

## Installation Guide for GeneralTouch SAW Touch Screen

### 吉锐声波触摸屏安装指导

#### V1.5

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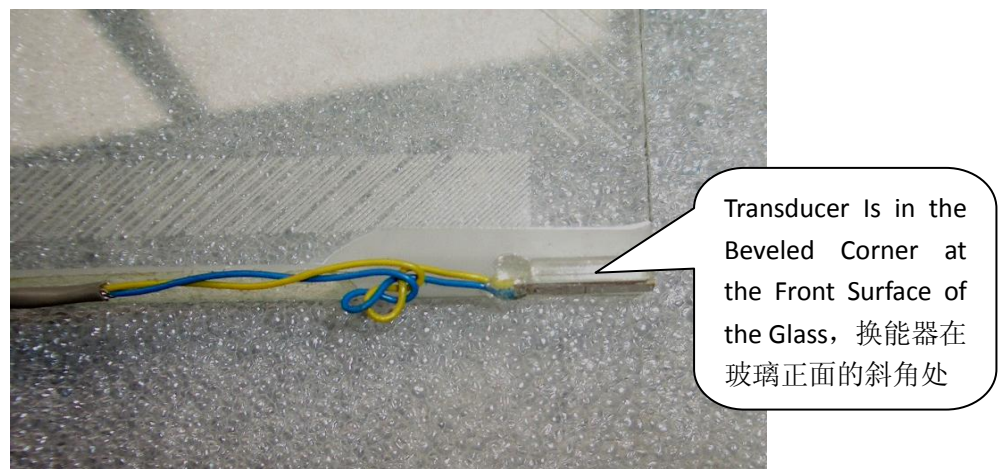
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## Introduction for GeneralTouch SAW Touch Screen

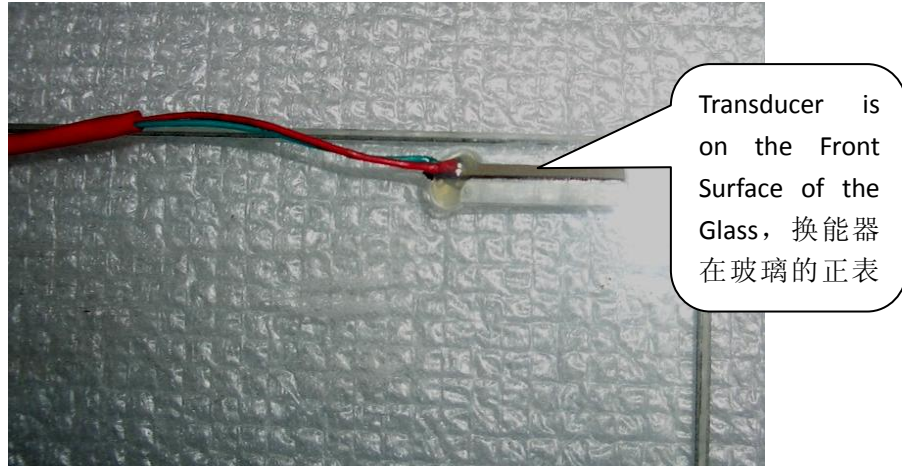
### 吉锐声波触摸屏介绍

We have three types of SAW touch screens, B-type, V-type and Zero-bezel touch screen. The type of the touch screen can be easily recognized from its model name. For example, if the model name is "SCTL4B\*\*", this "B" means that the touch screen is B-type touch screen; If the model name is "SCTL4V\*\*", this "V" means that the touch screen is V-type touch screen; If the model name is "SCTL4V\*\*Z\*\*", this "Z" means the touch screen is Zero-bezel touch screen. The type of the touch screen can also be recognized from the location of transducers: The transducers of B-type touch screen are in the beveled corners at the front surface of the glass; The transducers of V-type touch screen are on the front surface of the glass; The transducers of Zero-bezel touch screen are on the back surface of the glass. Please refer to the pictures below which show the locations of transducers for the three types of SAW touch screens.

