# AOD 150 OPEN FRAME

# USER'S MANUAL

**AOD**
all in one display

ALLINONE DISPLAY INC.
www.aodlcd.com

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## 0. Connection To the Monitor
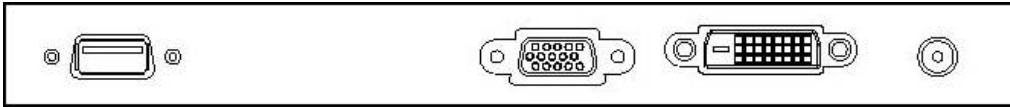
TOUCH INTERFACE
(OPTION/USB&SERIAL)

RGB

DVI(OPTION)

POWER(DC12V)

## 1. Installation

• Connect the signal(VGA) cable to the VGA port of computer. Tighten the two thumbscrews by turning clockwise.
• You can adjust the connection for your PC environment.
• Plug the DC cord of the AC adapter to the power connector  and the plug the end of AC adapter to and electrical outlet socket(110V/220V)
• Connect DC cord of adapter (12V DC) to the monitor..

## 2. Features

• AOD150 is 15" XGA LCD monitor and support up to 75Hz.
• You can adjust brightness, contrast, horizontal & vertical positions by OSD menus and use auto adjust function for instant adjustment.
• High-qualified LCD Controller inside
• Compact space saving design and power saving mode
• 100% compatible with Windows PC environment without the installation of driver CD or software program.

## 3. Plug and Play Function

AOD150 can be installed and connected automatically to any computer systems without driver CD or software programs. Monitor will recognize the optimized value of video mode by DDC(Display Data Channel) method that makes the graphic card of computer to communicate with the monitor.

AOD150 supports VESA DDC 1/2B.

## 4. Safety Precaution

We strongly recommend that you carefully read this User's Manual before operating your LCD monitor. FOLLOW INSTRUCTIONS in this manual.
Please read and comprehend all using directives before use this machine.

● **Power**
— Use the type of power indicated on the marking label.
● **Adapter**
— Only use an adapter designed of the LCD monitor.
● **Plug**
— Do not remove any of the prongs of the monitor's three-pronged power plug.
— Disconnect the power plug from the AC outlet if you will not use it for an indefinite period of time.
● **Power and extension cord**
— Use the proper power cord with ground conductor
— Do not overload wall outlets or power cords. Ensure that the total of all units plugged into the wall outlet does not exceed 7 amperes.
— Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
● **Care and maintenance**
— Slots and openings in the cabinet are provided for ventilation. Do not block or cover these openings.
— Do not push objects of any kind into cabinet slots or openings. The screen surface is easily scratched.
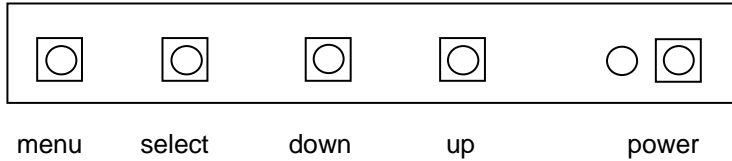— Do not use paper towels to clean the display. Avoid touching it with your fingers, pens, or pencils.
— Turn off the AC adapter and the monitor over long periods when not in use.

## 5. OSD (On-Screen-Menu)

| ☐ | ☐ | ☐ | ☐ | ○ ☐ |
|---|---|---|---|---|
| menu | select | down | up | power |

| Button | Function | Status |
|---|---|---|
| POWER | Power ON or OFF | ON/OFF |
| LED | Indicate working status | Green : On<br>Red : Stand-by<br>Orange : No signal |
| UP | Launch OSD Menu or Add Value | Move to OSD Menu |
| DOWN | Launch OSD Menu or Down value | Move to OSD Menu |
| SELECT | Select OSD Menu | |
| MENU | On / Off OSD Menu | |

