



THE DISPLAY CHOICE OF PROFESSIONALS

QF-28 4K2K LED-Backlit Display

User Manual

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FOR YOUR SAFETY

Before operating the monitor, please read this manual thoroughly. This manual should be retained for future reference.

SAFETY PRECAUTIONS

NOTICE:

- The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
- The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.

WARNING.

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

FOR YOUR SAFETY

PRECAUTIONS

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable cart, stand, or table. If the monitor falls, it
 can injure a person and cause serious damage to the appliance. Use only
 a cart or stand recommended by the manufacturer or sold with the monitor.
 If you mount the monitor on a wall or shelf, use a mounting kit approved by
 the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet 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 supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a
 third (grounding) pin. This plug will fit only into a grounded power outlet as a
 safety feature. If your outlet does not accommodate the three-wire plug,
 have an electrician install the correct outlet, or ground the appliance safely.
 Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightening storm or when it will not be used for long period of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor by yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.

FOR YOUR SAFETY

WEEE DECLARATION

Disposal of Waste Equipment by Users in Private Household in the European Union.



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

SPECIAL NOTES ON LCD MONITOR

The following symptoms are normal with LCD monitor and do not indicate a problem.

NOTES

- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours.
 In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.
- To declare the product is the Information Technical Equipment intended primarily for use in the domestic environment.
- The monitor is for computer use and not marketed and intended for displaying any television broadcast signals.

FEATURES

- 71.0cm(28 inches) TFT Color LCD Monitor
- · Crisp, Clear Display for Windows
- Recommended Resolutions: 3840x2160@60Hz
- · Ergonomic Design
- · Space Saving, Compact Case Design

CHECKING THE CONTENTS OF THE PACKAGE

The product package should include the following items:

- 1. LCD Monitor
- 2. Owner's Manual (including CD-ROM & Warranty Card)
- 3. Power Cord
- 4. DVI Cable
- 5. DP Cable
- 6. Base

INSTALLATION INSTRUCTIONS

Install



Figure 1 Installation Instruction

ADJUSTING THE VIEWING ANGLE

For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.

Hold the stand so that the monitor does not topple when you change the monitor's angle.

You are able to adjust the monitor as below:

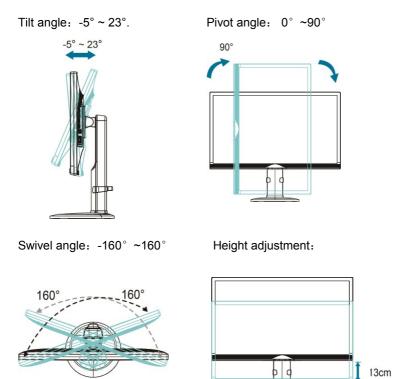


Figure 2 Adjusting the Viewing Angle

Note:

- · Put the monitor on a flat surface.
- Hold the panel so that the monitor does not topple.

Power Source:

- 1. Make sure that the power cord is the correct type required in your area.
- 2. This LCD monitor has an universal power supply that allows operation in either 100/120V AC or 220/240V AC voltage area (No user adjustment is required.)
- Connect the AC-power cord into your LCD monitor's AC-power-input. The AC
 power cord may be connected to either a wall power outlet or the power outlet
 socket on your PC, depending on the type of power cord supplied with your
 LCD monitor.

CONNECTING CABLES

SIGNAL CABLE

Connecting the Signal Cable: Plug the Signal Cable one end to LCD monitor's "DSUB" socket, the other end to the computer's VGA port and tighten the two screws on the cable connector.

Connecting the DVI Cable: Plug the DVI Cable one end to LCD monitor's "DVI" socket, the other end to the computer's DVI port and tighten the two screws on the cable connector.

Connecting the DP Cable: Plug the DP Cable one end to the output port of DP video equipment, the other end to LCD monitor's "**D**" socket.

Connecting the HDMI Cable: Plug the HDMI Cable one end to the output port of HDMI video equipment, the other end to LCD monitor's "HDMI" socket.

Connecting the Power Cord: Connect the AC-power cord into your LCD monitor's "AC-IN". The AC-power cord may be connected to either a wall power outlet or the power outlet socket on your PC, depending on the type of power cord supplied with your LCD monitor.

Connecting the Audio Cable: Connect the audio cable between the monitor's "AUDIO-IN" socket and the PC's audio output (green port).

