

## TFT LCD MONITOR

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### USER MANUAL

HDVS AHD/TVI Series

For all AT models

L104AT, L121AT, L152AT, L156AT

L172AT, L185AT, L192AT, L215AT

L238AT, L240AT, L270AT, L320AT

L420AT



**WARNING:**

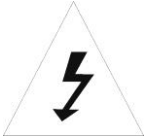
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

**CAUTION:**



**Explanation of Graphical Symbols**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**Precautions**

**Safety-----**

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by the qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat built-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

**Installation-----**

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust or mechanical vibration.

The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.

**Cleaning-----**

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

## **Safety Precautions**

### Federal Communications Commission (FCC) Statement

This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- You are cautioned that changes or modifications not expressly approved by that party responsible for compliance could void your authority to operate the equipment.

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

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired

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## **Package List**

A. LCD Monitor	x 1
B. Power Cord	x 1
C. User Manual	x 1
D. 12V Power Adapter	x 1 [Except for the 32"/42"]
F. VGA Cable (DB-15)	x 1 Optional
G. RCA Cable	x 1 Optional
H. IR remote	x 1

## Features

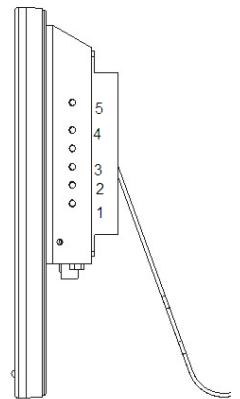
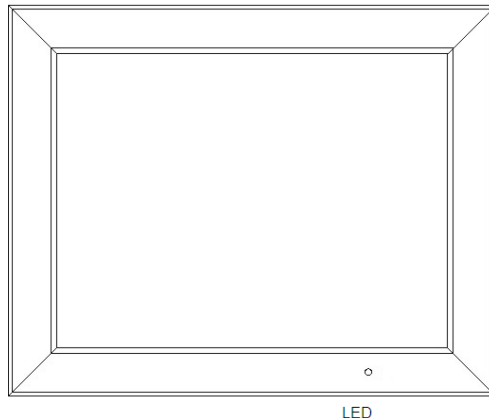
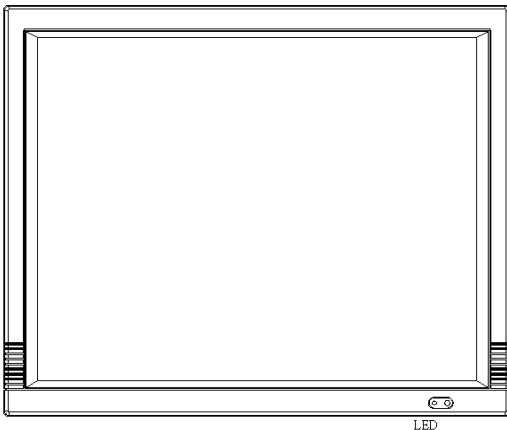
- Support AHD/TVI Input and Output.
- Support AHD/TVI 720p/1080p/3M.
- Multi-Function Display
- VGA/ DVI-D and HDMI Input
- True 10 bits Colour processing engine
- Independent colour management(ICM)
- Dynamic contrast control(DCC)
- Supported 1080p Full HD.
- Build-in 2W+2W speaker, 42" 7W+7W speaker.
- VESA standard bracket 75/100mm. 100/200mm for 32". 300mm for 42".
- Wall mountable capability.

## Operating Instructions

Frame type:

**15"/17"/19" Plastic**

10.4"/12.1" 15"/17"/18.5"/19"/21.5"/23.8"/24"/27"/32"/42" Aluminium



### Key Board

#### **(1). Power**

Push to turn on and turn off the unit.

LED Green light: Power on

LED Red light: Standby mode.

#### **(2. 3). Adjust UP /DOWN**

UP: Used as UP function. Or Increase value on the OSD Menu.

And as a hot key for colour adjust function.

DOWN: Used as DOWN function. Or Decrease value on the OSD Menu.

And as a hot key for auto adjust function.

#### **(4). Item:**

Hot key for OSD adjustments of Volume, Contrast, Brightness, and Red, Green, Blue.

#### **(5). Menu**

Push to call out OSD menu. Or Used as Confirm function in OSD Menu.