## 6. OSD Menu

| OSD Menu | | | Description | Remarks |
|---|---|---|---|---|
| Picture | Brightness | | Adjust the brightness of the screen | Only usable on Analog Mode |
| | Contrast | | Adjust the contrast of the screen | |
| | H.Position | | Adjust the horizontal position of the screen's image | |
| | V.Position | | Adjust the vertical position of the screen's image | |
| | Phase | | Adjust the focus of the screen's image | |
| | Clock | | Adjust the horizontal size of the screen's image | |
| | Auto Adjust | | Automatically adjust the Horizontal position, Vertical position, Horizontal size, and Phase Window's background or characters should be displayed on your Full screen prior to proceed this function | |
| Color | Color Temp | User<br>Reddish<br>Bluish | Control the temperature of the color | |
| | Red | | Control the intensity of the color of the screen's image<br>(Usable when Color temperature is USER mode.) | Only usable on Analog Mode |
| | Green | | | |
| | Blue | | | |
| | Auto Color | | Adjust the color balance of the screen | |

| | Language | English French German Spanish Italian Korean Japanese | Select one of the seven language | Usable on all Mode. |
|---|---|---|---|---|
| OSD | OSD H.Posi. | | Select OSD MENU horizontal position | |
| | OSD V.Posi. | | Select OSD MENU vertical position | |
| | OSD Timer | | OSD MENU disappear from over the screen after setting time | |
| | Transparency | | Adjust the transparency of the OSD menu | |
| Misc. | Language | English German French Spanish Korean | Select one of the seven language | |
| | Recall | Initialize the current mode & setting value | | |
| | Input Select | Analog | Analog signal(RGB) | |
| | | Digital | DVI digital signal | |
| | Audio | Audio ON/OFF select | | |
| | Volume | Adjust volume level | | |

## 7. Specifications

| Model | AOD 150 | | | |
|---|---|---|---|---|
| | **Main** | **Sub** | | |
| **Panel** | LM150X08 | | | LTM150X0 |
| **Suffix** | TL01 (XGA) | TL02 (XGA) | A4 (XGA) | L01 (XGA) |
| **Type** | 15" Color Active Matrix TFT LCD | | | |
| **Color** | 16.2M colors | | | |
| **Pixel** | 0.297x 0.297 | 0.297x 0.297 | 0.297x 0.297 | 0.297x 0.297 |
| **Resolution (Max)** | 1024 x 768 | 1024 x 768 | 1024 x 768 | 1024 x 768 |
| **Contrast Ratio** | 450:1 | 450:1 | 400:1 | 450:1 |
| **Response time** | 16 | 16 | 16 | 12 |
| **Brightness** | 250 cd/m2 | 250 cd/m2 | 250 cd/m2 | 250 cd/m2 |

**Video**
Frequency     Horizontal: 31.5 ~ 80KHz
     Vertical: 56 ~ 75KHz
Input signal     Analog RGB, 15 Pin

**Compatibility**
Plug and Play     VESA DDC 1/2B
Compatibility     VESA / IBM / MAC
Power     VESA Standard, DPMS

**Operation Environment**
Power Consumption     Operation Mode: 35 watt max.
     Stand-by: 4 watt max.
Temperature     Operation Mode : 0 ºC ~ 40 ºC
     Stand-by: -20 ºC ~ 60 ºC
Humidity     Operation Mode: 10% ~ 85% R.H.
     Stand-by: 90% R.H. Max.

**User's Mode**
OSD Key     Menu / Select / Down / Up / Power

**Dimension & Weight**
VESA     75mm*75mm, 100mm*100mm(option)
Dimension     350 (W) x 274 (H) x 48 (D) mm
Weight     3.5 kg
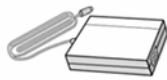
## 8. Contents Of the Retail Package



Monitor



User's Manual



AC/DC Adaptor



Power Cord



VGA Cable



Audio Cable (Option)



Touch Driver (Option)



Composite Cable (Option)



S-video Cable (Option)

## 9. Troubleshooting

**TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER.**
**NO USER-SERVICEABLE PARTS INSIDE.**
**REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

