User Manual

15" LCD Open frame SAW Touch Monitor

KOT-0150US-SA4W

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Chapter 1. INTRODUCTION

1.1 Product Description

    KOT-0150US-SA4W means KeeTouch's Open frame Touch monitor, size is 15", with

both USB and Serial (RS232) interface, integrates with Surface Acoustic wave touch screen and Dual USB/RS232 controller, 4 mm thickness glass of SAW touch screen panel; this KOT-0150US-SA4W has bezel seal standard for NEMA3 and IEC IP65; it has a long-lasting product cycle because the enclosure is controlled by KeeTouch's specifications. Future panel improvements are therefore possible without external changes.

1.2 About the Product

Your LCD open frame touchmonitor is a 15" SXGA TFT color display with the following features:

- Long lasting product cycle-enclosure controlled by KeeTouch specifications
- Future generation panels phased-in without external changes
- High quality panel with high brightness, high contrast ratio and broad viewing angle
- Multiple mounting options including VESA mount, horizontal or vertical bracket-mount
- KeeTouch's SAW technology on pure glass for the ultimate in image quality
- Finger or gloved hand operation
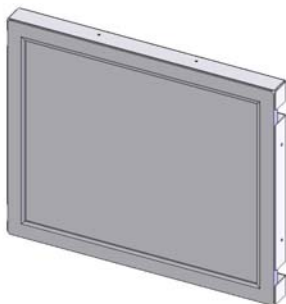- Dual USB/Serial touch interface port
- Worldwide agency approvals

For full Product Specifications refer to Chapter 7.

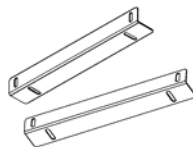# Chapter 2. INSTALLATION AND SETUP

This chapter discusses how to install your LCD touchmonitor and how to install the driver software.

2.1 Unpacking Your Touchmonitor

Check that the following 9 items are present and in good condition:

One Touchmonitor   Two L-brackets   8 M4 Screws and Washers
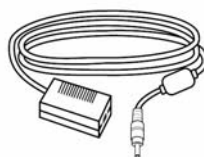
One Video cable   One Brick power supply   One Driver software CD
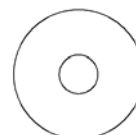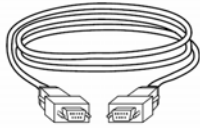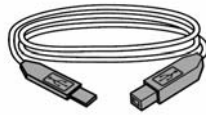
One Serial cable   One USB cable   One Power cable US/Canada
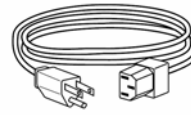
2.2 Product Overview