#### **(6). Source**

Select input signal from D-SUB, HD DVI and AHD/TVI.

#### **KEY Lock Function:**

Push "Menu" and "Item", OSD of screen will show "Key Lock on", Into key lock mode. And push again, OSD of screen will show "Key Lock off", Into key unlock mode.

## IR remote control

### (1). Power

Push to turn on and turn off the unit.

LED Green light: Power on

LED Red light: Standby mode.

### (2. 3). Adjust UP /DOWN

UP: Used as UP function. Or Increase value on the OSD Menu.

And as a hot key for colour adjust function.

DOWN: Used as DOWN function. Or Decrease value on the OSD Menu.

And as a hot key for auto adjust function.

### (4). Item:

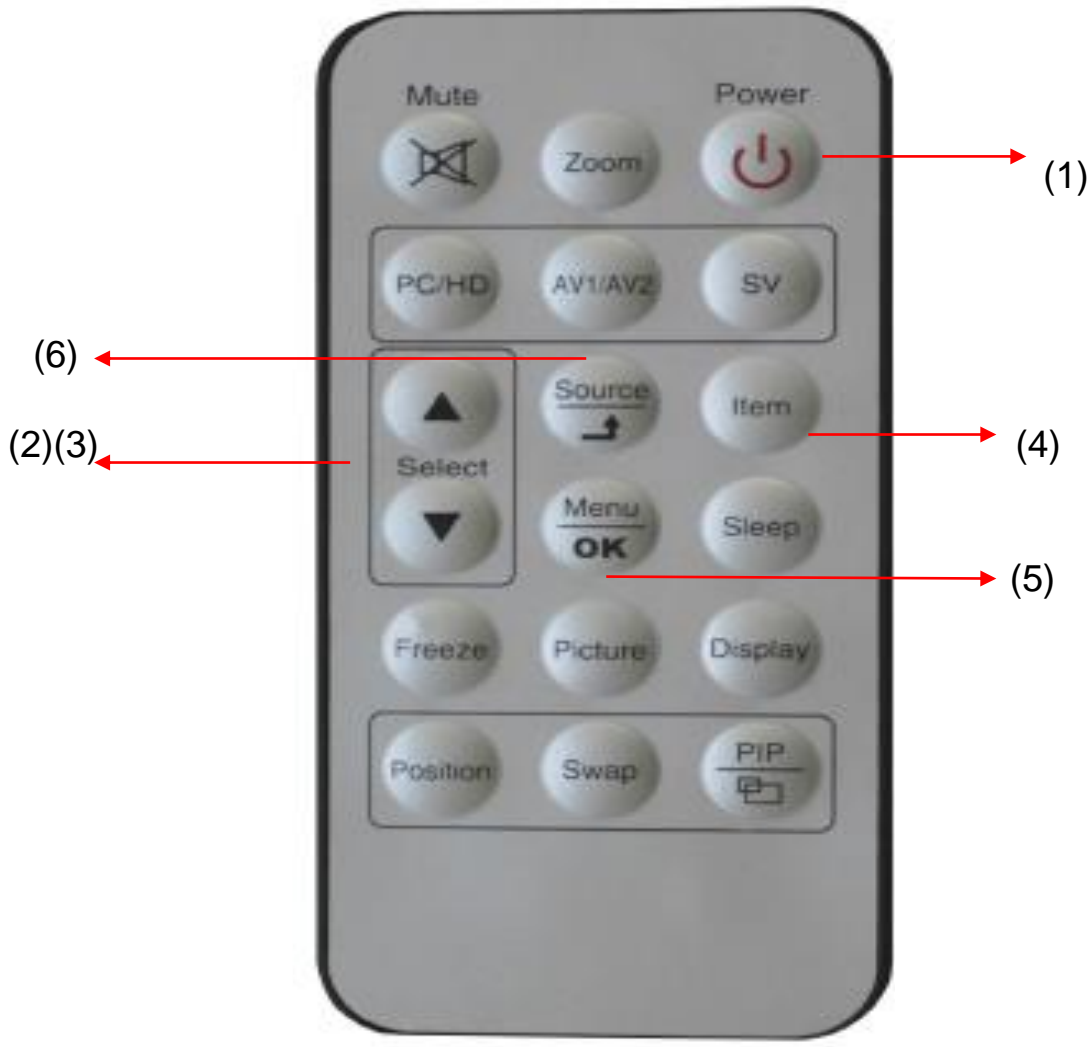
Hot key for OSD adjustments of Volume, Contrast, Brightness, and Red, Green, Blue.