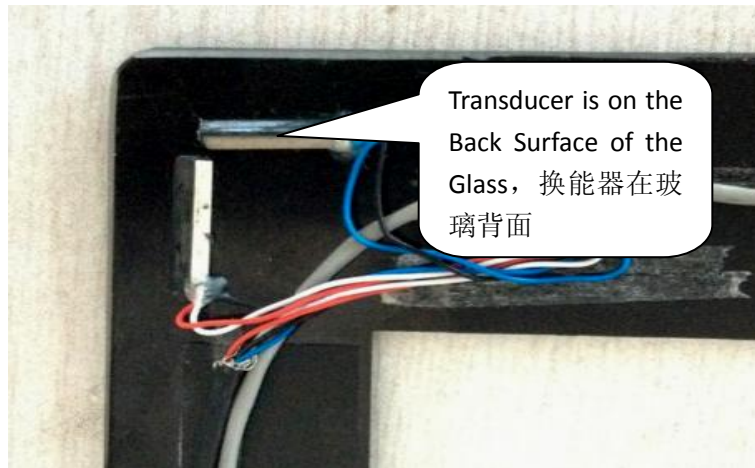
我司有三类声波触摸屏：B 类屏、V 类屏和零边框触摸屏。触摸屏的类型可以很容易地从它的型号名识别出来。例如，如果型号名是 "SCTL4B\*\*"，这个 "B" 代表它是 B 类屏；如果型号名是 "SCTL4V\*\*"，这个 "V" 代表它是 V 类屏；如果型号名是 "SCTL4V\*\*Z\*\*"，这个 "Z" 代表它是零边框触摸屏。您也可以通过换能器的位置识别出触摸屏的类型：B 类屏的换能器位于玻璃正面的斜角处；V 类屏的换能器在玻璃的正表面；零边框触摸屏的换能器在玻璃背面。请参考下面图片中三类声波屏的换能器位置。



(The transducer location of B-type SAW touch screen, B 类屏的换能器位置)



(The transducer location of V-type SAW touch screen, V类屏的换能器位置)



(The transducer location of Zero-bezel SAW touch screen, 零边框触摸屏的换能器位置)

## Installation Key Points for GeneralTouch SAW Touch Screen

### 吉锐声波触摸屏安装要点

First of all, please focus on the following summary of key points concerning assembling the GeneralTouch SAW touch system. Before, during and after the assembly, please follow each key point below to check whether the SAW touch screen is assembled correctly or not.

首先，请关注下面关于安装吉锐声波触摸系统的要点总结。在安装前、安装过程中及安装后，请逐一按照下面的要点核对声波触摸屏是否被正确安装。

1. Disassemble the front frame and the back cover of monitor. The touch screen will be stuck onto the front surface of the LCD panel, and the controller will be fixed onto the chassis or back cover of the monitor.

拆下显示器的前框和后盖。触摸屏将被粘贴在液晶显示面板前面，控制器将被固定在显示器的铁盘或后盖上。

2. Stick the touch screen onto the metal frame of LCD panel by double-sided adhesive tapes. Please pay attention to:

用双面胶将触摸屏粘贴在液晶显示面板的金属边框上。请注意以下事项：

- 1) Make sure the surface of the metal frame of LCD panel is flat and without any thrust;  
请确认液晶显示面板的金属边框表面是平整的，没有任何的突起。
- 2) Before sticking the touch screen, please clean the surface of the metal frame of LCD panel where the double-sided adhesive tapes will be stuck;  
在粘贴触摸屏前，请清洁液晶显示面板的金属边框表面，双面胶将贴在上面。
- 3) Before sticking the touch screen, please clean the viewable area of LCD panel and the rear surface of touch screen;  
在粘贴触摸屏前，请清洁液晶显示面板的可视区和触摸屏的背面。
- 4) Please adjust the location of the touch screen to make sure the viewable area of LCD panel is within the active area of touch screen, which means the reflection stripes of touch screen should be out of the viewing area of LCD panel;  
请调整触摸屏的位置来保证液晶显示面板的可视区在触摸屏的可触摸区内，这样触摸屏的反射条纹就不会出现在液晶显示面板的可视区内。

The double-sided adhesive tapes are mainly used to prevent dust and moisture from going into the clearance between the LCD panel and the touch screen, and help to fix the touch screen before assembling the front frame. Because the touch screen has gravity, there should be some special designs on the front frame or alternative frames to support the touch screen after the assembly.

双面胶主要是用来防止灰尘和水汽不会进入液晶显示面板和触摸屏之间的狭缝，并在安装前框前帮助固定触摸屏。由于触摸屏的自重，因此前框上需要有一些特殊的设计或者有其他边框，在安装后支撑触摸屏。