Mechanical Drawing

KOT-0150US-SA4W
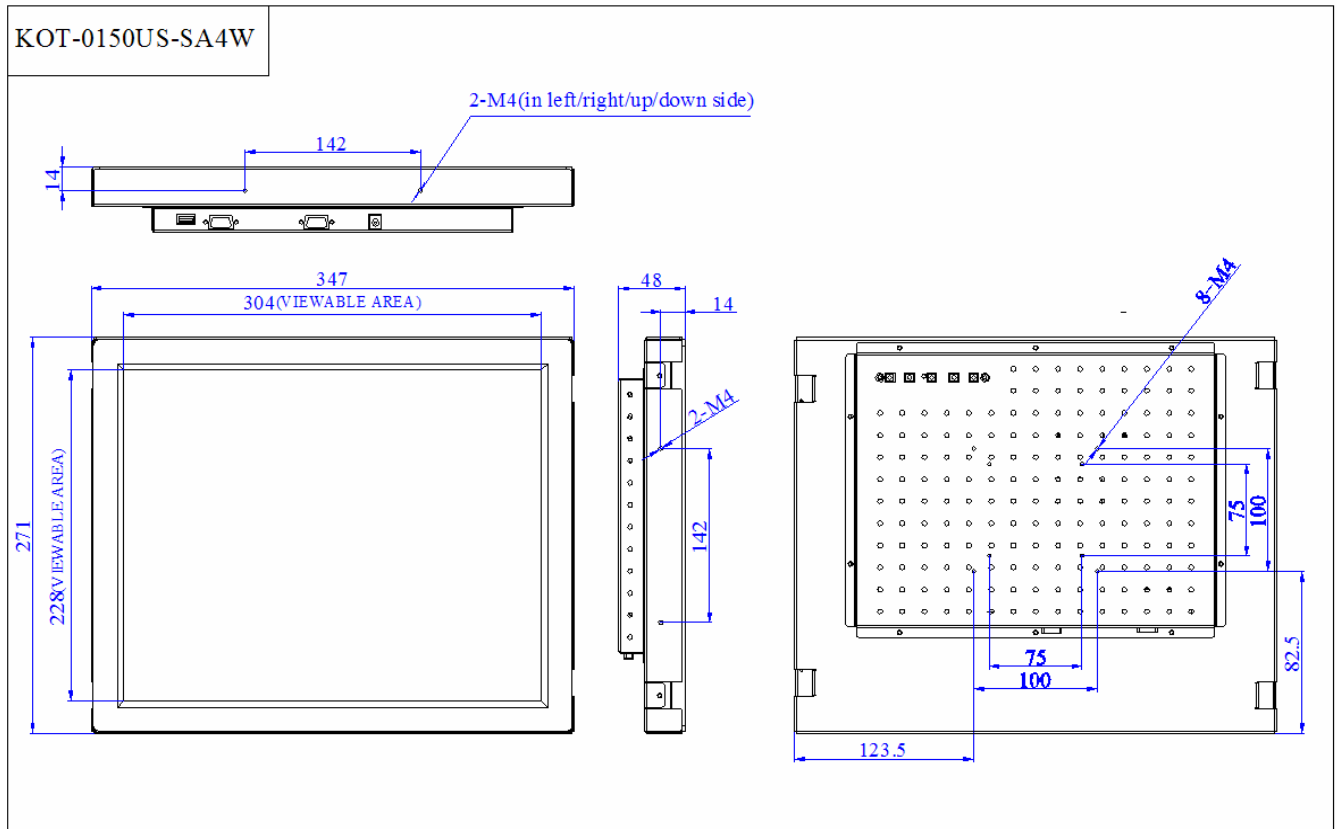
2.3 Attaching the L-Brackets

Two options for attaching the L-brackets, See the illustration below:

Option 1

(L-brackets to the left and right sides)

Option 2

(L-brackets to the up and down sides)
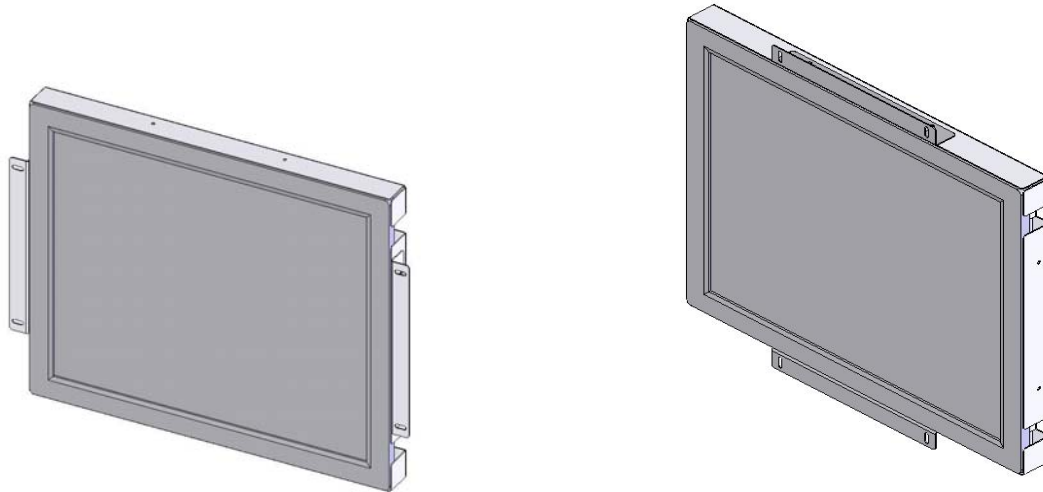
2.4 VESA Mounting Interface