### (5). Menu

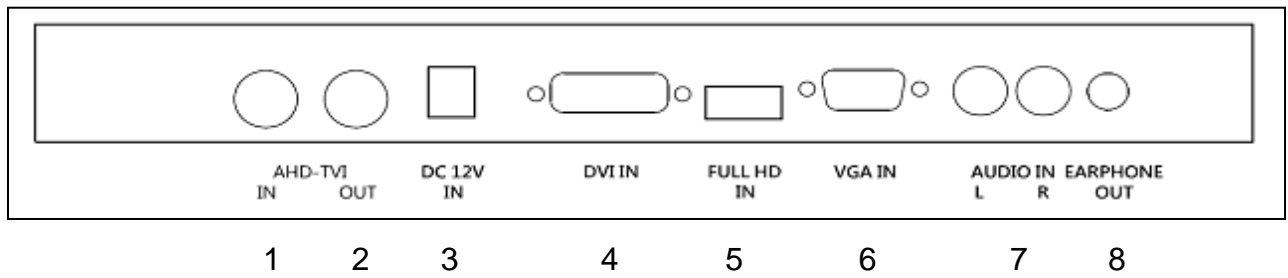
Push to call out OSD menu. Or Used as Confirm function in OSD Menu.

### (6). Source

Select input signal from D-SUB, HD DVI and AHD/TVI.

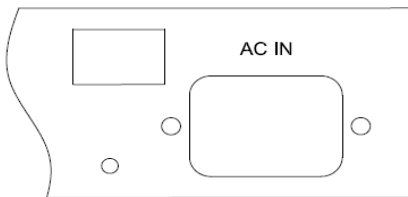


## Connection: HDVS AT Series 10.4"~27"



- 1: AHD/TVI-IN
- 2: AHD/TVI-OUT
- 3: Regulated DC12V Power Input
- 4: DVI-D IN
- 5: Full HD IN
- 6: D-SUB IN
- 7: AUDIO R/L IN
- 8: Earphone OUT

### 32"/42" AC Power in



## **OSD Function**

Colour Image Setting OSD Menu Signal Source Audio Misc. Back
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### **Colour:**

#### Contrast

Adjust background black level of the screen image.

#### Brightness

Adjust foreground white level of the screen image.

#### Colour Adjust

Adjust Red, Green, Blue, colour deepness for Users.

#### Colour Temp

Adjust colour temperatures for users.

9300, 6500, 5800, sRGB, USER

#### Back

Exit OSD menu.

### **Image Setting:**

#### Clock

Adjust image distortion appearing as vertical or “noise” on the screen.

#### Phase

Adjust image distortion appearing as horizontal or “noise” on the screen.

#### Sharpness

Adjust the clarity and focus of the screen images.

#### H. Position

Move the screen image left or right.

#### V. Position

Move the screen image up and down.

#### Back

Exit OSD menu.

### **OSD Menu:**

#### OSD H. Pos

Move the OSD menu position left or right.

#### OSD V. Pos

Move the OSD menu position up or down.

#### OSD Timer

Set the OSD menu display time.

#### Language

Select the desired language as English, French, German, Spanish, Traditional Chinese Simplified Chinese, and Japanese.

#### Back

Exit OSD menu.



**Signal source**

Select the input signal D-sub, HDMI, DVI, and AHD-TVI.

Back

Exit OSD menu.

**Audio**

Volume

Control built-in speakers' output Volumes

Mute

Disable the unit's sound output

Back

Exit OSD menu.

**.Misc:**

Auto Adjust

Adjust the best image.

Colour Adjust

Adjust the best image colour.

Reset

Return to factory default setting.

Screen saver

Use the manual buttons to on/off the screen saver

**Exit:**

Exit the OSD menu.

