office furniture to best suit your preferences now and as your preferences change over time.
- Minor changes in posture can help avoid discomfort: The longer you sit and work in front of your computer, the more important it is to observe your working posture. Avoid as summing any one posture for an extended period of time. Periodically make minor modifications in your posture to help deter any discomforts that might arise. Make use of any adjustments that your office furniture or equipment provide to accommodate changes in posture
- Short, periodic breaks help ensure healthy computing: Because computing is primarily a static activity, it is particularly important to take short breaks from your work. Periodically, stand up in front of your work area, stretch, walk for a drink of water, or otherwise take a short break from using your computer. A short break from work gives your body a welcome change in posture and helps to ensure you remain comfortable and productive while you do work.

## Adjusting your monitor image

This section describes the user control features used to adjust your monitor image.

## Using the direct access controls

The direct access controls can be used when the On Screen Display (OSD) is not displayed.

|   | Icon    | Control   | Description  |
|---|---------|---|--|
| 1 |         | DDC-CI  | Press and hold for 10 seconds to enable or disable the DDC-CI function.  |
|   |         | Exit  | Exit and return to previous level.   |
|   |         |   | Switches the video input source<br>Shift back to previous level when in OSD mode.                                    |
| 2 |         | Increase/Up   | Up browsing key.<br>For increasing the value on adjustment bar/tune in<br>Press to move to previous item.            |
|   |         | Brightness  | Direct access to Brightness adjustment.  |
| 3 | ÷Ċ-     | Enable Low Blue<br>Light  | Press and hold for 3 seconds to enable Low Blue Light.   |
|   |         | Disable Low Blue<br>Light   | Press and hold for 3 seconds to disable Low Blue Light.  |
| 4 | ↓       | Decrease/Down<br>Decrease/Down<br>Decrease/Down<br>Decrease/Down<br>Down browsing key.<br>For decreasing the value on adjustment<br>in<br>Press to move to next item. |  |
| 5 |         | Menu  | To access OSD menu.<br>Press to confirm selection.<br>Press and hold for 10 seconds will lock menu/un-<br>lock menu. |
|   | لھ<br>ا | Enter   | Press to enter next level on main menu/sub menu<br>status or enter previous level on adjustment bar.                 |

#### Using the On-Screen Display(OSD) controls

To adjust the settings, the user controls can be viewed through the OSD.

| Lenovo               | G24-20  | 1920x1080@60hz   |          |  |  |
|----------------------|---|--|----------|--|--|
| ()<br>               | Model<br>Firmware<br>Resolution<br>Max Refresh Rate<br>Mode<br>Format<br>Range<br>HDR | G24-20(FreeSync Premium)<br>L 1.0<br>1920x1080<br>60Hz<br>Normal<br>8bit RGB444<br>Full Range<br>OFF | (Î ← ↓ ↓ |  |  |
| Input Signal: HDMI 1 |   |  |          |  |  |

To use the controls:

- 1. Press  $\leftarrow$  to open the main OSD menu.
- 2. Use ↑ or ↓ to move among the icons. Select an icon and press ↓ to access that function. If there is a sub-menu, you can move between options using ↑ or ↓, then press ↓ to select that function. Use ↑ or ↓ to make adjustments then press ↓ to save.
- 3. Press  $\bigcirc$  to move backwards through the sub-menus and exit from the OSD.
- 4. Press and hold → for 10 seconds to lock the OSD. This will prevent accidental adjustments to the OSD. Press and hold → for 10 seconds to unlock the OSD and allow adjustments to the OSD.
- 5. Enables DDC/CI by default. Use OSD Exit Key, press and hold → for 10 seconds to disable / enable DDC/CI function. A message "DDC/CI disable" is shown on the screen.

