



# AIM TOUCH TECHNOLOGY CO., LTD.

## Product Specification For IR Touch Panel

Customer  
Model AIM-IR-4600-M01-G125  
Touch Type Infrared ray.  
Version V1.1  
Date 2014/06/27

Approve	Check	Edit

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# History

ITEM	Date	New Description

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# Characteristics

1.1 This Specification is for IR touch panel.

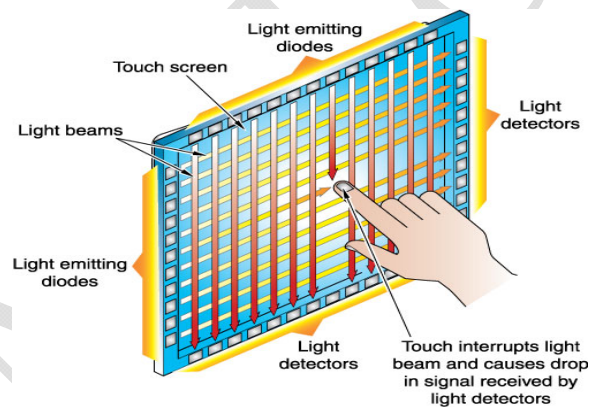
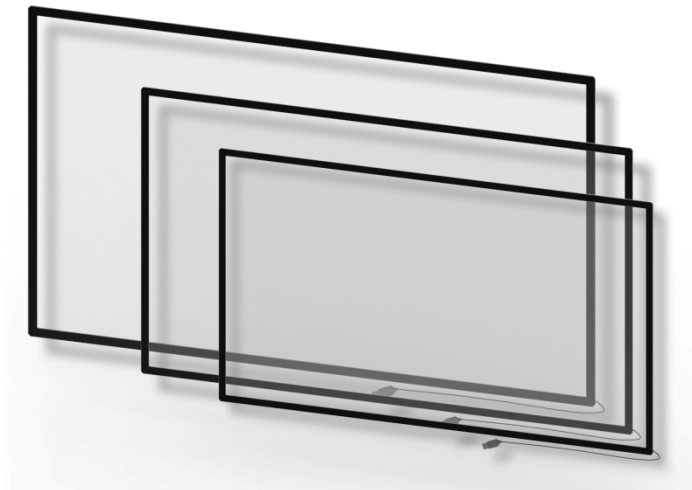


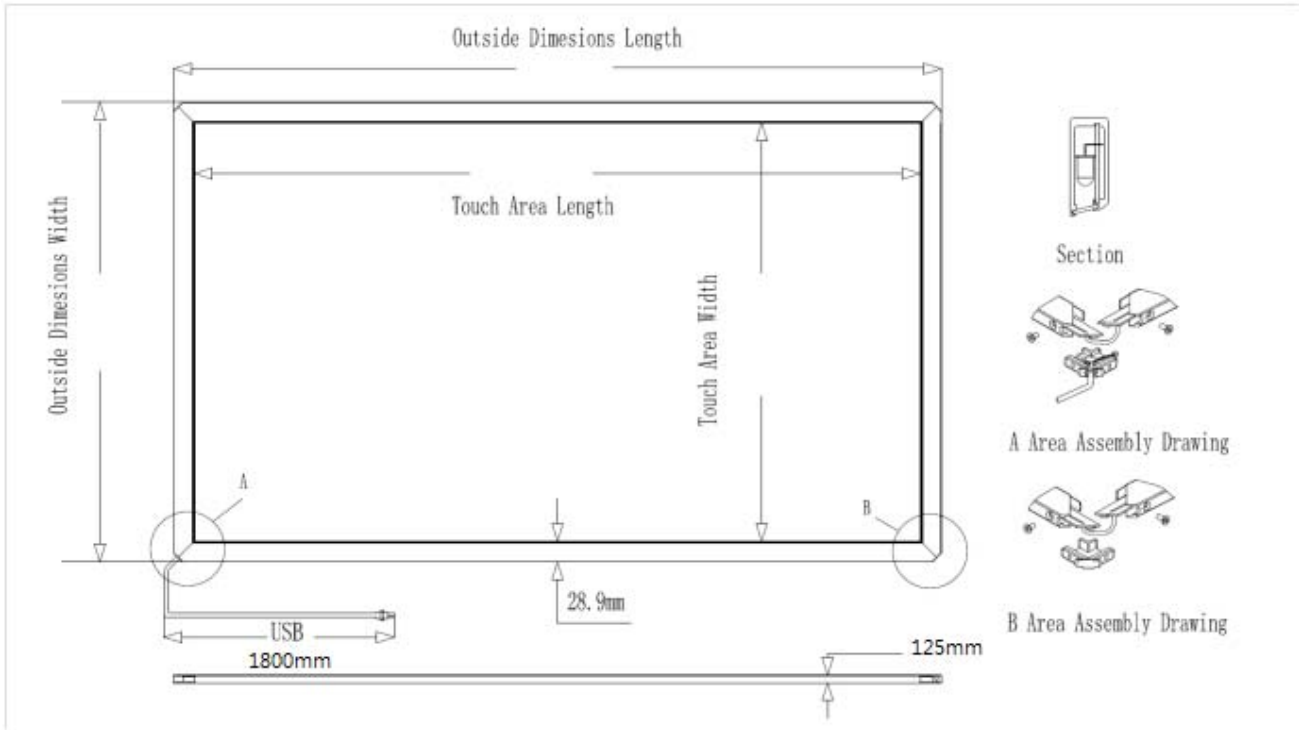
Fig. 1 The principle of infrared touch screen

