AOD 190 OPEN FRAME

GPEG

USER'S MANUAL

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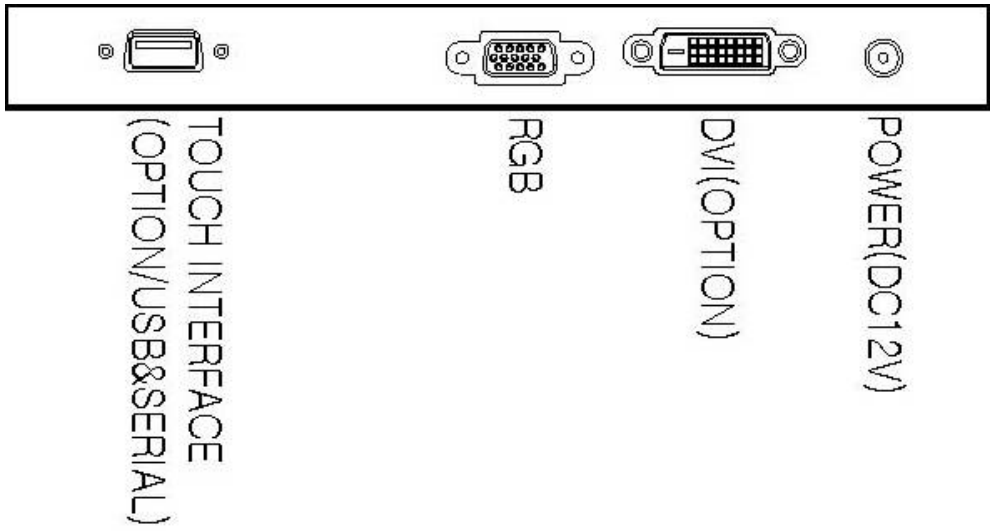
0. Connection To the Monitor



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

- AOD190 is 19” SXGA 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

AOD190 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.

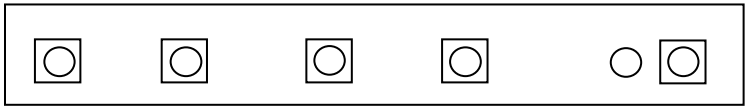
AOD190 supports VESA DDC 1/2B.

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.

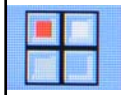
5. OSD (On-Screen-Menu)



Button	Function	Status
POWER	Power ON or OFF	ON/OFF
LED	Indicate working status	Green : On Red : Stand-by 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	
	Contrast		Adjust the contrast of the screen	
	H.Position		Adjust the horizontal position of the screen's image	Only usable on Analog Mode
	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 Reddish Bluish	Control the temperature of the color	
	Red		Control the intensity of the color of the screen's image (Usable when Color temperature is USER mode.)	Only usable on Analog Mode
	Green			
	Blue			
	Auto Color		Adjust the color balance of the screen	

 OSD	Language	English French German Spanish Italian Korean Japanese	Select one of the seven language	Usable on all Mode.
	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 190

Panel	LM190E03		
Suffix	TLB1 (SXGA)	A4 (SXGA)	A4K1 (SXGA)
Type	19" Color Active Matrix TFT LCD		
Color	16.2M colors		
Pixel	0.098 x 0.294	0.098 x 0.294	0.098 x 0.294
Resolution (Max)	1280 x 1024	1280 x 1024	1280 x 1024
Contrast Ratio	700:1	500:1	500:1
Response time	8	12	12
Brightness	300 cd/m2	400 cd/m2	400 cd/m2

Video

Frequency	Horizontal: 31.5 ~ 80KHz Vertical: 56~75KHz

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

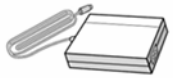
Dimension & Weight

VESA Hole	100mm*100mm
Size	425 (W) x 350 (H) x 53 (D) mm
Weight	6.4 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)