## **Extended brightness mode**

When the user adjusts the OSD default value over 100, the Warning message will pop up, "If the brightness is increased it will exceed the preset maximum brightness value and increase power consumption", after selecting the CHANGE, the OSD brightness maximum value can be adjusted to 150.

| Lenovo       | G24-20   | 1920x1080@60hz  |       |
|--------------|--|---|-------|
|              | Brightness<br>DCR<br>Saturation<br>Contrast<br>Dark boost<br>Scaling Mode<br>HDR<br>FreeSync | Power Usage<br>If the brightness is increased<br>it will exceed the preset<br>maximum brightness value<br>and increase power consumption.<br>CHANGE<br>CANCEL | C + ↑ |
| Input Signal | : DP   |   |       |

| <i>Table 2-1</i> . | OSD functions |
|--------------------|---------------|
|--------------------|---------------|

| OSD Icon on<br>Main Menu | Sub menu         | Description  | Controls and<br>Adjustments |
|--------------------------|------------------|--|-----------------------------|
|                          | Model            | G24-20(FreeSync Premium)   | All input ports             |
|                          | Firmware         |  |                             |
|                          | Resolution       | Show resolution.   |                             |
|                          | Max Refresh Rate | Show Max refresh rate  |                             |
| U                        | Mode             | • Normal<br>• Variable   |                             |
|                          | Format           | Ex:6,8,10,12 bit/<br>RGB444,YCbCr->4:4:4/4:2:2/4:2:0   |                             |
|                          | Range            | <ul><li>Full Range</li><li>Limited Range</li></ul>   |                             |
|                          | HDR              | • On<br>• Off  |                             |
|                          | Brightness       | Adjust overall screen brightness.<br><b>Note</b> : When the user adjusts the OSD default<br>value over 100, the Warning message will pop<br>up, "If the brightness is increased it will exceed<br>the preset maximum brightness value and<br>increase power consumption", after selecting<br>the CHANGE, the OSD brightness maximum<br>value can be adjusted to 150. |                             |
|                          | DCR              | Enable dynamic contrast ratio.<br>• Off<br>• On  |                             |
|                          | Saturation       | Adjust saturation  |                             |
|                          | Contrast         | Adjust difference between light and dark areas.  |                             |
|                          | Dark boost       | Adjust the Dark Boost from off to level3.  |                             |
|                          | Scaling Mode     | • Off<br>• Aspect  |                             |
|                          | HDR              | • Auto<br>• Off  |                             |
|                          | Freesync         | • Auto<br>• Off  |                             |
|                          | Color            | Warm/Neutral/Cool/Custom<br>*Custom mode can enter layer4 for RGB<br>select, and enter layer 5 for RGB value tuning<br>via slide bar   | All input ports             |
|                          | sRGB             | • Disable<br>• Enable  |                             |
|                          | Low Blue Light   | • Disable<br>• Enable  |                             |

| OSD Icon on<br>Main Menu Sub menu |                    | Description   | Controls and<br>Adjustments |
|-----------------------------------|--------------------|---|-----------------------------|
|                                   | Language           | Changes languages of menu.<br>The language chosen only affects the language<br>of the OSD. It has no effect on any software<br>running on the computer.   | All input ports             |
| (→≡)                              | Transparency       | Choose the transparency of OSD(0~100).  |                             |
|                                   | OSD Timeout        | Set the duration of time that the OSD will remain active when no operation is performed.  |                             |
|                                   | Reset All Settings | • Cancel<br>• Factory Reset   |                             |
|                                   | Game mode          | <ul> <li>FPS1: First person shooter 1 mode.</li> <li>FPS2: First person shooter 2 mode.</li> <li>Racing: Racing mode</li> <li>RTS: Real-Time-Strategy mode.</li> <li>Game1: User Game1 mode.</li> <li>Game2: User Game2 mode.</li> <li>Off</li> </ul> |                             |
| Hz                                | Over Drive         | • Off<br>• Level 1<br>• Level 2<br>• Level 3<br>• Level 4   |                             |
|                                   | MPRT               | • Off<br>• On   |                             |
|                                   | Refresh Rate       | Display the panel's current refresh rate on the<br>screen.<br>• Off<br>• Left Top<br>• Right Top<br>• Left Bottom<br>• Right Bottom   |                             |
|                                   | Auto Switch Input  | The input will automatically<br>switch to the next available input when<br>There is no input signal present. The time out<br>period has expired.  |                             |
|                                   | DP                 | Select digital among OSD<br>Controls when you use DP.   |                             |
|                                   | HDMI1              | Select digital among OSD<br>Controls when you use HDMI1.  |                             |
|                                   | HDMI2              | Select digital among OSD<br>Controls when you use HDMI2.  |                             |