The principle of Infrared touch screen is constructing an IR light matrix in front of the display screen, and periodically scanning the infrared ray to detect the user touch information. The touch screen includes a touch frame and optional glass. The touch frame contains a row of IR-light emitting diodes and corresponding receiving diodes which are mounted on two opposite sides to create a grid of invisible infrared light. The frame assembly is comprised of PCBs on which the opto electronics are mounted and are concealed behind an IR-transparent bezel. As shown in Fig. 1, when touching one or more of the beams of the screen, the obstructed points' X and Y coordinates will be sent to the control unit to calculate the exact location of touch point.

# General Specification

Item	Data	
Mode	IR Touch Panel	
Input Type	Finger	
Material	Aluminum	
Touch Points	6 Points (Option 10 or 20 Points)	
Structure	Aluminum 9.5mm + Glass 3mm	
Total Thickness	12.5 mm	
Signal Cable Length	1800 mm USB Cable	
Operation	-20°C ~ +60°C Non Condensing	10~90%RH at max 50°C
Storage	-40°C ~ +85°C Non Condensing	10~90%RH at max 50°C
OS.	Windows XP 7/8/10 (Plug & Play)	Linux / Mac / Android

# Model & Dimensions



Unit mm

Inch	Model	Dimension Length	Dimension Width	Area Length	Area Width
46"	AIM-IR-4600-M01-G125	1066.1	620.7	1020.1	574.7

## *Electrical Specification*

Item	Data
Respond per second (max.)	6 ms
Minimum touch object	>3 mm
Power Consumption	350 mA (5V) by USB
ESD	Air 8KV Contact 4KV
EMI	CE FCC

## *Mechanical Specification*

Item	Data	
Force	Stylus	No minimum force
Interface	USB 2.0	
Hardness	Tempered glass	7H
Impact	Tempered glass	30cm > 50g
Panel Static Load	Tempered glass	> 200g
Cable Tail Peeling	800g by vertical 90°	no damage
Cable Tail Bending	135°10 times left & right	no damage

## *Optical Specification*

Item	Data
Transparency	90%
Haze	3%

## *Reliability Specification*

Item	Data
Constant Temperature	70°C /60%RH, 240 hrs and normalized for 4 hrs
Heat Cycle	70°C /180 hrs and normalized for 4 hrs
Cold Cycle	-20°C /180 hrs and normalized for 4 hrs
Thermal Cycle	-20°C ~70°C[60 min./cycle] ×50 cycles and normalized for 4 hrs



# Quick Install Guide

- 1) Put the four sides of the touch frame in accordance with the corresponding order of A, B, C, D sequence, as shown in Fig. 2 (note: the USB outlet position, A, is placed in the lower corner of the touch frame). Please ignore steps 1 ~ 7, if the touch frame is assembled shipment.