Connecting the USB Cable: Plug the USB Cable one end to LCD Monitor's USB upstream, the other end to the computer's USB port.

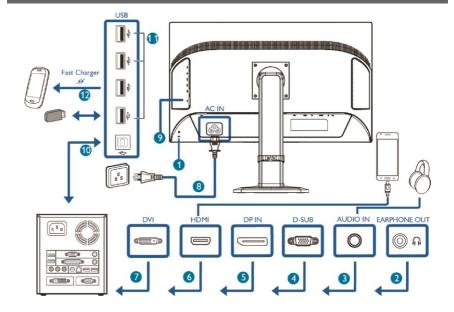


Figure 3 Connecting Cables

- Mensington anti-theft lock
- 2 Earphone jack
- 3 Audio input
- 4 VGA input
- 6 Display port input
- 6 HDMI input
- 7 DVI input
- 8 AC power input
- 9 Power Switch
- **10** USB upstream
- 1 USB port
- **12** USB fast charger

GENERAL INSTRUCTIONS

Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor (See *Figure 4*). By changing these settings, the picture can be adjusted to your personal preferences.

- · The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.

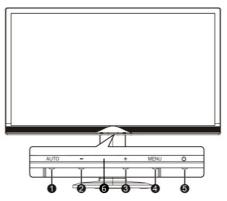


Figure 4 External Control Button

EXTERNAL CONTROLS

| No. | Description |
|-----|----------------------|
| 1 | AUTO / SOURCE / EXIT |
| 2 | - / ECO hotkey |
| 3 | + / Volume+ |
| 4 | MENU / ENTER |
| 5 | Power Button |
| 6 | Power Indicator |

FRONT PANEL CONTROL

· Auto/ Source / Exit:

- When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).
- When OSD menu is in off status, press this button to select input Source: D-Sub/DVI/DP/HDMI.
- 3. When OSD menu is in off status, press this button for 2 seconds to activate the Auto Adjustment function. The Auto Adjustment function is used to set the HPos, VPos, Clock and Phase. (D-Sub only)

-/ ECO hotkey:

ECO control is for brightness and image optimization for different applications. Activates ECO control when the OSD is off or adjust a function when function is activated.

+ / Volume+:

Activates the volume control when the OSD is off or adjust a function when function is activated.

· + / Audio source:

Activates Audio source when OSD is off, and press MENU key to select the function.

- → Change audio input source: Line-in
- → Setting store by HDMI or DisplayPort: Line-out

• MENU / ENTER:

Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Volume Adjust OSD status.

• 也 / Power Button:

Press this button to turn the monitor ON or OFF, and display the monitor's state.

· Power Indicator:

Blue — Power On mode.

Orange — Standby mode.

OSD Lock Function: To lock the OSD, press and hold the MENU button while the monitor is off and then press power button to turn the monitor on. To unlock the OSD - press and hold the MENU button while the monitor is off and then press power button to turn the monitor on.

NOTES

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.

- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.
- Do not scratch the screen with hard things, it may cause permanent damage.
- Don't leak liquid into monitor which will result in the damage of component.

HOW TO ADJUST A SETTING

- 1. Press the MENU-button to activate the OSD window.
- 2. Press + or to navigate through the functions. Once the desired function ishighlighted, press the MENU-button to activate it. If the function selected has a sub-menu, press + or again to navigate through the submenu functions. Once the desired function is highlighted, press MENU-button to activate it.
- 3. Press + or to change the settings of the selected function.
- 4. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-3.

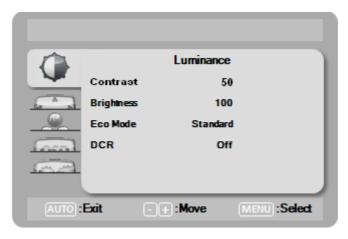


Figure 5 OSD Message

HOW TO ADJUST PIP/ PBP SETTING

- 1. Press the MENU-button to activate the OSD window.
- 2. Press + or to navigate through the functions to PIP SETTING. Once PIP SETTING function is highlighted, press the MENU-button to activate it.
- 3. Press + or again to navigate through the submenu functions. Once the desired function is highlighted, press + or to change the settings of the selected function. Press MENU-button to activate the selected function.
- 4. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-3.
- Press the SOURCE-button to activate the signal source window. Once the desired function is highlighted, press + or - to change the source settings of the selected function.