- 5) The transducers at the three corners of the touch screen and the touch screen cable should be well-protected. Please make sure that transducers will not be touched or crashed during and after assembly. Meanwhile there should be a protection clearance of at least 1mm between the front frame and the transducers, and 2mm is recommended.  
触摸屏三个角的换能器和屏线应该保护好。请保证安装过程中和完成安装后,换能器不被接触和挤压到。同时前框和换能器之间应至少 1mm 的保护高度, 2mm 是更推荐的。
  - 6) During the assembly process, please protect the touch screen carefully from any physical damages like scratches.  
在安装过程中, 请小心地保护触摸屏免受任何物理损伤, 比如划伤。
3. Assemble the touch controller onto the chassis or the back cover of the monitor. Please pay attention to:  
将控制器安装在显示器的铁盘或者后盖上。请注意以下事项:
- 1) In order to prevent interference, the controller, touch screen cable, serial cable and USB cable should be fixed as far as possible from the inverter board, A/D board and power board of the monitor. Meanwhile please make sure the cables are not crisscrossed or overlapped. If interference occurs after the assembly, please use aluminum foil to wrap the touch screen cable, serial cable and USB cable which are routing inside the monitor, meanwhile please pay attention to avoiding short circuit.  
为防止干扰, 控制器、屏线、串口线和 USB 线应固定在远离显示器高压板、AD 板和电源板的地方。同时请不要让各种线材交叉。如果安装后出现了干扰, 请用铝箔将布置在触摸显示器内部的屏线、串口线和 USB 线包裹起来, 同时注意防止短路。
  - 2) Make sure that the controller doesn't contact the chassis directly in case of short circuit and needs to be grounded well.  
请确认控制器不能直接接触到显示器铁盘以防短路, 同时需要良好的接地。
4. Tidy up the cables routed inside the touch monitor and then fix or band them at a proper location;  
请整理触摸显示器内部的线材, 并固定在合适的位置。
5. Re-assemble the front frame and the back cover of the monitor. If there is a proper dust-proof solution, please stick the dust-proof materials such as dust-proof strip and rubber blade onto the inner edges of the front frame, and then re-assemble the front frame, now the touch monitor will have a certain dust-proof performance. Make sure that the dust-proof materials do not press the reflection stripes tightly, and it is better not to contact the reflection stripes.  
重新组装上显示器的前框和后盖。如果有合适的防尘方案, 请将防尘物料粘贴于前框内侧的四边, 这样触摸显示器就有了一定的防尘性能。请注意防尘物料不能紧压触摸屏反射条纹区域, 最好不接触该区域。

Because most installation key points are applicable to all the types of GeneralTouch SAW touch screens, we will take GeneralTouch V-type single-point touch screen SCTL4V42BR as example to specify how to assemble GeneralTouch SAW touch screen. At the same time, some special guidelines for assembling other types of GeneralTouch touch screens such as B type and Zero-bezel touch screen are introduced at the corresponding procedure (The following sections started with "Attention"). Please read them carefully.

因为大部分安装要点适用于吉锐所有类型的声波触摸屏, 所以我们下面以吉锐 42" V 类单点屏体 SCTL4V42BR 为例, 详细说明如何安装 V 类屏。同时组装吉锐其他屏体如 B 类屏和零边框触摸屏的特殊注意事项在相应步骤有介绍(下面以“注意”开始的段落), 请仔细阅读。

## SOP for GeneralTouch SAW Touch Screen Assembly

### 吉锐声波屏安装作业指导书

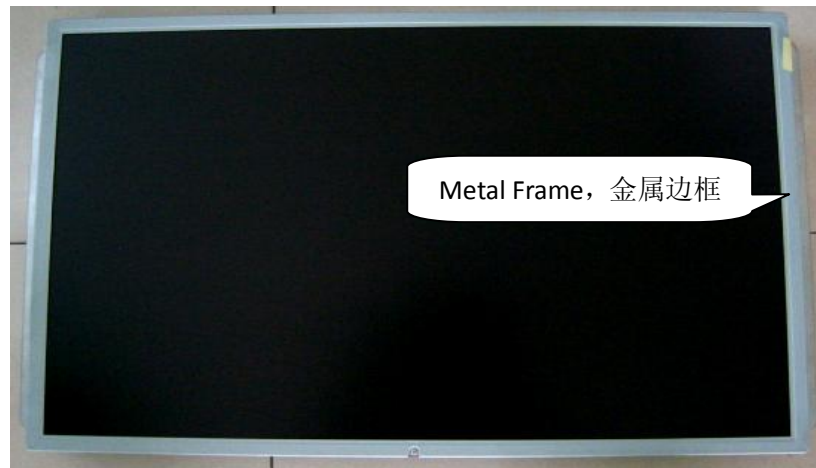
1. Disassemble the front frame and the back cover of the monitor.