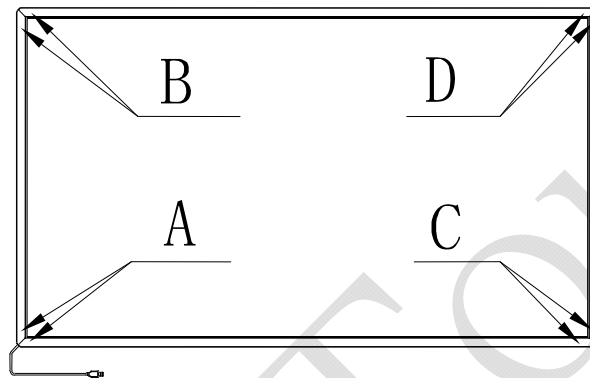


Fig.2 Touch frame Diagram

- 2) Connect the FPC wiring harness in the corner A-A as shown in Fig. 3.

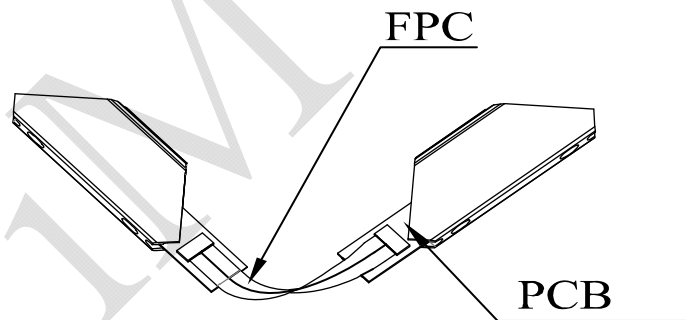


Fig. 3 FPC Connection Diagram

- 3) Install the angle iron and USB in the corner A-A as shown in Fig. 4.

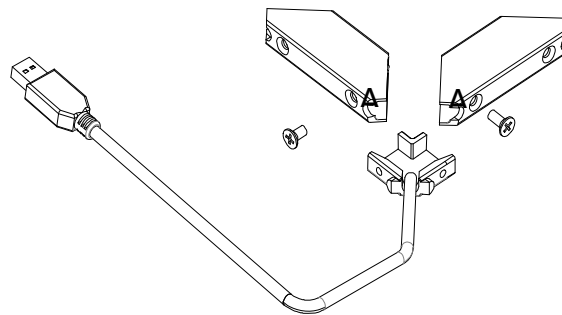


Fig. 4 Installation Diagram of Corner A-A

4) The installed effect is shown in Fig. 5.

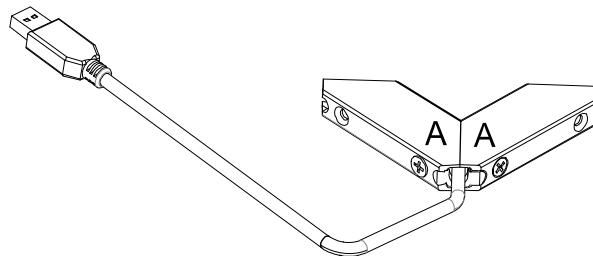


Fig. 5 Assembly Diagram of Corner A-A

5) Connect the FPC wiring harness in the corner B-B as shown in Fig. 3. Install the angle iron and USB as shown in Fig. 6, and the installed effect is shown in Fig. 7.