\*The use of Level 3/Level 4 may result in reduced display quality when fast moving video graphics are displayed.

Users should check Level 3/Level 4 to verify if it is compatible with any applications they would like to use it with.

\*Low Blue Light Mode is reducing the blue light content.

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## Selecting a supported display mode

The display mode the monitor uses is controlled by the computer. Therefore, refer to your computer documentation for details on how to change display modes.

The image size, position and shape might change when the display mode changes. This is normal and the image can be re-adjusted using automatic image setup and the image controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, LCD or Flat Panel technology is inherently flicker-free.

**Note:** If your system has previously been used with a CRT monitor and is currently configured to a display mode outside the range of this monitor, you may need to reattach the CRT monitor temporarily until you have re-configured the system; preferably to 1920x1080 at 60Hz, which is a common display mode.

The display modes shown below have been optimized at the factory.

| Timing     | Refresh rate(Hz)   |  |
|------------|--------------------|--|
| 720x400    | 70Hz VGA, IBM      |  |
| 640x480    | 60Hz VGA, IBM      |  |
| 640x480    | 72Hz VESA          |  |
| 640x480    | 75Hz VESA          |  |
| 800x600    | 60Hz VESA          |  |
| 800x600    | 72Hz VESA          |  |
| 800x600    | 75Hz VESA          |  |
| 832x624    | 75Hz Apple, Mac II |  |
| 1024x768   | 60Hz VESA          |  |
| 1024x768   | 70Hz VESA          |  |
| 1024x768   | 75Hz VESA          |  |
| 1280 x1024 | 75Hz VESA          |  |
| 1152x864   | 75Hz               |  |
| 1280x1024  | 60Hz               |  |
| 1280x1024  | 70Hz               |  |
| 1440x900   | 60Hz               |  |
| 1600x900   | 60Hz               |  |
| 1600x900   | 75Hz               |  |
| 1680x1050  | 60Hz               |  |
| 1920x1080  | 75Hz               |  |
| 1920x1080  | 60Hz               |  |
| 1920x1080  | 120Hz              |  |
| 1920x1080  | 144Hz              |  |
| 1920x1080  | 165Hz              |  |

Table 2-2. Factory set display modes

## Understanding power management

Power management is invoked when the computer recognizes that you have not using your mouse or keyboard for a user-definable period. There are several states as described in the table below.

For optimal performance, switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

| State           | Power<br>Indicator | Screen | Screen Restoring Operation   |  |
|-----------------|--------------------|--------|--|--|
| On              | White              | Normal |  |  |
| Standby/Suspend | Amber              | Blank  | Press a key or move the mouse.<br>There may be a slight<br>delay reappears.<br><b>Note:</b> Standby also occurs<br>if there is no image output to the monitor. |  |
| Off             | Off                | Blank  | Press power key to switch on<br>There may be a slight delay before the image<br>reappears.   |  |

*Table 2-3. Power indicator* 

#### **Power Management Modes**

| VESA Modes       | Horizontal<br>Sync | Vertical<br>Sync | Video  | Power<br>Indicator | Power Consumption                 |
|------------------|--------------------|------------------|--------|--------------------|-----------------------------------|
| Normal operation | Active             | Active           | Active | White              | 38 W (maximum)*<br>25 W (typical) |
| Active-off mode  | Inactive           | Inactive         | Off    | Amber              | Less than 0.5 W                   |
| Switch off       | -                  | -                | -      | Off                | Less than 0.3 W                   |

#### \*\* Maximum power consumption with max luminance.

This document is informational only and reflects laboratory performance. Your product may perform differently, depending on the software, components and peripherals you ordered and shall have no obligation to update such information. Accordingly, the customer should not rely upon this information in making decisions about electrical tolerances or otherwise. No warranty as to accuracy or completeness is expressed or implied.