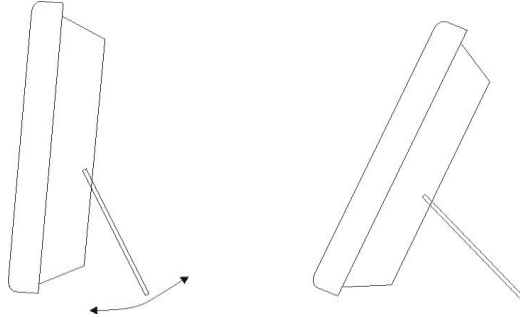
**PC Timing**

Mode	Resolution
1	800*600@60
2	800*600@72
3	800*600@75
4	1024*768@60
5	1024*768@70
6	1024*768@75
7	1280*1024@60
8	1280*1024@75
9	1360*768@60
10	1920*1080@60

# LCD monitor Mounting Guide

## A. Desktop

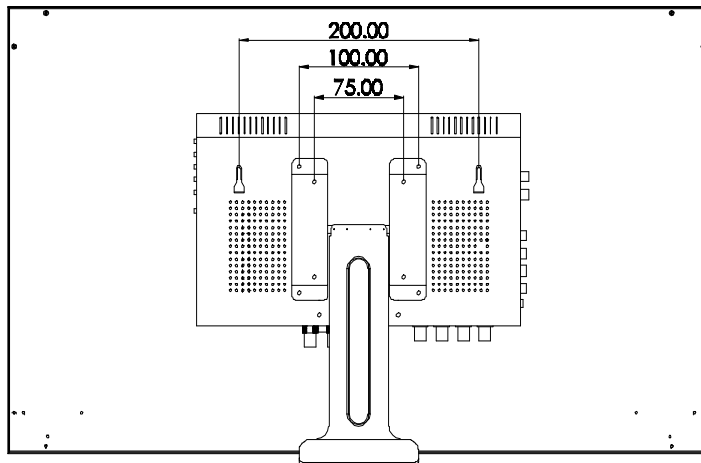
Adjust the viewing angle of LCD to fit most comfortable monitoring status.



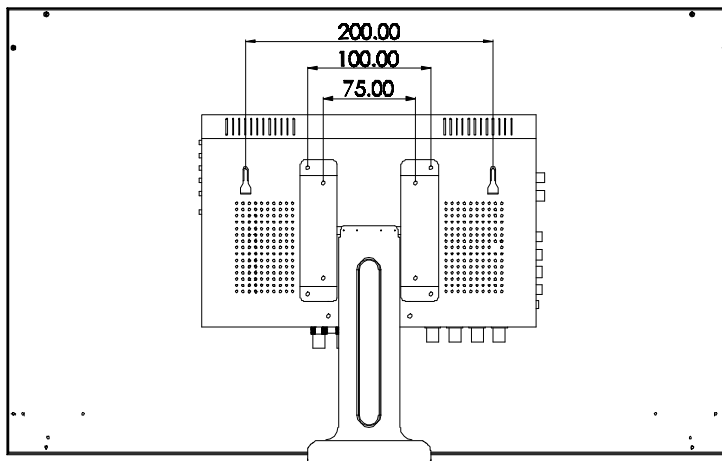
## B. Wall mount

Free your space with wall mount design.

Please follow the fix-hole size in back panel to install the LCD to the wall.