Your touchmonitor conforms to the VESA Flat Panel Monitor Physical Mounting Interface (FPMPMITM) Standard which defines a physical mounting interface for flat panel monitors, and corresponding standards for flat panel monitor mounting devices, such as wall and table arms.

Your monitor has standard VESA mounting holes on the rear of the unit. The holes are spaced at 75mm and 100mm standard.

NOTE: Do not penetrate the M4 screw into the monitor more than 5mm.
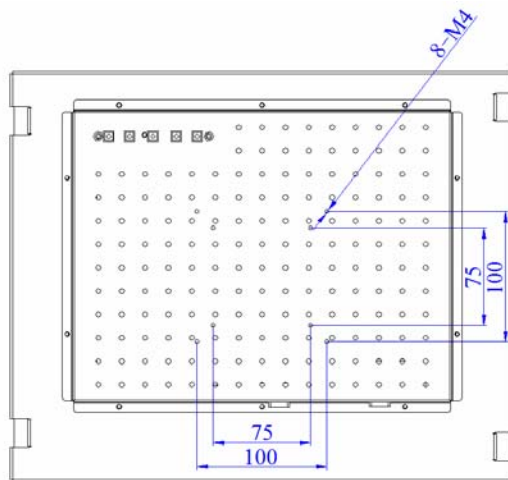
2.5 Interface Connection

Note: Before connecting the cables to your touchmonitor and PC, be sure that the computer and touchmonitor are turned off.

Adapter   Video Cable   Serial Cable   USB Cable
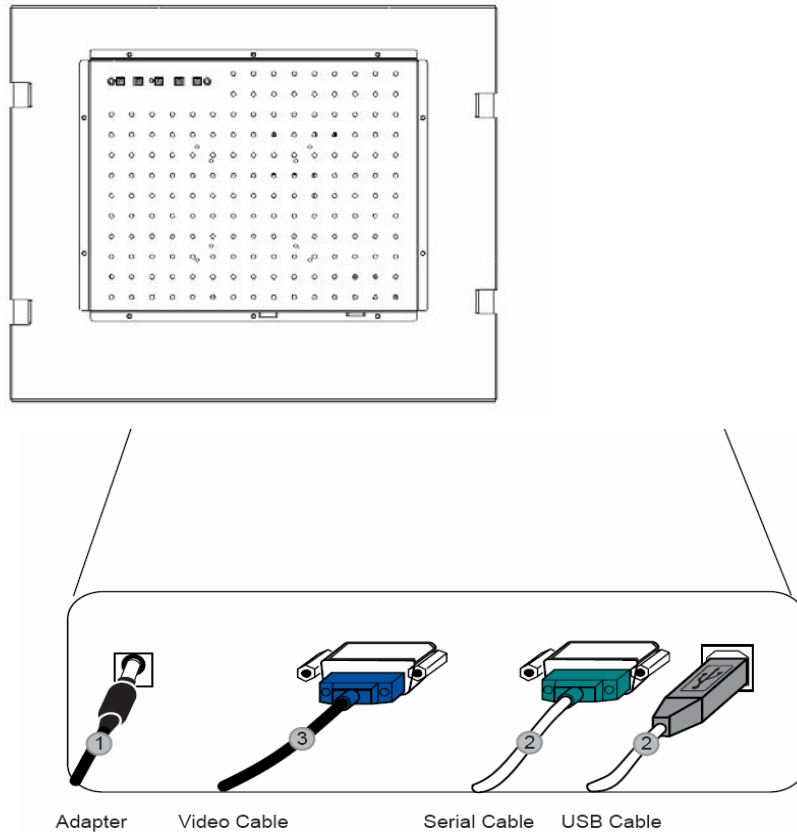
1. Connect one end of either the **serial (RS232) cabl**e or the **USB cable** (but not both) to the rear side of the computer and the other end to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding (USB cable does not have thumb screws).