## **Caring for your monitor**

Be sure to turn off the power before you perform any maintenance on the monitor.

#### Do not:

- Apply water or liquid directly to your monitor.
- Use solvents or abrasives.
- Use flammable cleaning materials to clean your monitor or any other electrical equipment.
- Touch the screen area of your monitor with sharp or abrasive items. This type of contact may cause permanent damage to your screen.
- Use any cleaner which contains an anti-static solution or similar additives. This may harm the coating of the screen area.

#### Do:

- Lightly dampen a soft cloth with water and use this to gently wipe the covers and the screen.
- Remove grease or finger marks with a damp cloth and a little mild detergent.

## Detaching the monitor base and stand

Step 1: Place the monitor on a soft and flat surface.

Step 2: Remove the screws from stand before detaching stand from the monitor.



## Wall Mounting (Optional)

Refer to the instructions that come with the base mounting kit. To convert your LCD display from a desk-mounted to a wall-mounted display, do the following:

Step 1: Verify that the Power button is turned Off, then disconnect the power cord. Step 2: Lay the LCD display face down on a towel or blanket.



Step 3: Remove the base and stand from the monitor, refer to "Detaching the monitor base and stand" on page 2-9.



Step 4: Attach the mounting bracket from the VESA compatible wall mounting kit. (100mm x100mm distance), the type of VESA mounting screw is M4 x 10 mm.



Step 5: Attach the LCD display to the wall, and follow the instructions in the wall-mounting kit. For use only with UL Listed Wall Mount Bracket with minimum weight/load: 8kg

#### Note:

When you use a flexible arm, do not tilt the monitor downward by more than 5 degrees.

# **Chapter 3.Reference information**

This section contains monitor specifications, instructions to manually install the monitor driver, troubleshooting information.

# **Monitor specifications**

| Table 3-1. Monitor sp           Dimensions  | ecifications for type-model |                                       |  |  |
|---|-----------------------------|---------------------------------------|--|--|
| Dimensions                                  | Depth                       | 234.80mm (9.24 in.)                   |  |  |
|   | Height                      | 494.17mm (19.46 in.)                  |  |  |
|   | Width                       | 539.75mm (21.25 in.)                  |  |  |
| Stand                                       | Tilt                        | Range: -5°~22°                        |  |  |
| VESA mount                                  | Supported                   | 100 mm x 100 mm (3.94 in. x 3.94 in.) |  |  |
| Image                                       | Viewable image size         | 604.52mm (23.8 in.)                   |  |  |
|   | Maximum height              | 296.46mm (11.67in.)                   |  |  |
|   | Maximum width               | 527.04mm (20.75in.)                   |  |  |
|   | Pixel pitch                 | 0.2745mm (V)                          |  |  |
| Power input                                 | Supply voltage              | 100-240V AC                           |  |  |
|   | Max supply current          | 1.5A                                  |  |  |
| Power consumption                           | Normal operation            | <38 W (Max)                           |  |  |
| Note: Power                                 |                             | <25 W (Typical)                       |  |  |
| consumption figures                         | Standby/Suspend             | <0.5 W                                |  |  |
| are for the monitor<br>and the power supply | Stando J, Stopena           |                                       |  |  |
| combined.                                   |                             |                                       |  |  |
| Note: Typical power                         | Off                         | <0.3 W at 100VAC and 240VAC           |  |  |
| consumption is tested                       | Note: without USB/          |                                       |  |  |
| under OSD default                           | Webcam/external speaker     |                                       |  |  |
| setting.                                    |                             |                                       |  |  |
| DP  | Interface                   | DP                                    |  |  |
|   | Horizontal addressability   | 1920 pixels (max)                     |  |  |
|   | Vertical addressability     | 1080 lines (max)                      |  |  |
|   |                             |                                       |  |  |
|   | Clock frequency             | 390 MHz (max)                         |  |  |
| HDMI  | Interface                   | HDMI                                  |  |  |
|   | Input signal                | VESA TMDS (Panel Link <sup>TM</sup> ) |  |  |
|   | Horizontal addressability   | 1920 pixels (max)                     |  |  |
|   | Vertical addressability     | 1080 lines (max)                      |  |  |
|   | Clock frequency             | 390 MHz (max)                         |  |  |
| Communications                              | VESA DDC/CI                 |                                       |  |  |
| communications                              |                             |                                       |  |  |