ADJUSTING THE PICTURE

The descriptions for function control.

| Main Menu Item | Main Menu Icon | Sub Menu Item | Sub Menu | Description | | | |
|-------------------|----------------------|---------------------|-------------|--|---------------------------------|--|--------------|
| | | Contrast | | Contrast from Digital-register | | | |
| | | Brightness | | Backlight Adjustment | | | |
| | | | Standard | Standard Mode | | | |
| | | | Text | Text Mode | | | |
| Luminance | | Eco | Internet | Internet Mode | | | |
| | ~ | | Game | Game Mode | | | |
| | | | Movie | Movie Mode | | | |
| | | | Sports | Sports Mode | | | |
| | | DCD | Off | Disable dynamic contrast ratio. | | | |
| | | DCR | On | Enable dynamic contrast ratio. | | | |
| | | Clock | | Adjust Picture Clock to reduce | | | |
| | | Clock | | Vertical-Line noise. | | | |
| | | Phase H.Position | | Adjust Picture Phase to reduce | | | |
| Image | | | | Horizontal-Line noise. | | | |
| Setup | | | | Adjust the horizontal position of | | | |
| | | | | | | | the picture. |
| | | | V.Position | | Adjust the vertical position of | | |
| | | lmana Datia | | the picture. Wide/ 4:3 | | | |
| | | Image Ratio | | | | | |
| | | Warm | | Recall Warm Color Temperature from EEPROM. | | | |
| | | Normal | | Recall Normal Color | | | |
| | Color | Nomiai | | Temperature from EEPROM. | | | |
| Color | | Cool | | Recall Cool Color Temperature | | | |
| Temp. | G B | | | from EEPROM. | | | |
| . 5 | | sRGB | | Recall SRGB Color | | | |
| | | | | Temperature from EEPROM. | | | |
| | | | User-B | Blue Gain from Digital-register | | | |
| | | User | User-G | Green Gain from Digital-register | | | |
| | | | User-R | Red Gain from Digital-register | | | |

| Main Menu Item | Main Menu Icon | Sub Menu Item | Sub Menu | Description | |
|-------------------|----------------------|------------------|---------------|--|--|
| OSD Setup | 650 | Timeout | | Adjust the OSD Timeout | |
| | 080 | Language | | Select the OSD language | |
| | | | Off | Stop Multi-View function | |
| | | PIP Mode | PIP | Picture-in-Picture Mode | |
| | | | PBP | Picture-by-Picture Mode | |
| | | | Small | Small sub-window | |
| | | PIP Size | Middle | Middle sub-window | |
| DID | | | Large | Large sub-window | |
| PIP | | | Right Up | Choose top-right position | |
| | | PIP Position | Right Down | Choose bottom-right position | |
| | | | Left Up | Choose top-left position | |
| | | | Left Down | Choose bottom-left position | |
| | | Swap | | Swap main window and sub window | |
| | | | Main Sorce | | |
| | | | D-SUB | Select analog input source | |
| | | | DVI | Select DVI input source | |
| | | | HDMI/ MHL | Select HDMI/MHL input source | |
| | | | DP | Select DP input source | |
| | | | Sub Source | ce | |
| | | | D-SUB | Select analog input source | |
| | | Input Select | DVI | Select DVI input source | |
| | ļ | | DP | Select DP input source as sub | |
| | | | | source | |
| Extra | | | HDMI/ | Select HDMI/MHL input source | |
| | (W.) | | MHL | as sub source | |
| | | | Display Po | | |
| | | | DP1.1 | Choose DP1.1 mode | |
| | | | DP1.2 | Choose DP1.2 mode | |
| | | | Auto-Swit | • | |
| | | | On | Enable Auto-Switch Input | |
| | | | Off | Disable Auto-Switch Input | |
| | | DDC/CI | | Turn ON/OFF DDC/CI Support. | |
| | | Reset | | Reset the menu to default. | |
| | | Information | | Show the information of the main image and sub-image source. | |

PLUG AND PLAY

Plug & Play DDC1/2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bi-directional data channel based on the I2C protocol. The host can request EDID information over the DDC2B channel.

THIS MONITOR WILL APPEAR TO BE NON-FUNCTIONAL IF THERE IS NO VIDEO INPUT SIGNAL. IN ORDER FOR THIS MONITOR TO OPERATE PROPERLY, THERE MUST BE A VIDEO INPUT SIGNAL.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association (VESA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signal this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard, or clicking the mouse.