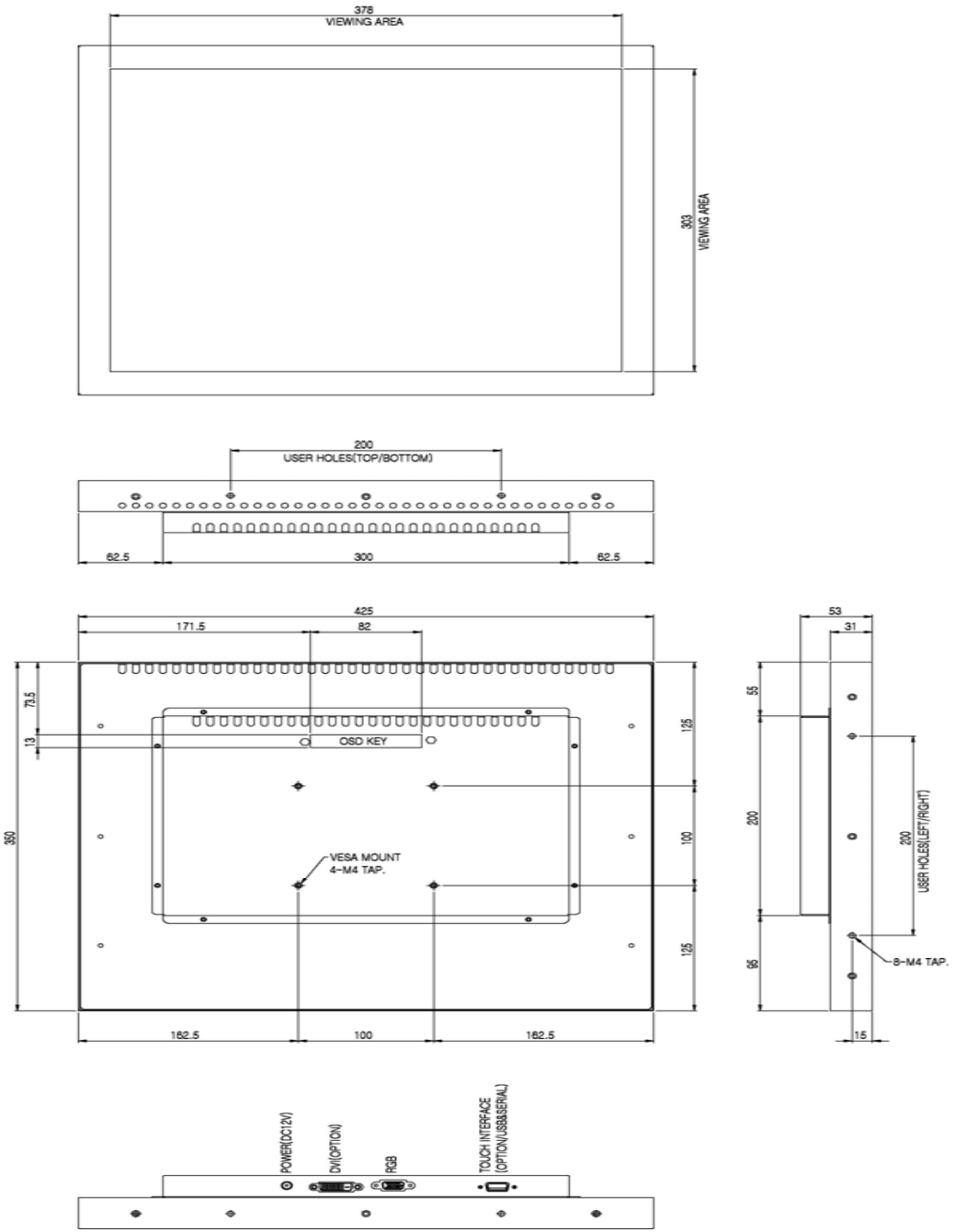
S-video Cable
(Option)

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

12. SAW touch (Option)

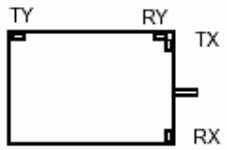
SURFACE ACOUSTIC WAVE TOUCH PANEL

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)

SURFACE ACOUSTIC WAVE TOUCH PANEL

F. Glass Substrate Quality

1. **Circular Defects**

Description	Length {mm}	Comments {mm}
Glass defects spots, stains, etch defects, surface chips	>0.51	None allowed
	≧0.38, ≦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**

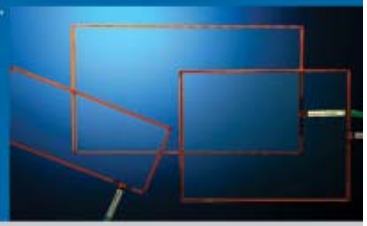
Description	Comments {mm}
Four edges excluding four corners	1.27 W × 1.27 L × 1/3 glass thickness
Four corners	2.54 W × 5.08 L × 1/2 glass thickness

13. Capacitive Touch (Option)

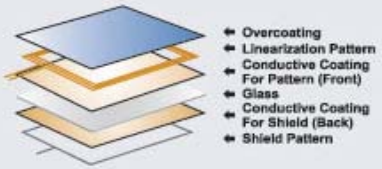
EST Capacitive TouchSreen

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



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

APPLICATION

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

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