~ . *C*.... 1.1 (2) / 20

| Supported Display<br>Modes | Horizontal frequency | 30 kHz – 185 kHz               |  |
|----------------------------|----------------------|--------------------------------|--|
|                            | Vertical frequency   | 48 Hz – 165 Hz                 |  |
|                            | Native Resolution    | 1920 x 1080 at 60 Hz           |  |
| Temperature                | Operating            | 0° to 40°C (32°F to 104° F)    |  |
|                            | Storage              | -20° to 60°C (-4°F to 140° F)  |  |
|                            | Shipping             | -20° to 60°C (-4° F to 140° F) |  |
| Humidity                   | Operating            | 10% to 80% non-condensing      |  |
|                            | Storage              | 5% to 95% non-condensing       |  |
|                            | Shipping             | 5% to 95% non-condensing       |  |

## Troubleshooting

If you have a problem setting up or using your monitor, you might be able to solve it yourself. Before calling your dealer or Lenovo, try the suggested actions that are appropriate to your problem.

Table 3-2. Troubleshooting

| Problem   | Possible cause   | Suggested action   | Reference   |
|---|--|--|---|
| The words" Out<br>of Range" are<br>shown on the<br>screen, and the<br>power indicator is<br>flashing white. | The system is set to a<br>display mode which is<br>not supported by the<br>monitor   | <ul> <li>If you are replacing an old<br/>monitor, reconnect it and<br/>adjust the display mode to<br/>within the specified range<br/>for your new monitor.</li> <li>If using a Windows<br/>system, restart the system<br/>in safe mode, then select<br/>a supported display mode<br/>for your computer.</li> <li>If these options do not<br/>work, contact the Customer<br/>Support Centre.</li> </ul> | "Selecting a<br>supported display<br>mode" on page 2-7        |
| The image quality<br>is unacceptable  | The video signal cable is<br>not<br>connected with the<br>monitor or system<br>completely.   | Be sure the signal cable is<br>firmly plugged into the system<br>and monitor.  | "Connecting and<br>turning on your<br>monitor" on page<br>1-4 |
|   | The color settings may be incorrect.   | Select another color setting from the OSD menu.  | "Adjusting your<br>monitor image" on<br>page 2-3              |
|   | The automatic image setup function was not performed.  | Perform automatic image setup.   | "Adjusting your<br>monitor image" on<br>page 2-3              |
| The power<br>indicator is not<br>lit and there is no<br>image.  | <ul> <li>The monitor's power switch is not switched on.</li> <li>The power cord is loose or disconnected.</li> <li>There is no power at the outlet.</li> </ul> | <ul> <li>Be sure the power cord<br/>is connected properly.</li> <li>Be sure the outlet has power.</li> <li>Power on the monitor.</li> <li>Try using another power cord.</li> <li>Try using another<br/>electrical outlet.</li> </ul>   | "Connecting and<br>turning on your<br>monitor" on page<br>1-4 |
| Screen is blank<br>and power<br>indicator is amber.   | The monitor is in Standby<br>/ Suspend mode  | <ul> <li>Press any key on the<br/>keyboard or move the<br/>mouse to restore operation.</li> <li>Check the Power options<br/>settings on your computer.</li> </ul>  | "Understanding<br>power management"<br>on page 2-8            |
| The power<br>indicator is amber,<br>but there is no<br>image  | The video signal cable<br>is loose or disconnected<br>from the system or<br>monitor  | Be sure the video cable is<br>connected with the system<br>properly  | "Connecting and<br>turning on your<br>monitor" on page<br>1-4 |
|   | The monitor brightness<br>and contrast are at the<br>lowest setting.   | Adjust the brightness and<br>contrast setting on the OSD<br>menu.  | "Adjusting your<br>monitor image" on<br>page 2-3              |