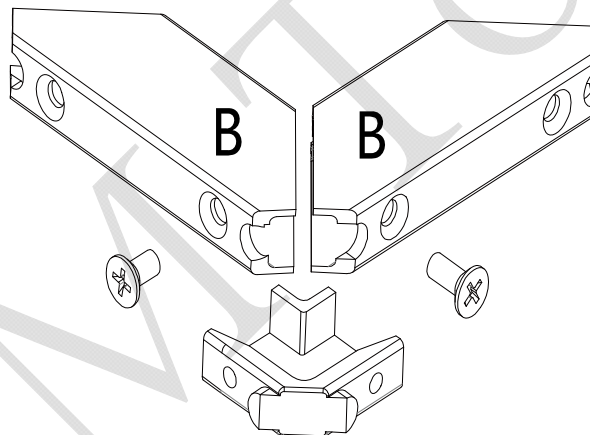


Fig. 6 Installation Diagram of Corner B-B

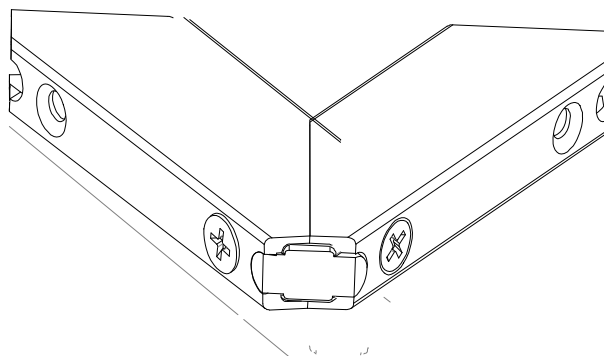


Fig. 7 Assembly Diagram of Corner B-B

- 6) Connect the FPC wiring harness in the corner C-C as shown in Fig. 3. Install the angle iron and USB as shown in Fig. 8.

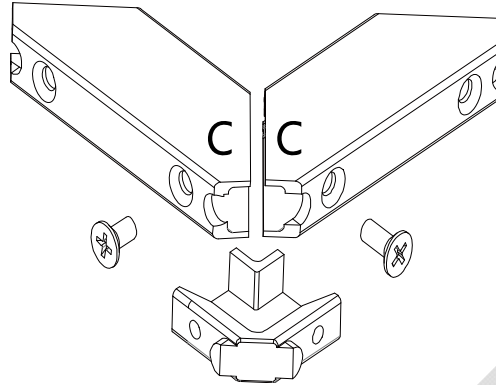


Fig. 8 Installation Diagram of Corner C-C

- 7) The corner D-D do not have FPC wiring harness, just install the frame as shown in Fig. 9.

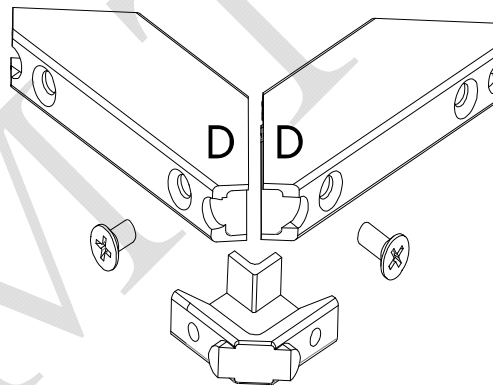


Fig. 9 Installation Diagram of Corner D-D

- 8) The installed effect is shown in Fig. 10.



Fig. 10 Schematic Diagram of Touch Frame Assembly



- 9) Connect the frame to your PC via USB, and install the software driver on the computer, then the frame is ok and works automatically.

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## *Touch Screen Mounting Procedure*

- 1) Confirm the installation environment. Make sure the air flows fluently, the operations area is clean and should have anti-static treatment.
- 2) Get the tools ready. Brush screen cloth, double-sided glue, scissors are necessary.
- 3) Check the frame, make sure there is not any problem with touch frame.
- 4) Clean the surface of touch frame with brush screen cloth.
- 5) Paste the double-sided glue along the touch frame, the glue should be in the center of the bezel, as shown in Fig. 11.

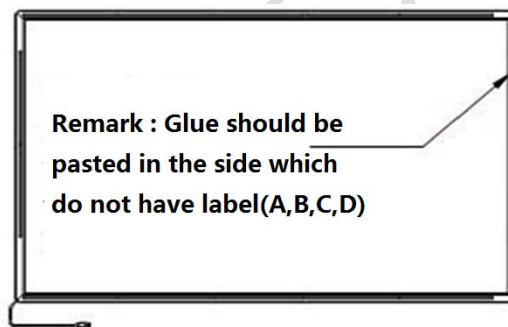


Fig. 11 Schematic Diagram of Paste the Double-Sided Glue

- 6) Align the touch frame and toughened glass, press the touch frame all around to make sure the touch frame and toughened glass paste firm, as shown in Fig. 12.