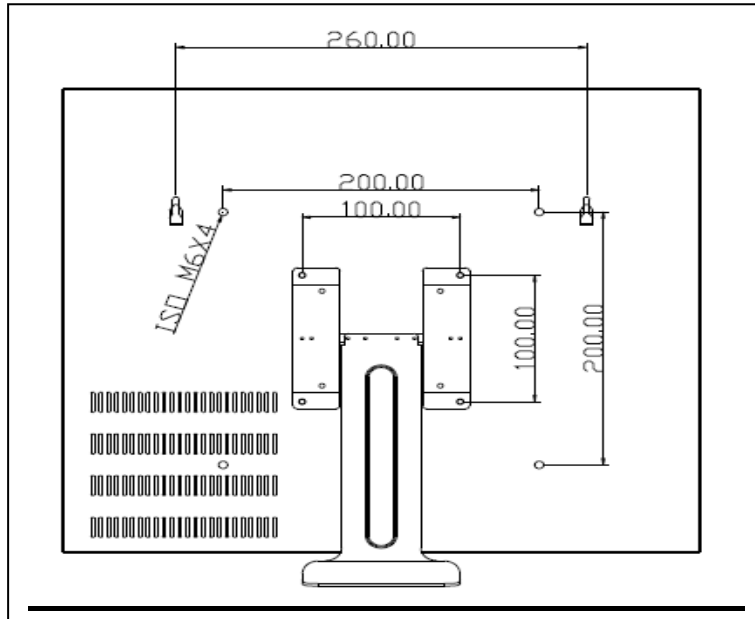


## C. VESA Bracket

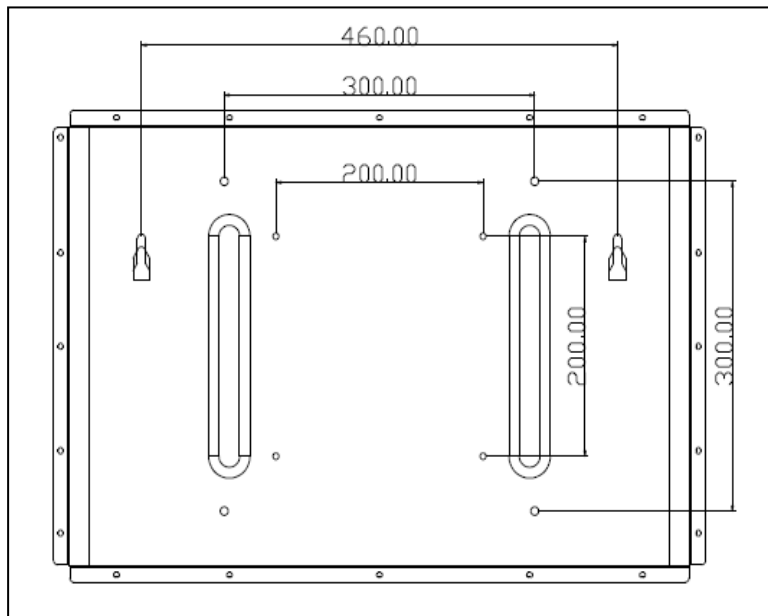


- LCD-15"/15.6"
- LCD-17"
- LCD-18.5"
- LCD-19"
- LCD-21.5"
- LCD-23.8"/24"/27"

32"



42"



## **Specification**

<b>Monitor model</b>	<b>L104AT</b>
LCD panel	10.4"
Visible area (mm)	211.2 x 158.4
Picture format	4:3
Max. resolution	1024x768
Pixel dot pitch (mm)	0.2063x0.2063
Colours	16.2M
Brightness	350 cd/m <sup>2</sup> [LED]
Contrast	900 :1
Response time (Tr+Tf)	16 ms
View angle (U/D/L/R)	75/75/75/75
HDMI input	1x HDMI (A Type)
Audio input(R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/2A
Power consumption	Approx. 9 watts
Dimensions (WxHxD) mm	266 x 214 x 60
Weight	2.5 kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L121AT</b>
LCD panel	12.1"
Visible area (mm)	245.76 x 184.32
Picture format	4:3
Max. resolution	1024x768
Pixel dot pitch (mm)	0.24x0.24
Colours	16.7M
Brightness	500 cd/m <sup>2</sup> [LED]
Contrast	700:1
Response time (Tr+Tf)	35 ms
View angle (U/D/L/R)	70/70/80/80
HDMI input	1x HDMI (A Type)
Audio input(R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/2A
Power consumption	Approx. 11.5 watts
Dimensions (WxHxD) mm	300 x 239 x 61
Weight	2.7 kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L152AT</b>
LCD panel	15"
Visible area (mm)	304 x 228
Picture format	4:3
Max. resolution	1024x768
Pixel dot pitch (mm)	0.297x0.297
Colours	16.7M
Brightness	250 cd/m <sup>2</sup> [LED]
Contrast	600 :1
Response time (Tr/Tf)	6/2 ms
View angle (U/D/L/R)	80/80/80/80
HDMI input	1x HDMI (A Type)
Audio input(R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A
Power consumption	Approx. 13.5 watts
Dimensions (WxHxD) mm	357 x 283 x 64
Weight	3.2kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L156AT</b>
LCD panel	15.6"
Visible area (mm)	344.1x 193.5
Picture format	16:9
Max. resolution	1920x1080
Pixel dot pitch (mm)	0.17925 x 0.17925
Colours	262K
Brightness	300 cd/m <sup>2</sup> [LED]
Contrast	600 :1
Response time (Tr/Tf)	3/8 ms
View angle (U/D/L/R)	60/60/70/70
HDMI input	1x HDMI (A Type)
Audio input(R/L)	1x (RCAX2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A
Power consumption	Approx. 12 watts
Dimensions (WxHxD) mm	401.5 x 251 x 60.3
Weight	3.2kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L172AT</b>	<b>L192AT</b>
LCD panel	17"	19"
Visible area (mm)	338 x 270	376 x 301
Picture format	5:4	5:4
Max. resolution	1280 x 1024	1280x1024
Pixel dot pitch (mm)	0.264x0.264	0.294 x0.249
Colours	16.7M	16.7M
Brightness	250 cd/m <sup>2</sup> [LED]	250 cd/m <sup>2</sup> [LED]
Contrast	1000 :1	1000:1
Response time (Tr/Tf)	1.2/3.8 ms	3.5/1.5 ms
View angle (U/D/L/R)	80/80/85/85	80/80/85/85
HDMI input	1x HDMI (A Type)	
Audio input (R/L)	1x (RCAX2)	
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input	
Earphone out	1xPhone jack ,3.5ψ	
AHD/TVI Video input	1x (BNC)	
AHD/TVI Video output	1x (BNC)	
Speaker	2x built-in speaker (2 watt)	
OSD setting	Yes	
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A	
Power consumption	Approx. 20 watts	Approx.21 watts
Dimensions (WxHxD) mm	391 x 352 x 65	430 x 356 x 66.7
Weight	3.9 kg	5.5 kg
Operating temperature	0° to 50° C	