| Problem   | Possible cause   | Suggested action   | Reference  |
|---|--|--|--|
| One or more of<br>the pixels appear<br>discolored   | This is a characteristic of<br>the LCD technology and<br>is not an LCD defect  | If there are more than five<br>pixels missing, contact the<br>Support Center   | "Appendix A,<br>Service and Support"<br>on page A-1                    |
| <ul> <li>Fuzzy lines<br/>in text or a<br/>blurryimage</li> <li>Horizontal<br/>or vertical<br/>lines through<br/>the image.</li> </ul> | <ul> <li>Image setup has not<br/>been optimized</li> <li>Your system<br/>DisplayProperties<br/>setting have not<br/>been optimized.</li> </ul> | Adjust the resolution settings<br>on your system to match<br>the native resolution for this<br>monitor: 1920 x 1080 at 60 Hz.                        | "Adjusting your<br>monitor image" on<br>page 2-3                       |
|   |  | Perform automatic image setup.<br>If automatic image setup does<br>not help, perform manual image<br>setup.  | supported display  |
|   |  | When working in the native<br>resolution, you may find<br>additional improvements by<br>adjusting the Dots Per Inch<br>(DPI) setting on your system. | See the Advanced<br>section of your<br>system's display<br>properties. |

## Manually installing the monitor driver

Below are steps for manually installing the monitor driver in Microsoft Windows 7, Microsoft Windows 10.

#### Installing the monitor driver in Windows 7

To use the Plug and Play feature in Microsoft Windows 7, do the following:

- 1. Turn off the computer, all attached devices.
- 2. Ensure that the monitor is connected correctly.
- 3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 7 operating system.
- 4. From the Lenovo website https://pcsupport.lenovo.com/solutions/g24\_20, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
- 5. Open the Display Properties window by clicking Start, Control Panel, Hardware and Sound icon, and then click the Display icon.
- 6. Click the Change the display settings tab.
- 7. Click the Advanced Settings icon.
- 8. Click the Monitor tab.
- 9. Click the Properties button.
- 10. Click the Driver tab.
- 11. Click Update Driver, then click Browse the computer to find the driver program.
- 12. Select Pick from the list of device driver program on the computer.
- Click the Hard Disk button. By clicking the Browse button, browse and point to the following path: X:\Monitor Drivers\Windows 7
  - (where X indicates "the folder in which the downloaded driver is located"(such as a desktop)).
- 14. Select the "leng24-20.inf" file and click the Open button. Click the OK button.
- 15. In the new window, select LEN G24-20 and click Next.
- 16. After the installation is complete, delete all downloaded files and close all windows.
- 17. Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

#### Installing the monitor driver in Windows 10

To use the Plug and Play feature in Microsoft Windows 10, do the following:

- 1. Turn off the computer, all attached devices.
- 2. Ensure that the monitor is connected correctly.
- 3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 10 operating system.
- 4. From the Lenovo website https://pcsupport.lenovo.com/solutions/g24\_20, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
- 5. On the Desktop, move mouse to bottom-left corner of screen, right-click choose Control Panel, then double click the icon of Hardware and Sound, and then click Display.
- 6. Click the Change the display settings tab.
- 7. Click the Advanced Settings icon.
- 8. Click the Monitor tab.
- 9. Click the Properties button.
- 10. Click the Driver tab.
- 11. Click Update Driver, then click Browse the computer to find the driver program.
- 12. Select Pick from the list of device driver program on the computer.
- 13. Click the Hard Disk button. By clicking the Browse button, browse and point to the following path:X:\Monitor Drivers\Windows 10 (where X indicates "the folder in which the downloaded

driver is located" (such as a desktop)).

- 14. Select the "leng24-20.inf" file and click the Open button. Click the OK button.
- 15. In the new window, select LEN G24-20 and click Next.
- 16. After the installation is complete, delete all downloaded files and close all windows.
- 17. Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

**Note:** On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1080 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

#### Getting further help

If you still can't solve your problem, please contact the Lenovo Support Center. For more information on contacting the Support Center, please see Appendix A."Service and Support" on page A-1.

# **Appendix A. Service and Support**

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your Lenovo Statement of Limited Warranty for a fully explanation of Lenovo warranty terms.

## **Registering your option**

Register to receive product service and support updates, as well as free and discounted computer Accessories and content. Go to: http://www.lenovo.com/support

## **Online technical support**

Online technical support is available during the life of your product through the Lenovo Support Web site at http://www.lenovo.com/ support

Product replacement assistance or exchange of defective components also is available during the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your option is installed in a Lenovo computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

#### **Telephone technical support**

Installation and configuration support through the Customer Support Center will be available until 90 days after the option has been withdrawn from marketing. After that time, the support is cancelled, or made available for a fee, at Lenovo's discretion. Additional support is also available for a nominal fee.

Before contacting a Lenovo technical support representative, please have the following information available: option name and number, proof of purchase, computer manufacturer, model, serial number and manual, the exact wording of any error message, description of the problem, and the hardware and software configuration information for your system.

Your technical support representative might want to walk you through the problem while you are at your computer during the call.

Telephone numbers are subject to change without notice. The most up-to-date telephone list for Lenovo Support is always available at: http://www.lenovo.com/support

| Country or Region | Telephone Number        |  |
|-------------------|-------------------------|--|
| China             | 400-990-8888            |  |
| South Africa      | 800982393               |  |
| Argentina         | 0800-444-2722(Spanish)  |  |
| Australia         | 1300-557-073            |  |
| Austria           | 800295730(German)       |  |
| Belgium           | 80076524(French, Dutch) |  |
| Bolivia           | 800-100-764(Spanish)    |  |

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Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. For information on recycling Lenovo products, go to:

http://www.lenovo.com/recycling

環境配慮に関して

本機器またはモニターの回収リサイクルについて

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Collecting and recycling a disused Lenovo computer or monitor

If you are a company employee and need to dispose of a Lenovo computer or monitor that is the property of the company, you must do so in accordance with the Law for Promotion of Effective Utilization of Resources. Computers and monitors are categorized as industrial waste and should be properly disposed of by an industrial waste disposal contractor certified by a local government. In accordance with the Law for Promotion of Effective Utilization of Resources, Lenovo Japan provides, through its PC Collecting and Recycling Services, for the collecting, reuse, and recycling of disused computers and monitors. For details, visit the Lenovo Web site at

https://www.lenovo.com/jp/ja/services\_warranty/recycle/pcrecycle/. Pursuant to the Law for Promotion of Effective Utilization of Resources, the collecting and recycling of homeused computers and monitors by the manufacturer was begun on October 1, 2003. This service is provided free of charge for home-used computers sold after October 1, 2003. For details, visit the Lenovo Web site at

https://www.lenovo.com/jp/ja/services\_warranty/recycle/personal/.

Disposing of Lenovo computer components

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