2. Connect one end of the **video cable** to the rear side of computer and the other to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding.

3. Connect one end of the **power adapter** to the monitor and the other end to the connector of the power cord.

4. Press the **power button** on the rear panel to turn the monitor power on.

NOTE：The touchmonitor should be integrated according to the above process, if not may result in the touchmonitor working abnormally。

2.6 Installing the Driver Software and Calibration

2.6.1 Drivers can be downloaded from KeeTouch Driver CD (developed by Touch base):

- Windows 2000 (for both home version & professional version)
- Windows XP (for both home version & professional version)
- Windows Vista (for both home version & professional version)

2.6.2 Drivers Supply from email of Technical Support engineer (developed by KeeTouch):

- Windows XP embedded
- Linux for USB & RS232 (Linux 2.4, Linux 2.6, Fedora Core 6, Fedora Core 7. FC2/Ubuntu Linux, Ubuntu 7.04 Linux, Ubuntu 7.10 Linux)

Your KeeTouch touchmonitor is Plug-and-Play compliant. Information on the video capabilities of your touchmonitor is sent to your video display adapter when Windows

starts. If Windows detects your touchmonitor, follow the instructions on the screen to install a generic Plug-and-Play monitor.

2.6.3 Installing the Driver Software

Double click the file of "Setup.exe" in the folder, the Windows will flip Dialog Box as follow:
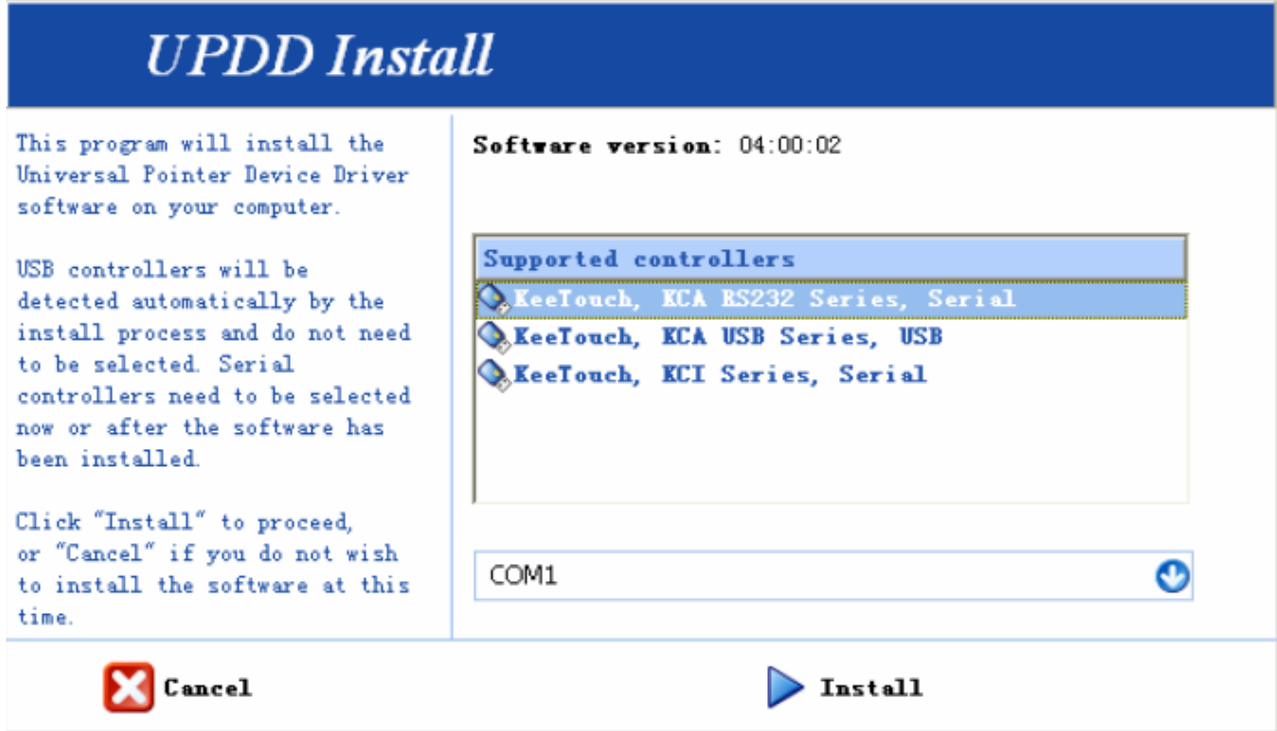
NOTE: Your touchmonitor have dual USB and Serial (RS232) touch interface port, Depending upon whether you connected the USB communication cable or the Serial (RS232) communication cable, you should install only the USB driver or the Serial (RS232) driver. Install the USB driver, please chose the "KeeTouch, KCA USB Series, USB"; Install the Serial (RS232) driver, please chose "the KeeTouch, KCA RS232 Series, Serial".