**The monitor does not respond after you turn on the system.**
Make sure that the monitor is turned on.
Turn off the power and check the monitor's power cord, AC adapter,
and signal cable for proper connection.
**Appear the " No Input the Signal"**
Check the connecting of the audio cable between the monitor and the computer.
**Appear the " Input Not the Supported"**
Input signal are insuperable, reset the video mode.
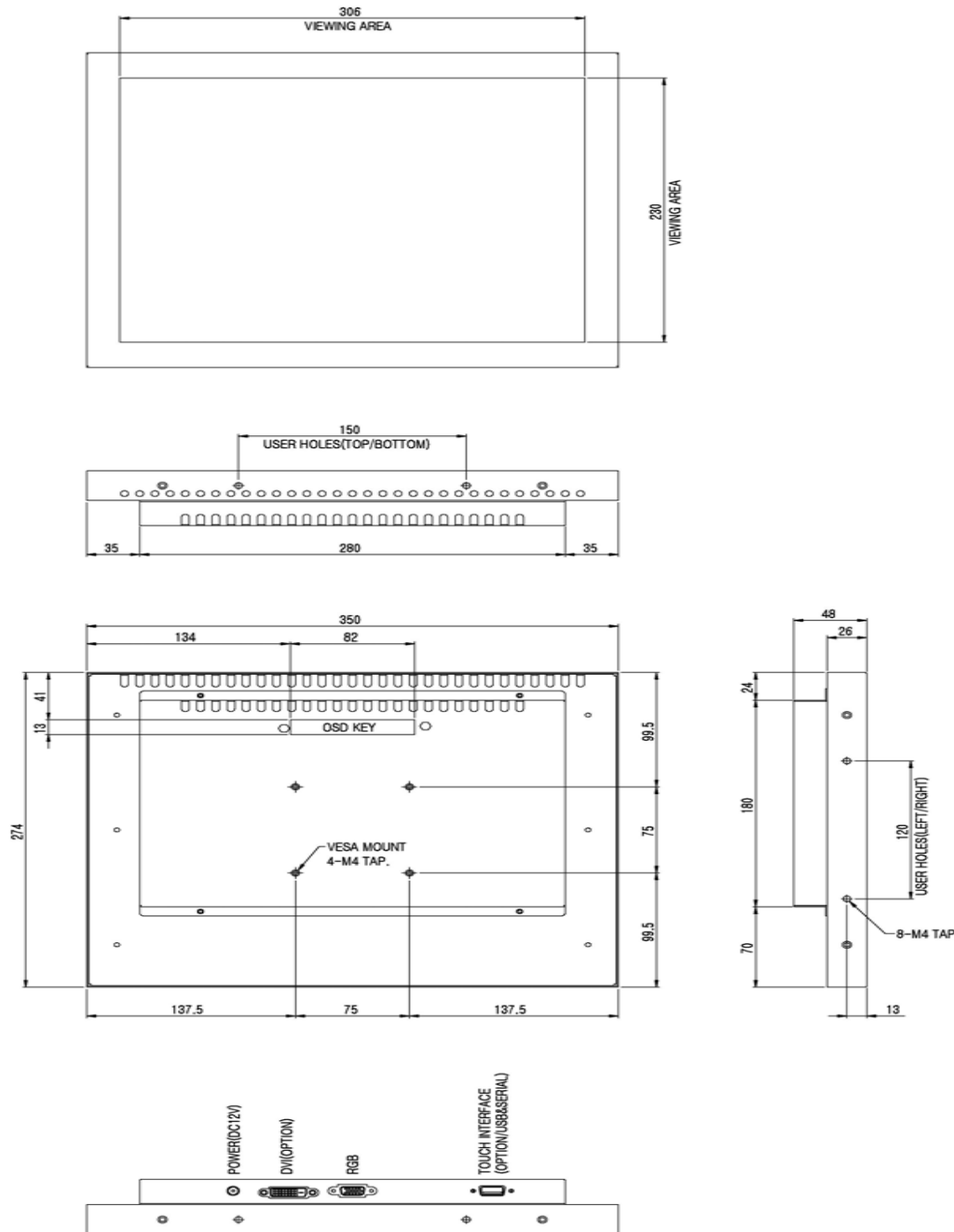**The appearance is not at the screen center.**
Use "AUTO ADJUST", refer to the Controls section.
**The characters on the screen are too dim or too bright**
Choose fit color temperature, use "AUTO COLOUR ADJUST or manually adjust
"RGB ADJUSTMENT, refer to the Control section.