Subject to technical changes without prior notice. Error excepted.



<b>Monitor model</b>	<b>L185AT</b>
LCD panel	18.5"
Visible area (mm)	409.8 x 230.4
Picture format	16:9
Max. resolution	1366x768
Pixel dot pitch (mm)	0.300x0.300
Colours	16.7M
Brightness	250 cd/m <sup>2</sup> [LED]
Contrast	1000 :1
Response time (Tr/Tf)	1.4/3.6 ms
View angle (U/D/L/R)	80/80/85/85
HDMI input	1x HDMI (A Type)
Audio input(R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A
Power consumption	Approx. 22 watts
Dimensions (WxHxD) mm	464.4 x 285 x 63.2
Weight	4.2 kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L215AT</b>	<b>L238/L240AT</b>	
LCD panel	21.5"	23.8"	24"
Visible area (mm)	476.6 x 268.1	527.04x294.46	531.3 x 298.8
Picture format	16:9	16:9	
Max. resolution	1920 x 1080	1920x1080	
Pixel dot pitch (mm)	0.248x0.248	0.2745x0.2745	0.27675x0.27675
Colours	16.7M	16.7M	
Brightness	250 cd/m <sup>2</sup> [LED]	250 cd/m <sup>2</sup> [LED]	
Contrast	3000 :1	3000:1	
Response time (Tr/Tf)	20/5 ms	20ms	7/5 ms
View angle (U/D/L/R)	89/89/89/89	89/89/89/89	
HDMI input	1xHDMI (A Type)		
Audio input (R/L)	1x (RCAx2)		
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input		
Earphone out	1xPhone jack ,3.5ψ		
AHD/TVI Video input	1x (BNC)		
AHD/TVI Video output	1x (BNC)		
Speaker	2x built-in speaker (2 watt)		
OSD setting	Yes		
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A		
Power consumption	Approx. 21 watts	Approx. 27 watts	
Dimensions (WxHxD) mm	532.3 x 323.3 x 65	575.9 x 347.8 x 56.7	
Weight	5.7 kg	5.8 kg	
Operating temperature	0° to 50° C		