TECHNICAL SUPPORT (FAQ)

| Problem & Question | Possible Solution |
|--|---|
| Power LED is not on. | Check if the Power Switch is in the ON position.Power Cord should be connected. |
| No Plug & Play | Check if the PC system is Plug & Play compatible. Check if the Video Card is Plug & Play compatible. Check if the D-15 plug pin of Video Cable is bent. |
| Picture is fuzzy. | Adjust the Contrast and Brightness Controls. |
| Picture bounces or a wave pattern is present in the picture. | Move electrical devices that may cause electrical interference. |
| The power LED is ON but there's no video or no picture. | Computer Power Switch should be in the ON position. Computer Video Card should be snugly seated in its slot Make sure monitor's video cable is properly connected to the computer. Inspect monitor's video cable and make sure none of the pins are bent. Make sure computer is operational by hitting the CAPS LOCK key on the keyboard while observing the CAPS LOCK LED. The LED should either turn ON or OFF after hitting the CAPS LOCK key. |
| Missing one of the primary colors (RED, GREEN, or BLUE). | Inspect the monitor's video cable and make sure that none of the pins are bent. |
| Screen image is not centered or sized properly. | Adjust pixel frequency (CLOCK) and PHASE or press hot-key (AUTO). |
| Picture has color defects (white does not look white) | Adjust RGB color or select color temperature. |
| Horizontal or vertical disturbances on the screen. | Use Win95/98/2000/ME/XP/WIN7/WIN8 shut-down mode Adjust CLOCK and PHASE or perform hot-key (AUTO-key). |

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 picture has not correct width. PHASE adjusts the phase of the pixel clock signal. With a wrong phase adjustment the picture has horizontal disturbances in light picture. For PHASE and CLOCK adjustment use "dot-pattern" or Win95/98/2000/ME/XP/WIN7/WIN8 shut-down mode pattern.

TECHNICAL SUPPORT (FAQ)

ERROR MESSAGE & POSSIBLE SOLUTION CABLE NOT CONNECTED:

- 1. Check that the signal-cable is properly connected. If the connector is loose, tighten the connector's screws.
- 2. Check the signal cable connection pins for damage.

PiP/ PbP Input compatibility:

There are four different video input to choose as the sub display source: DVI\HDMI\DP. Please refer below table for compatibility of main/sub input source

| PIP | | | Main | Souce | |
|--------|----------|-------|------|----------|----|
| | | D-SUB | DVI | HDMI/MHL | DP |
| | D-SUB | V | V | V | V |
| Sub | DVI | V | V | V | V |
| Source | HDMI/MHL | V | V | V | V |
| | DP | V | V | V | V |

| | | Main Souce | | | |
|---------------|----------|------------|-----|----------|----|
| P | BP | D-SUB | DVI | HDMI/MHL | DP |
| | D-SUB | V | V | V | V |
| Sub Source | DVI | V | V | V | V |
| Source | HDMI/MHL | V | V | V | V |
| | DP | V | V | V | V |

SPECIFICATIONS

| Specifications | | QF-28 |
|----------------|---------------------|--|
| | Panel Type | LED-backlit TFT LCD |
| I CD Danal | Panel Size | 28" |
| LCD Panel | Pixel Pitch (mm) | 0.16 x 0.16 |
| | Max. Resolution | 3840 x 2160 |
| | Display Colour | 1.073B |
| | U From | 30KHz – 99KHz (D-SUB, DVI, HDMI) |
| Frequency | H. Freq. | 30KHz – 160KHz(DisplayPort) |
| (H/V) | V Frog | 56Hz – 80Hz (D-SUB) |
| | V. Freq. | 23Hz – 80Hz(DVI,HDMI,DisplayPort) |
| | VGA | 15-Pin D-Sub |
| Innut | DVI | 24-Pin DVI |
| Input | HDMI | HDMI |
| | DisplayPort | DisplayPort |
| | Audio in | 1 x stereo audio in for PC (audio jack, 3.5 Ø) |
| Audio | Audio out | 3.5mm Stereo Phone jack |
| | Speaker | 3W x 2 |
| USB hub | | 4 X USB (2 X USB 3.0 ,2 X USB2.0) |
| | Power Supply | 100-240V~, 50/60Hz,1.5A |
| Power | Consumption Max. | < 105W (On) |
| | Consumption Standby | < 0.5W |