# 10. Drawing



# 11. Resistive touch (Option)

Specifications for Touchkit controller.

| Specifications | |
|---|---|
| Power requirements | +5VDC ( Maximum 100mA, typical 70mA,50mV peak to peak maximum ripple ) |
| Operating temperature | 0 to 50 ℃ |
| Storage Temperature | -40 to 80 ℃ |
| Relative Humidity | 95% at 60 ℃ |
| Protocol | RS232 Model: 9600 bauds, None parity, 8 data bits, 1 stop bit USB Model : USB 1.1 Low speed |
| Resolution | 2048 X 2048 |
| Report rate | RS232 Model: Max. 160 points/sec USB Model: Max. 160 points/sec |
| Response time | Resistive : Max. 35 ms Capacitive : Max. 200 ms |
| Pin out definition | 5 wire model: UL, UR, COM, LR, LL |
| Panel resistance | 5 wire resistive model: 50 ~ 200 ohm ( pin to pin on drive layer ) |
| Regulatory Approvals | FCC-B, CE |

## Features for Touchkit software

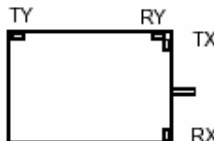| Features | |
|---|---|
| Calibration | 1. Fast full oriental 4 points position<br>2. Support monitor / display rotation<br>3. Support multiple monitors |
| Compensation | Accuracy 25 points linearity compensation. |
| Draw Test | Position and linearity verification |
| Controller Setting | 1. Support multiple controllers<br>2. Dynamical add/remove controllers<br>3. Change Controller interface without reboot. |
| Language | Support 8 languages for Windows |
| Mouse Emulator | 1. Right/Left button emulation<br>2. Click/drawing mode |
| Sound Notification | 1. No sound<br>2. Touch Down<br>3. Touch Up |
| Double Click | 1. Configurable double click speed<br>2. Configurable double click area |
| OS support | 1. Windows 95 / 98 / ME / NT4 / 2000 / XP / XP Tablet Edition<br>2. Windows CE 2.12, 3.0, .net<br>3. Linux ( X Window Version: 3, 4<br>      Red Hat 6.0 ~ 8.0<br>      Mandrake 5.0 ~ 9.0 )<br>4. iMac. OS9<br>5. MS-DOS:<br>   Support display resolution: 320x200, 640x200, 640x350, 640x480, 800x600, 1024x768 and 1280x1024 |
| COM port support | 1. Support COM 1 ~ COM 256 for Windows and Linux<br>2. Support COM 1 ~ COM 8 for DOS |

## 12. SAW touch (Option)

**SURFACE ACOUSTIC WAVE TOUCH PANEL**

### C. Electrical Characteristics

1. **Supply Voltage**
   +5VDC

2. **Electrostatic Protection**
   Per EN 61000-4-2, 1995 : Meets Level 4
   (15 kV air / 8 kV contact discharges).

3. **Resolution**
   Based on controller resolution of 4096 x 4096.

### D. Mechanical Characteristics

1. **Construction**
   There are four transducers attached to the beveled edge of the glass.
   1×TY on left side upper corner
   1×RY on right side upper corner
   1×TX on right side upper corner
   1×RX on right side down corner
   ( Based on the cable exiting from the right side)

2. **Cable and Connector**
   Cable typically exits from the right side, with a 2 x 6, 0.635 mm square post receptacle.

3. **Touch Activation Force**
   Less than 85 grams.

4. **Positional Accuracy**
   Standard deviation of error is less than ±1%.

5. **Life Performance**
   More than 50 million touches in one location.
   (Tested by a stylus similar as finger).

6. **Input Medium**
   Finger or gloved hand (rubber, cloth or leather ).

7. **Surface Durability**
   Optical glass surface, Mohs' hardness rating : 7.

## For Tempered SAW only

**1. Construction**

Pure 6mm-thickness heat strengthened glass with transducers attached to the beveled edge of the glass.

**2. Break Resistance**

Meets UL-1950 Steel Ball Drop Test

A 1-pound steel ball drops from height of 130 cm onto the center of the glass without breaking.

## For Protected SAW only

**1. Construction**

Pure 6mm-thickness heat strengthened glass with transducers attached on the edge of the glass surface.

The reflectors and transducers are sealed inside the ABS plastic frame.

**2. Break Resistance**

Meets UL-1950 Steel Ball Drop Test

**3. Dustproof**

The ABS plastic frame around the panel prevents dust and dirt from accumulating on the reflectors and transducers.