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L270AT</b>
LCD panel	27"
Visible area (mm)	597.6x 336.15
Picture format	16:9
Max. resolution	1920x1080
Pixel dot pitch (mm)	0.31125 x0.31125
Colours	16.7M
Brightness	300 cd/m <sup>2</sup> [LED]
Contrast	5000:1
Response time (Tr/Tf)	7/5 ms
View angle (U/D/L/R)	89/89/89/89
HDMI input	1x HDMI (A Type)
Audio input (R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz, Adapter DC 12V/5A
Power consumption	Approx. 35 watts
Dimensions (WxHxD) mm	658 x 396.6 x 60.5
Weight	7.2kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L320AT</b>
LCD panel	32"
Visible area (mm)	698.4 x 392.8
Picture format	16:9
Max. resolution	1920x1080
Pixel dot pitch (mm)	0.36375x 0.37375
Colours	16.7M
Brightness	350 cd/m <sup>2</sup> [LED]
Contrast	3000:1
Response time (G to G)	6.5 ms
View angle (U/D/L/R)	89/89/89/89
HDMI input	1x HDMI (A Type)
Audio input (R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (2 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60Hz
Power consumption	Approx. 57 watts
Dimensions (WxHxD) mm	761.6 x 455.2 x 75
Weight	13.2kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

<b>Monitor model</b>	<b>L420AT</b>
LCD panel	42"
Visible area (mm)	930.24 x 523.26
Picture format	16:9
Max. resolution	1920x1080
Pixel dot pitch (mm)	0.4845x0.4845
Colours	16.7M
Brightness	350 cd/m <sup>2</sup> [LED]
Contrast	3000:1
Response time (G to G)	6.5 ms
View angle (U/D/L/R)	89/89/89/89
HDMI input	1x HDMI (A Type)
Audio input (R/L)	1x (RCAx2)
PC input	1x VGA input (D-Sub 15 pin) 1x DVI-D input
Earphone out	1xPhone jack ,3.5ψ
AHD/TVI Video input	1x (BNC)
AHD/TVI Video output	1x (BNC)
Speaker	2x built-in speaker (7 watt)
OSD setting	Yes
Power input	AC 100-240V 50/60H
Power consumption	Approx. 78 watts
Dimensions (WxHxD) mm	994.6 x 587.2 x 81
Weight	23kg
Operating temperature	0° to 50° C

Subject to technical changes without prior notice. Error excepted.

## **Appendixes**

### **Troubleshooting**

The tables provided below include some problems that the user may encounter while using the display and the corresponding solutions. Please refer to the contents of this section prior to contacting service personnel.

Problem	Possible Causes	Solutions
No picture	<ol style="list-style-type: none"><li>1. Is the power cable connected to the unit?</li><li>2. Is the unit turned on?</li><li>3. Is the signal cable connected to the unit?</li><li>4. Is the unit in power saving mode?</li></ol>	<ol style="list-style-type: none"><li>1. Make sure the power cable has been properly connected to the unit.</li><li>2. Turn on the unit.</li><li>3. Make sure the signal cable has been properly connected to the unit.</li><li>4. Press any key on computer keyboard.</li></ol>
Strange colour	<ol style="list-style-type: none"><li>1. Is the signal cable connected to the unit?</li></ol>	<ol style="list-style-type: none"><li>1. Make sure the signal cable has been properly connected to the unit.</li></ol>
Picture distortion	<ol style="list-style-type: none"><li>1. Is the signal cable connected to the unit?</li><li>2. Is the video input signal within the unit's specified frequency range?</li></ol>	<ol style="list-style-type: none"><li>1. Make sure the signal cable has been properly connected to the unit.</li><li>2. Make sure the input signal is within the unit's specified frequency range.</li></ol>
Picture is too dim	<ol style="list-style-type: none"><li>1. Have the unit's brightness and contrast settings been set to the lowest level?</li></ol>	<ol style="list-style-type: none"><li>1. Adjust brightness and contrast</li></ol>
Only sound but no picture	<ol style="list-style-type: none"><li>1. Is the connection of the input signal correct?</li></ol>	<ol style="list-style-type: none"><li>1. Check connection of input signal.</li><li>2. Make sure the signal cable has been properly connected.</li></ol>
Only picture but no sound	<ol style="list-style-type: none"><li>1. Is the signal cable connected to the unit?</li><li>2. Has the volume been set to the min level?</li><li>3. Is the audio cable connected to the unit?</li></ol>	<ol style="list-style-type: none"><li>1. Make sure the signal cable has been properly connected to the unit.</li><li>2. Adjust the volume to an appropriate setting.</li><li>3. Make sure the audio cable has been properly connected to the unit.</li></ol>

Please contact the customer service centre of your local dealer if you have any questions regarding the unit after reading the information provided above.