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User Manual

19" LCD Open frame SAW Touch Monitor

KOT-0190US-SA4B

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Chapter 1. INTRODUCTION

1.1 Product Description

KOT-0190US-SA4B means KeeTouch's Open frame Touch monitor, size is 19", 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-0190US-SA4B 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 touch monitor is a 19" 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

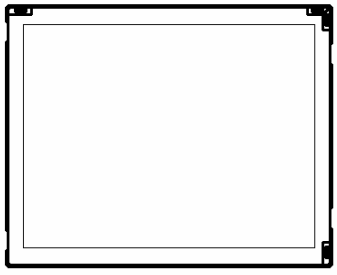
For full Product Specifications refer to Appendix C.

Chapter 2. INSTALLATION & SETUP

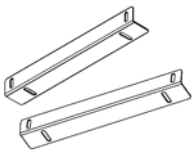
This chapter discusses how to install your LCD touch monitor and how to install the driver software.

2.1 Unpacking Your Touch monitor

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



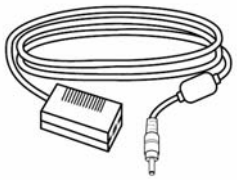
One Touch monitor



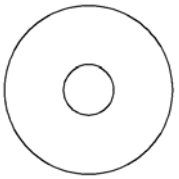
2 L-brackets

4 x M4 Screws and Washers

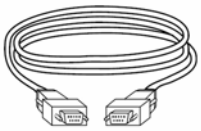