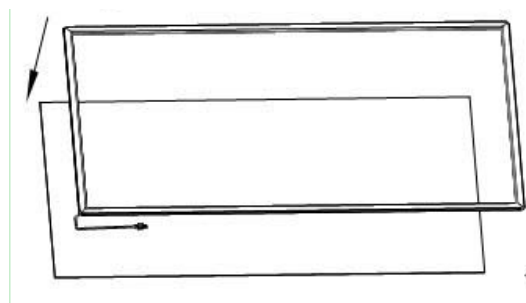


Fig. 12 Schematic Diagram of Installation the Touch Frame

## Examination

- 1) Connect touch frame and PC with USB wire, the USB port of PC is compatible with USB2.0.
- 2) Connect the PC and monitor with VGA, DVI or HDMI.
- 3) Start PC and monitor.
- 4) Run the paint software, touch around the touch frame by any opaque objects whose diameters should be bigger than 5mm, as shown in Fig. 13. Then check whether multi-touch function is normal.

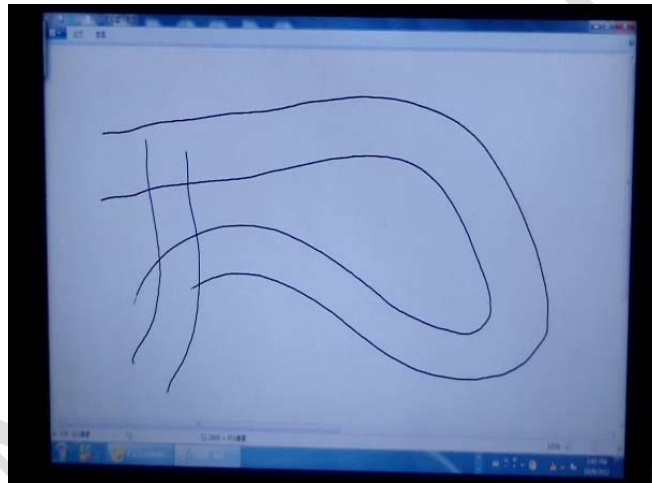


Fig. 13 Test the Touch Frame



## FAQ

Q1. Only one-touch is available while you connect your touch frame to PC, why?

A1: Please check your OS and make sure your OS must be one of Win7 Home premium, Win7 Professional, Win7 Ultimate and Win8. Your installed version must be the full version, not a version of Ghost. If your OS is XP or Win7 Home Basic, they just support one-touch .

Q2. There is deviation when you touch, how do I?

A2: This question need to re-calibrate. Win7 has its own calibration tool. Please do as following:

Control Panel → Hardware and Sound → Table PC Settings → Click Calibrate → Choose Touch Input.

Then the Calibration Interface come out. What you need to do is clicking the point one by one. After 16 points, the calibration is done.

Q3. If I want the USB wire comes out from the other corner, what should I do?

A3: Please contact our engineer.

Q4. The touch function does not work when the frame is connected to PC, what is the problem?

A4: (1) Check the USB port to make sure they are connected correctly.

(2) Make sure if your USB port support USB2.0.

(3) If the above methods does not work, please change the USB port and try again.



Q5.Sometimes there comes jump-point or does not work, why?

A5: The electric isolation must be considerate while installation. The radiation of strong currency can lead to jump-point and break line

Q6.What is the requirement of USB wire between touch frame and PC?

A6:(1) Directly use USB Extender within 10 meters.

(2) The USB Extender must add amplifier while the length within 10 to 20 meters.

(3) When the distance between 20 to 50 meters, external power supply should be used, and in order to reduce the signal attenuation, we use network cables with network amplifier to transmit the signal.

Q7.What is the glass installation requirements?

A7: The infrared multi-touch frame must be close to the surface of glass, the glass should be flat and does not bulge in the middle in case of blocking the infrared light. When the screen is super huge, please push the two X-axis of frame up 5-10mm.



## *Maintenance*

- 1) Do not beat the frame with metal.
- 2) Do not put heavy objects on the frame.
- 3) Periodic clean the dust around of the frame and glass.
- 4) Turn off the power when the touch screen is not used.

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