After selecting the proper interface, click the Install button to start installing the driver as following.
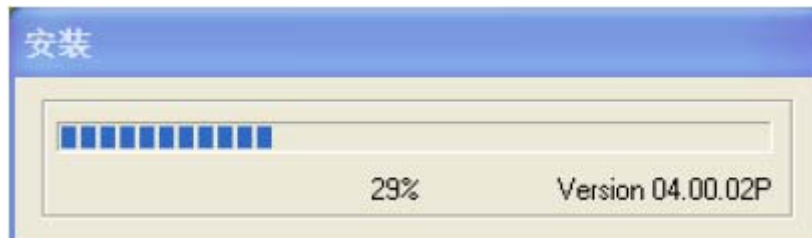
Installation successfully as following:

UPDD Install

Install successful

The Universal Pointer Device Driver software has
been successfully installed on your computer.

Double click the UPDD Console icon on the desktop
to add further devices or make changes to settings.

Close

2.6.4 Calibration

Find "calibration" from "UPDD" in "All programs" and complete the calibration for your touch system at the first time of touch system integration and every time you changed the touch screen sensor or controller.

Chapter 3. OPERATION

3.1 About Touchmonitor Adjustments

Your touchmonitor will not likely require adjustment. Variations in video output and application may require adjustments to your touchmonitor to optimize the quality of the display. For best performance, your touchmonitor should be operating in native resolution, that is1024×768 at 80k-75 Hz. Use the Display control panel in Windows to choose1024×768 resolution. Operating in other resolutions will degrade video performance. For further information, please refer to Appendix A.

All control adjustments are automatically memorized. This feature saves you from having to reset your choices every time you unplug or power your touchmonitor off and on. If there is a power failure, your touchmonitor settings will not default to the factory specifications

Rear Panel Controls
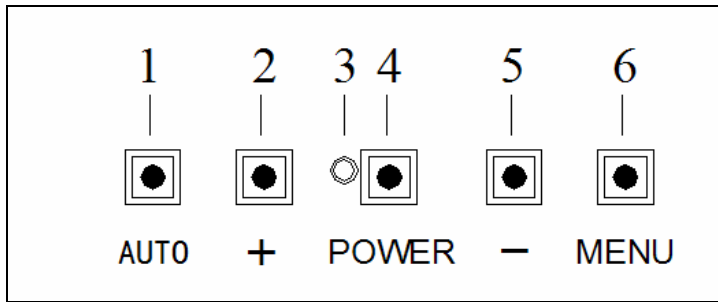
Control Function

(1) **AUTO**   adjust to an optimum image automatically

(2) **+**   1) Enter brightness adjustment.