One Video cable



One Brick power supply

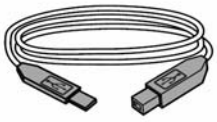


One Driver software CD

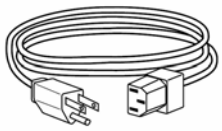


One Serial cable

or



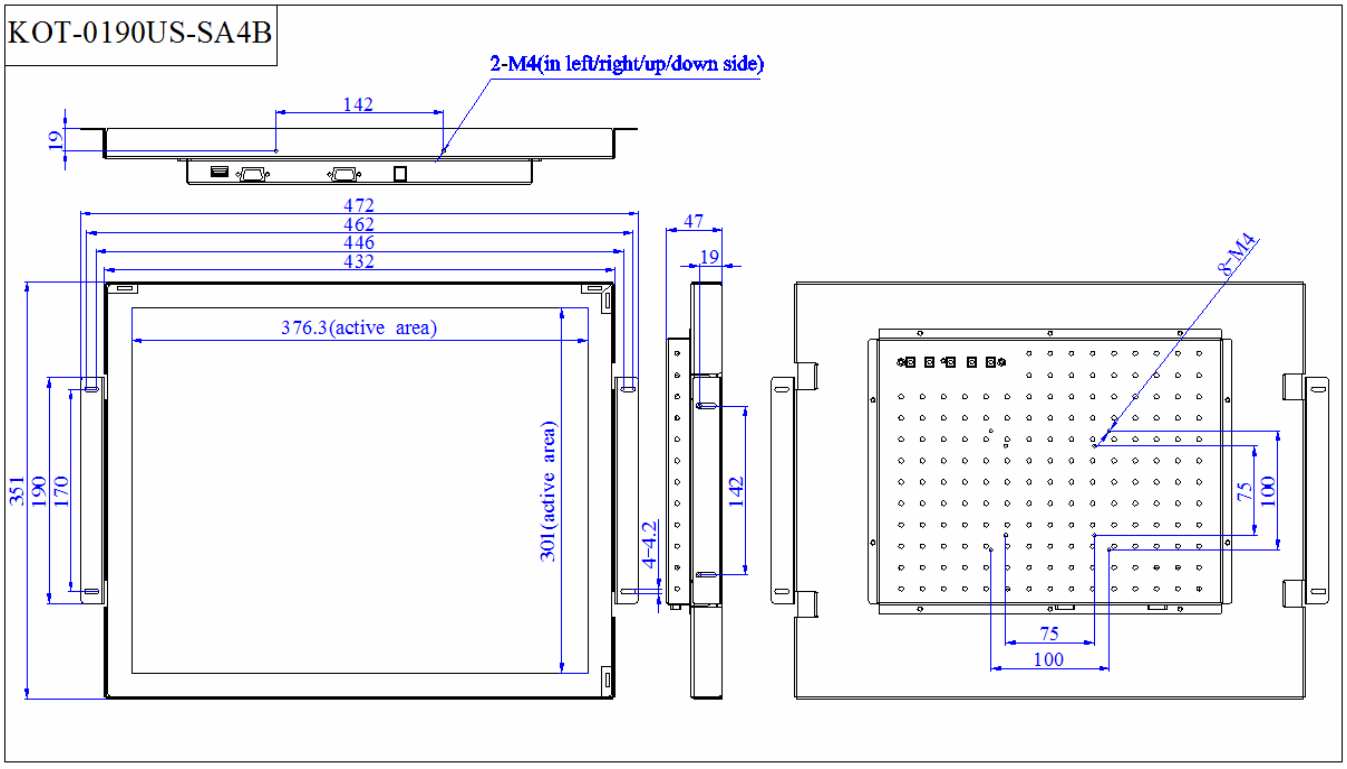
One USB cable



One Power cable US/Canada

2.2 Product Overview

Mechanical Dimensions (unit in mm)



2.3 VESA Mounting Interface

Your touch monitor 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.

2.4 Attaching the L-Brackets

To attach the L-brackets:

1 Lay the monitor face down.

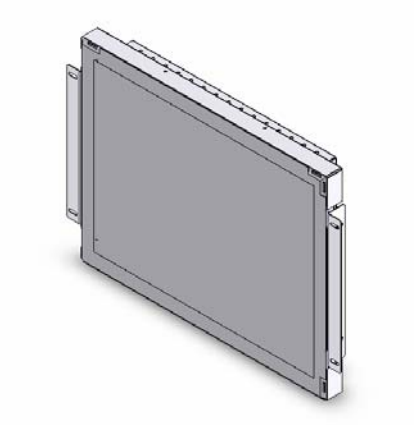
2 Place the long end of the L-bracket against the side of touch monitor. Line up the two holes of the L-bracket with the two holes of the touch monitor.

3 Place two M4 screws in the holes and with the screwdriver; screw them in to secure the bracket.

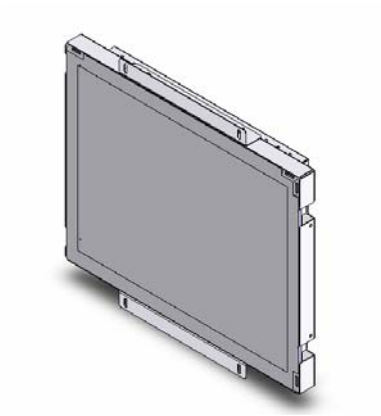
4 Repeat steps 2 and 3 to attach the other L-bracket to the other side of the touch monitor.

NOTE: The way to attach the L-brackets has two options, See the illustration below:

Option 1
L-brackets to the left and right sides

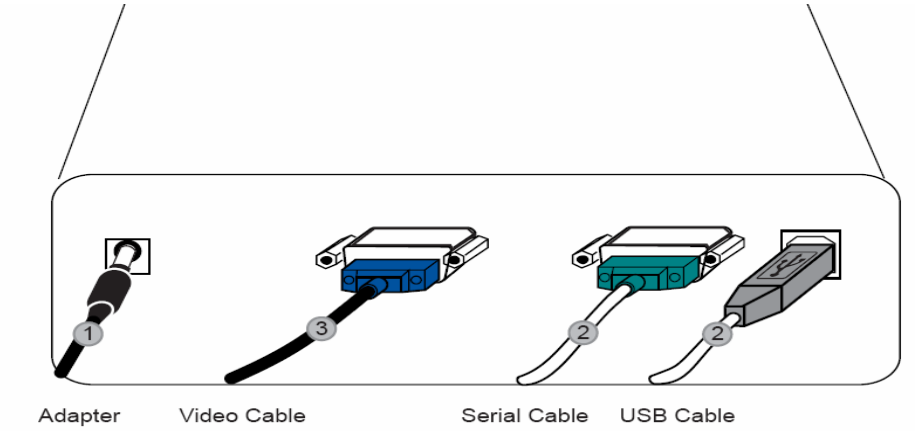


Option 2
L-brackets to the up and down sides



2.5 Interface Connection

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



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 touch monitor should be integrated according to the above process, if not may result in the touch monitor 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 Technical Support email (developed by KeeTouch):

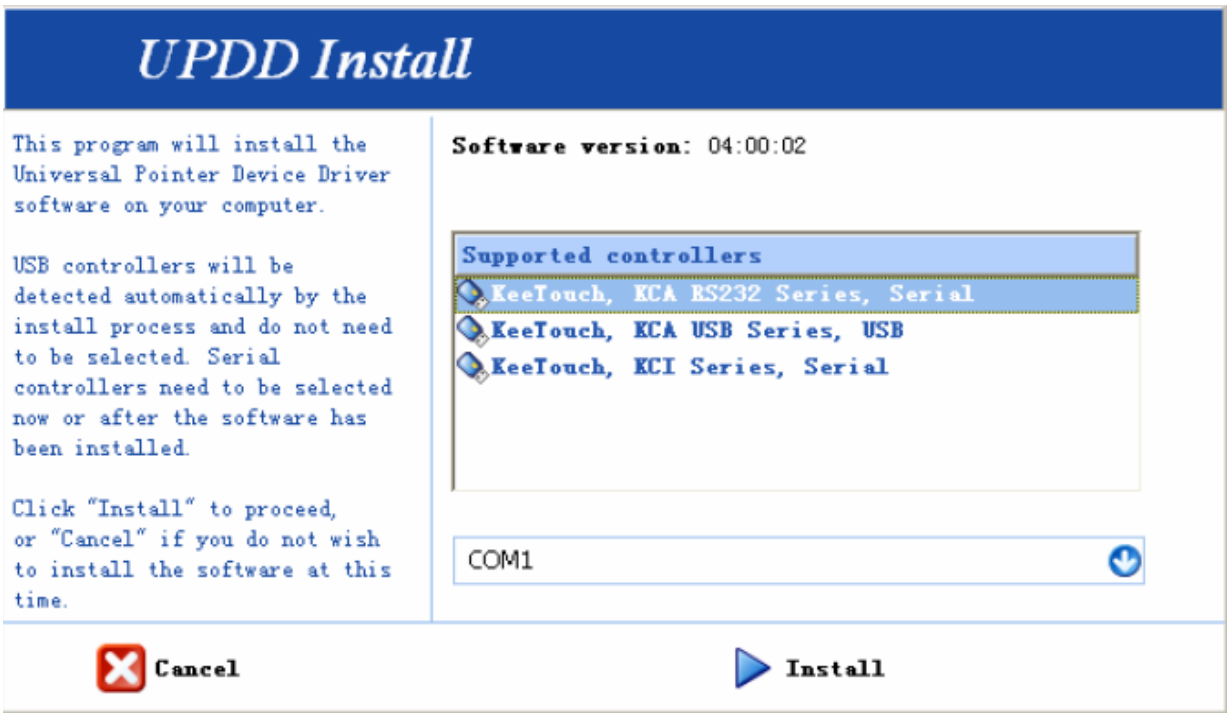
- Windows XP embedded
- Linux

Your KeeTouch touch monitor is Plug-and-Play compliant. Information on the video capabilities of your touch monitor is sent to your video display adapter when Windows starts. If Windows detects your touch monitor, follow the instructions on the screen to install a generic Plug-and-Play monitor.