**4. Waterproof**

Special glue is applied to the gap between the ABS plastic frame and glass substrate to prevent water infiltration.

Test Method : Set the touchscreen horizontally, and pour water on the panel surface without overflow over the ABS plastic frame. The panel surface is soaked in water for 1 hour. The panel is in normal condition after water poured out and dried.

# E. Optical Performance

**Light Transmission**  90% (per ASTM D1003)

# F. Glass Substrate Quality

**1. Circular Defects**

| Description | Length {mm} | Comments {mm} |
|---|---|---|
| Glass defects spots, stains, etch defects, surface chips | >0.51 | None allowed |
| | $\geq 0.38, \leq 0.51$ | 2 per 50.8 diameter circle |
| | <0.38 | Accumulated length must be less than 1.27 in a 50.8 diameter circle |
| | When evaluating defects with distortion include the entire distorted area when measuring. | |

**2. Linear Defects**

| Description | Width {mm} | Comments {mm} |
|---|---|---|
| Glass scratch | >0.102 | None allowed |
| | 0.102 | 12.7max length w/ minimum separation of 6.35 |
| | 0.076 | 25.4 max length w/ minimum separation of 3.81 |
| | 0.051 | 38.1 max length w/ minimum separation of 1.27 |
| | < 0.051 | Disregard |

**3. Edge Chips**

| Description | Comments {mm} |
|---|---|
| Four edges excluding four corners | 1.27 W × 1.27 L × 1/3 glass thickness |
| Four corners | 2.54 W × 5.08 L × 1/2 glass thickness |

## 13. Capacitive Touch (Option)

# EST Capacitive TouchSreen
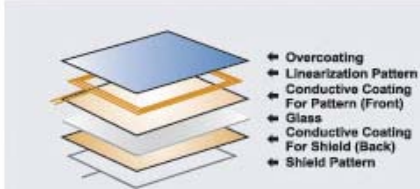
## DIGITECH EST CAPACITIVE TOUCH TECHNOLOGY

DigiTech's EST Capacitive Touch screens, utilizing its remarkable patented touch technology, are the ideal touchscreen solution for the public access and entertainment application such as Kiosk and Gaming machine. With the longest touchscreen warranty available, the EST Capacitive Touchscreens are the preferred solution for the applications requiring accuracy, robustness, reliability, clarity, and unsurpassed performance.

EST Capacitive Touchscreen surface with protective hardcoat enables scratch and contaminant resistance to dirt, dust, liquid, and corrosive chemicals.

With this transparent protective overcoat that minimizes the reflection and maximizes the light transmissions, DigiTech's EST Capacitive Touchscreens provide dramatic physical robustness.

## STRUCTURE

- ← Overcoating
- ← Linearization Pattern
- ← Conductive Coating For Pattern (Front)
- ← Glass
- ← Conductive Coating For Shield (Back)
- ← Shield Pattern

## PRODUCT

- Standard Model : 12.1", 15.0", 17.0", 19.0", 23.0"
- Thickness : 3.0mm (Glass only)
- Customization Engineering Applications are Welcomed

## BENEFITS & FEATURES

**Durability**
Transparent hard coating increases durability in the face of scratches and abrasion.

**Accuracy**
Design of Linearization pattern and narrow border.

**Soft sensitivity and fast responsiveness**
Superior response time with dragging performance.

**High Transmittance**
Multi layers of anti-reflection coating is available.

**Inborn Linearity**
For correcting linearity of EST Capacitive Touchscreen.

**Endurance**
Surface protection over-coating to withstand 250 million mechanical touches.

## SPECIFICATIONS

| | |
|---|---|
| ELECTRICAL | Input Method : Finger<br>Positional Accuracy : 1.0% of true position |
| MECHANICAL | Surface Scratch Hardness : More than 6Mohs Rating<br>Endurance : 250 Million Mechanical Touches |
| OPTICAL | Light Transmission : Up to 85% / 90 % |
| ENVIROMENTAL | Operating Temperature : -20°C to 70°C<br>Storage Temperature : -50°C to 90°C |

## APPLICATION

- Gaming Machine
- Public Kiosk
- Ticketing Machine
- ATM
- Point-of-information(POI)
- Touch Monitor
- Public Access Terminal

*All In One*

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# THANK YOU

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