          2) Increase value of the adjustment item.
          3) Select item counter-clockwise.

(3) **Power LED**

(4) **Power**   Switches the power of the monitor

(5) **-**   1) Enter brightness adjustment.

          2) Decrease value of the adjustment item.
          3) Select item clockwise.

(6) **Menu**   Display/exits the On Screen Display (OSD) menus

3.2 Controls and Adjustment

3.2.1 on Screen Display (OSD) Menu Functions
To Display and Select the OSD Functions:
(1) Press the **Menu** key to activate the OSD menu.
(2) Use **+** or **-** to move through the menu. Press the **Menu** key, the parameter will be highlighted when selected.
(3) To quit the OSD screen at any time during the operation, press the **AUTO** key.
NOTE: If no keys are pressed for a short time period, the OSD automatically disappears.

Chapter 4. TROUBLESHOOTING

     If you are experiencing trouble with your touchmonitor, refer to the following table. If the problem persists, please contact your local dealer or our service center.

Solutions to Common Problems

Problem	Suggestion(s)
The monitor does not respond after you turn on the system	1) Check that the monitor's Power Switch is on. 2) Turn off the power and check the monitor's power cord and signal cable for proper connection.

Characters on the screen are dim	Refer to the About Touchmonitor Adjustments section to adjust the brightness.
The screen is blank	1) During operation, the monitor screen may automatically turn off as a result of the Power Saving feature. Press any key to see if the screen reappears. 2) Refer to the About Touchmonitor Adjustments section to adjust the brightness.
Screen flashes when initialized	Turn the monitor off then turn it on again.
"Out of Range" display	Check to see if the resolution of your computer is higher than that of the LCD display. Reconfigure the resolution of your computer to make it less than or equal to 1024× 768. See Appendix A for more information on resolution.
Touch doesn't work	Make sure the touch cable is securely attached at both ends.

Chapter 5. NATIVE RESOLUTION

The native resolution of a monitor is the resolution level at which the LCD panel is designed to perform best. For the LCD touchmonitor, the native resolution is 1024x768 for the 15 inch size. In almost all cases, screen images look best when viewed at their native resolution. You can lower the resolution setting of a monitor but not increase it.

Input Video	**15" LCD**
640 x 480 (VGA)	Transforms input format to 1024x768
800 x 600 (SVGA)	Transforms input format to 1024x768
1024 x 768 (XGA)	Displays in Native Resolution

The native resolution of an LCD is the actual number of pixels horizontally in the LCD by the number of pixels vertically in the LCD. LCD resolution is usually represented by the following symbols:

VGA	640 x 480
SVGA	800 x 600
XGA	1024 x 768
SXGA	1280 x 1024
UXGA	1600 x 1200

As an example, a SXGA resolution LCD panel has 1280 pixels horizontally by 1024 pixels vertically. Input video is also represented by the same terms. SXGA input video has a format of 1280 pixels horizontally by 1024 pixels vertically. When the input pixels contained in the video input format match the native resolution of the panel, there is a one to one correspondence of mapping of input video pixels to LCD pixels. As an example, the pixel in column 45 and row 26 of the input video is in column 45 and row 26 of the LCD. For the case when the input video is at a lower resolution than the native resolution of the LCD, the direct correspondence between the video pixels and the LCD pixels is lost. The LCD controller can compute the correspondence between video pixels and LCD pixels using algorithms contained on its controller. The accuracy of the algorithms determines the fidelity of conversion of video pixels to LCD pixels. Poor fidelity conversion can result in artifacts in the LCD displayed image such as varying width characters.

Chapter 6. TOUCHMONITOR SAFETY

This manual contains information that is important for the proper setup and maintenance of your touchmonitor. Before setting up and powering on your new touchmonitor, read through this manual, especially Chapter 2 (Installation), and Chapter 3 (Operation).