2.6.3 Installing the Driver Software

Driver installation and Touch System calibration guide:

(1) Preparation: connecting SAW touch screen, controller and application device or computer with correct cable on the integration procedure.
(2) Insert the KeeTouch Driver CD in to application system;
(3) Follow the instruction to complete the driver installation



(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.

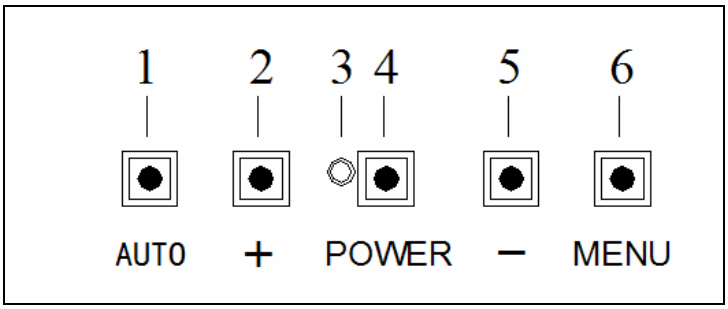
Chapter 3 OPERATION

3.1 About Touch monitor Adjustments

Your touch monitor will not likely require adjustment. Variations in video output and application may require adjustments to your touch monitor to optimize the quality of the display. For best performance, your touch monitor should be operating in native resolution, that is 1280×1024 at 80k-75 Hz. Use the Display control panel in Windows to choose 1280 ×1024 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 touch monitor off and on. If there is a power failure, your touch monitor settings will not default to the factory specifications

3.1.1 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.

3.2.2 Power Management System

The monitor is equipped with the power management function which automatically reduces the power consumption when not in use.

Power	**Mode Consumption**
On	<40W
Sleep	<4W
Off	<2W

We recommend switching the monitor off when it is not in use for a long time.

NOTE: The monitor automatically goes through the Power Management System (PMS) steps when it is idle. To activate the monitor, press any key on the keyboard or move the mouse.

Chapter 4. TROUBLESHOOTING

If you are experiencing trouble with your touch monitor, 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 Touch monitor 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 Touch monitor 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 is 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 touch monitor, the native resolution is 1280 x 1024 for the 19 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	19" LCD
640 x 480 (VGA)	Transforms input format to 1280 x 1024
800 x 600 (SVGA)	Transforms input format to 1280 x 1024
1024 x 768 (XGA)	Transforms input format to 1280 x 1024
1280 x 1024(SXGA)	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 touch monitor. Before setting up and powering on your new touch monitor, 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 touch monitor 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 touch monitor case are for ventilation. Do not block or insert anything inside the ventilation slots.

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

Care and Handling of Your Touch monitor

The following tips will help keep your touch monitor 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.

• Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air.

• To clean the display unit cabinet, use a cloth lightly dampened with a mild detergent.

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

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

Chapter 7. TECHNICAL SPECIFICATIONS

Model No.	KOT-0190US-SA4B
Structure	Metal-cased open frame

LCD Type	19 " Active matrix TFT-LCD	
Active Area	14.8 " (376.3mm)×11.9 " (301mm)	
Monitor Dimensions	**Width**: 432mm **Width with bracket**: 472mm **Height**: 351mm **Height with bracket**: 391mm **Depth**: 47mm	
Suggested Resolution	1280×1024	
Supported Resolution	1280×1024 at 60,75 Hz; 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(Typical)	Pure LCD Panel	300cd/m^2
	With SAW Glass Sensor	275cd/m^2
Response Time(Typical)	8ms	
Viewing Angle (Typical at CR＞10)）	Horizontal(left/right)	75°/75°
	Vertical(up/down)	75°/60°
Contrast Ratio(Typical)	700:1	
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(Typical)	50,000 Hours	
Weight（N.W/G.W）	5.8Kg / 8 Kg	
Power Consumption	50W 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-0190-4B: 19” SAW 4MM thickness of touch screen sensor (Available Options: Thickness/Anti-glare/Tempered)	
Touch System Interface	Having USB and serial interface	

Touch Response time	9ms
Agency Approval	ETL，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)