| Specifications | | QF-28 |
|--------------------|--------------------|---|
| | Switch | +/Volume+ -/ECO AUTO/SOURCE/EXIT MENU/ENTER POWER BUTTON |
| Control Setting | Functions | LuminanceImage SetupColor Temp.OSD SetupPIP SetupExtra |
| Plug & Play | | VESA DDC2B |
| Operating | Temperature | 0°C ~ 40°C (32°F ~ 104°F) |
| Conditions | Humidity | 10% ~ 85% |
| Storage | Temperature | -20°C ~ 55°C (-4°F ~ 131°F) |
| Conditions | Humidity | 5% ~ 93% |
| | Weight (with base) | 7.88 kg |
| Weight | Weight (w/o base) | 5.28 kg |
| | Packaging Weight | 10.30 kg |
| Dimension | With Base | 659.7 x 555.4 x 244.5 mm |

Note: All specifications are subject to change without prior notice.

FACTORY PRESET TIMING TABLE

Preset Display Modes

| Standard | Resolution | Horizontal Frequency (KHz) | Vertical Frequency (Hz) |
|----------|----------------|-------------------------------|----------------------------|
| | 640×480 @60Hz | 31.469 | 59.940 |
| N/C A | 640×480 @67Hz | 35.000 | 66.667 |
| VGA | 640×480 @72Hz | 37.861 | 72.809 |
| | 640×480 @75Hz | 37.500 | 75.000 |
| Dos-mode | 720×400 @70Hz | 31.469 | 70.087 |
| | 800×600 @56Hz | 35.156 | 56.250 |
| 0) (0 4 | 800×600 @60Hz | 37.879 | 60.317 |
| SVGA | 800×600 @72Hz | 48.077 | 72.188 |
| | 800×600 @75Hz | 46.875 | 75.000 |
| Mac-Mode | 832×624 @75Hz | 49.725 | 74.550 |
| | 1024×768 @60Hz | 48.363 | 60.004 |
| XGA | 1024×768 @70Hz | 56.476 | 70.069 |
| | 1024×768 @75Hz | 60.023 | 75.029 |
| | 1280x720@60Hz | 44.772 | 59.855 |
| SXGA | 1280x960@60Hz | 60.000 | 60.000 |
| SXGA | 1280x1024@60Hz | 63.981 | 60.020 |
| | 1280x1024@75Hz | 79.976 | 75.025 |
| WSXGA | 1440x900@60Hz | 55.935 | 59.887 |
| WSXGA+ | 1680x1050@60Hz | 64.674 | 59.883 |
| FULL HD | 1920x1080@60Hz | 67.500 | 60.000 |
| QWHD | 2560x1440@60Hz | 88.786 | 59.900 |
| LILID | 3840x2160@30Hz | 67.500 | 30.000 |
| UHD | 3840x2160@60Hz | 133.32 | 60.000 |

MHL Timing Table

| Format | Resolution | Vertical Frequency |
|--------|-------------|--------------------|
| 480P | 640 x 480 | 60Hz |
| 480P | 720 x 480 | 60Hz |
| 576P | 720 x 576 | 50Hz |
| 720P | 1280 x720 | 50Hz,60Hz |
| 10801 | 1920 x 1080 | 50Hz,60Hz |
| 1080P | 1920 x 1080 | 30Hz |

Video (DP / HDMI) Timing Table

| Format | Resolution |
|----------------------------|-------------|
| 480P@60Hz for Digital only | 640 x 480 |
| 480P@60Hz for Digital only | 720 x 480 |
| 576P@60Hz for Digital only | 720 x 576 |
| 720P@50Hz for Digital only | 1280 x720 |
| 720P@60Hz for Digital only | 1280 x720 |
| 1080P@50Hz for Digital | 1920 x 1080 |
| 1080P@60Hz for Digital | 1920 x 1080 |
| 1080i@50Hz for Digital | 1920 x 540 |
| 1080i@60Hz for Digital | 1920 x 540 |
| 1080P@30Hz for Digital | 1920 x 1080 |

CONNECTOR PIN ASSIGNMENT

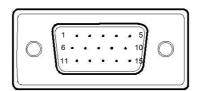


Figure 6 15-Pin Color Display Signal Cable

| Pin No. | Description |
|---------|--------------|
| 1 | Red |
| 2 | Green |
| 3 | Blue |
| 4 | Logic Gnd |
| 5 | Detect cable |
| 6 | Red Gnd |
| 7 | Green Gnd |
| 8 | Blue Gnd |

| Pin No. | Description |
|---------|-----------------|
| 9 | +5V/Sense(+5V) |
| 10 | Monitor Gnd |
| 11 | Logic Gnd |
| 12 | DDC serial data |
| 13 | H sync |
| 14 | V sync |
| 15 | DDC serial Clk. |