(1)   To reduce the risk of electric shock, follow all safety notices and never open the touchmonitor case.

(2)   Turn off the product before cleaning.

(3)   The socket-outlet shall be installed near the equipment and shall be easily accessible.

(4)   The slots located on the sides and top of the touchmonitor case are for ventilation. Do not block or insert anything inside the ventilation slots.

(5)   It is important that your touchmonitor remains dry. Do not pour liquid into or onto your touchmonitor. If your touchmonitor becomes wet do not attempt to repair it yourself.

Care and Handling of Your Touchmonitor

The following tips will help keep your touchmonitor functioning at the optimal level.

• To avoid risk of electric shock, do not disassemble the brick supply or display unit cabinet. The unit is not user serviceable. Remember to unplug the display unit from the power outlet before cleaning.

• Avoid getting liquids inside your touchmonitor. If liquid does get inside, have a qualified service technician check it before you power it on again.

• To clean the touchscreen, use window or glass cleaner. Put the cleaner on the rag and wipe the touchscreen. Never apply the cleaner directly on the touchscreen.

Chapter 7. TECHNICAL SPECIFICATIONS

Model No.	KOT-0150US-SA4W	
Series	OT	
Structure	Metal-cased open frame	
LCD Type	15 " Active matrix TFT-LCD	
Active Area	12 " (304mm)×9 " (228mm)	
Monitor Dimensions	**Width**: 352mm **Width with bracket**: 392mm **Height**: 280mm **Height with bracket**: 320mm **Depth**: 44.5mm	
Suggested Resolution	1024×768	
Supported Resolution	1024×768 at 60,70,75 Hz; 800×600 at 60,72,75 Hz; 640×480 at 60,72,75 Hz; 640×400 at 70 Hz	
Support Colors	16.2M	
Brightness(Typ.)	Pure LCD Panel	250cd/m^2

	With SAW Glass Sensor	225cd/m^2
Response Time(Typ.)	16ms	
Viewing Angle	Horizontal(left/right)	60°/60°
(Typ. at CR＞10)）	Vertical(up/down)	40°/60°
Contrast Ratio(Typ.)	450:1	
Video Input	Analog RGB	
Signal Input	H/V Separate Sync. (TTL)	
Video Signal Input Connector	Mini D-Sub 15-pin VGA	
Frequency（H/V）	30～80KHz / 60～75Hz	
Power Supply	Type: External brick Input (line) voltage: 100-240 VAC, 50-60 Hz Output voltage/current: 12 volts at 4 amps max	
Environment	Operating Temp.	0～50°C
	Storage Temp.	-20～60°C
	Operating RH:	20%～80%
	Storage RH:	10%～90%
MTBF	50,000 Hours	
LCD Back light Life(Typ.)	50,000 Hours	
Weight（N.W/G.W）	3Kg / 4.5Kg	
Power Consumption	30W Max.	
Mount Interface	1)VESA 75mm and 100mm 2)Mount bracket, horizontal or vertical (Standard mount brackets are supplied)	
OSD Control	Buttons	AUTO,+,POWER,-,MENU
	Function	Brightness, Contrast Ratio, Auto-adjust, Phase, Clock, H/V Location, Languages, Function, Reset
Touch screen Type	KAL-0150-4W: 15" SAW 4MM thickness of touch screen sensor With water-proof IP65 touchscreen (Available Options: 3 mm regular glass; 6 mm of tempered glass and Anti-glare)	
Touch System Interface	Having USB and serial interface	
Touch Response time	9ms	
Agency Approval	ETL (as same as UL)，FCC，CE，RoHS	
Regular Warranty	5 years for SAW Sensor; 3 years for controller; 1 year for LCD	

NOTE:

Our current LCD panel is made by one of the largest Chinese LCD panel manufacture

BOE (www.boe.com.cn/) and

SVA NEC (www.sva-nec.com/english/index.html)