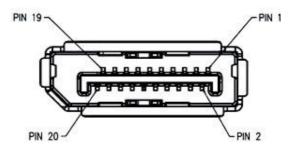


Figure 7 20-Pin Display Port Signal Cable

| Pin No. | Mnemonic | Signal |
|---------|---------------|-----------------|
| 1 | ML Lane 3 (n) | Lane 3 - |
| 2 | GND | Ground |
| 3 | ML Lane 3 (p) | Lane 3 + |
| 4 | ML Lane 2 (n) | Lane 2 - |
| 5 | GND | Ground |
| 6 | ML Lane 2 (p) | Lane 2 + |
| 7 | ML Lane 1 (n) | Lane 1 - |
| 8 | GND | Ground |
| 9 | ML Lane 1 (p) | Lane 1 p |
| 10 | ML Lane 0 (n) | Lane 0 - |
| 11 | GND | Ground |
| 12 | ML Lane 0 (p) | Lane 0 + |
| 13 | GND | Ground |
| 14 | GND | Ground |
| 15 | AUX CH (p) | Aux Channel + |
| 16 | GND | Ground |
| 17 | AUX CH (n) | Aux Channel - |
| 18 | HPD | Hot Plug Detect |
| 19 | Return | Return |
| 20 | DP PWR | NC |

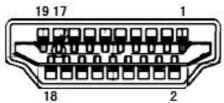
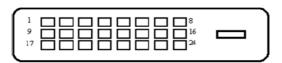


Figure 8 HDMI Signal Cable

| Pin No. | Signal Name |
|---------|--------------------|
| 1 | TMDS Data 2+ |
| 2 | TMDS Data 2 Shield |
| 3 | TMDS Data 2 |
| 4 | TMDS Data 1+ |
| 5 | TMDS Data 1 Shield |
| 6 | TMDS Data 1 |
| 7 | TMDS Data 0+ |
| 8 | TMDS Data 0 Shield |
| 9 | TMDS Data 0 |
| 10 | TMDS Clock + |

| Pin No. | Signal Name |
|---------|---------------------------|
| 11 | TMDS Clock Shield |
| 12 | TMDS Clock |
| 13 | CEC |
| 14 | Reserved (N.C. on device) |
| 15 | SCL |
| 16 | SDA |
| 17 | DDC/CEC Ground |
| 18 | +5V Power |
| 19 | Hot Plug Detect |



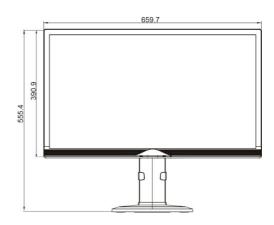
| Pin No. | Signal Name |
|---------|----------------------|
| 1 | TMDS Data 2- |
| 2 | TMDS Data 2+ |
| 3 | TMDS Data 2/4 Shield |
| 4 | TMDS Data 4- |
| 5 | TMDS Data 4+ |
| 6 | DDC Clock |
| 7 | DDC Data |
| 8 | NC |
| 9 | TMDS Data 1- |
| 10 | TMDS Data 1+ |
| 11 | TMDS Data 1/3 Shield |
| 12 | TMDS Data 3- |

| Pin No. | Signal Name | |
|---------|----------------------|--|
| 13 | TMDS Data 3+ | |
| 14 | +5V Power | |
| 15 | Ground (for +5V) | |
| 16 | Hot Plug Detect | |
| 17 | TMDS Data 0- | |
| 18 | TMDS Data 0+ | |
| 19 | TMDS Data 0/5 Shield | |
| 20 | TMDS Data 5- | |
| 21 | TMDS Data 5+ | |
| 22 | TMDS Clock Shield | |
| 23 | TMDS Clock + | |
| 24 | TMDS Clock - | |

PRODUCT DIMENSIONS

QF-28

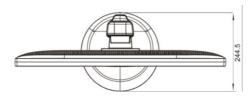
► Front View



► Side View



► Top View



Company Address: 5F-1, No. 3-1, Park Street, Nangang District, Taipei, 11503, Taiwan.