拆下显示器的前框和后盖。

2. Assemble the touch screen 安装触摸屏

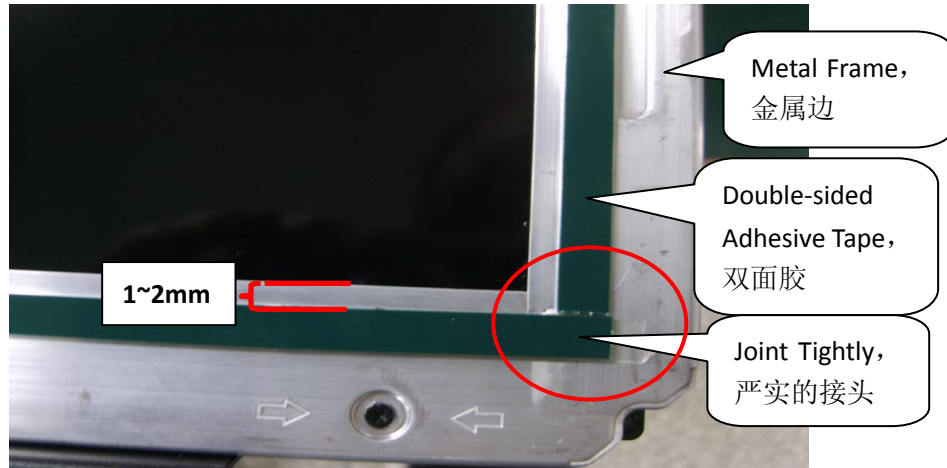
- 1) The front view of the LCD panel is shown as below. Check every metal frame of the LCD panel to make sure there is no bump. If so, please grind it carefully to make sure the metal frames of LCD panel are perfectly flat and smooth for next operation. If there is PCB board on the metal frame, please remove it at first.

下图是液晶显示面板的正面视图。检查液晶显示面板的每一条金属边框，确认没有任何突起。如果有突起，请小心地磨掉，保证液晶显示面板的边框十分的平坦和光滑，以便下一步操作。如果金属边框上有电路板，请先移除。



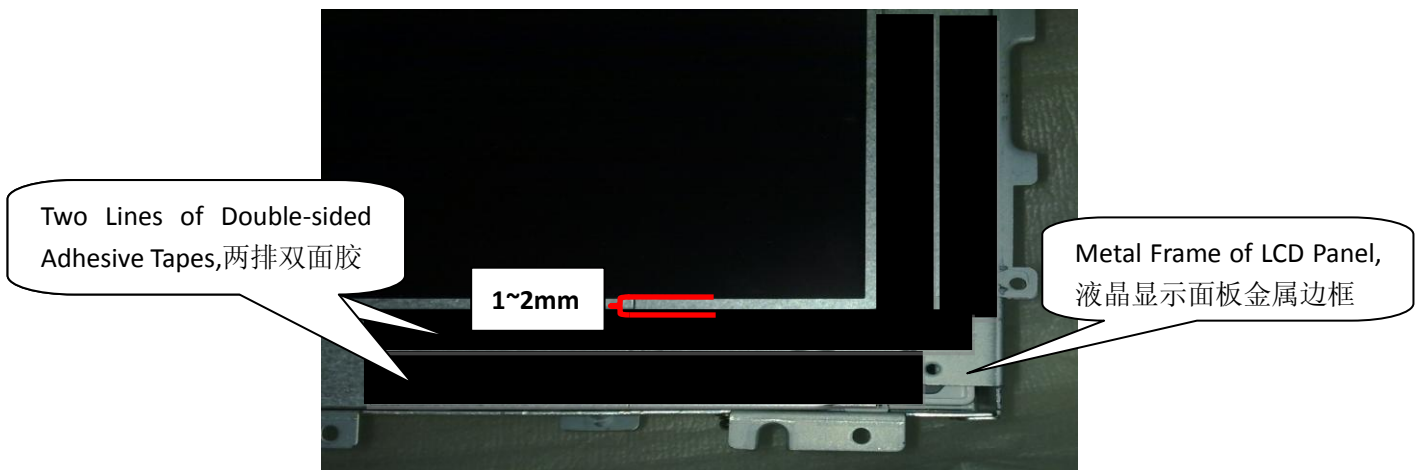
- 2) Stick the double-sided adhesive tapes onto the metal frame of the LCD panel and keep a 1~2mm distance away from the inner edge of the metal frame as shown below. Please stick the double-sided adhesive tapes straightly and tightly to prevent the intrusion of the dust and moisture, and make the joints adhere to each other closely.

如下图所示，将双面胶粘贴在液晶显示面板的金属边框上，并与金属边框内侧保留 1~2mm 的间隙。请又紧又直地粘贴双面胶以防止灰尘和水汽的进入，同时将接头严密地粘贴在一起。



*Attention:* If the metal frame of the LCD panel generally larger than 26" is wide enough to stick two lines of double-sided adhesive tapes, please kindly stick two lines of double-sided adhesive tapes onto the metal frame of LCD panel straightly and tightly and also keep a 1~2mm distance away from the inner edge of the metal frame as shown below.

*注意:* 如果液晶显示面板，一般是大于 26"的液晶显示面板，它的金属边框足够宽，可以粘贴下两排双面胶，请按照下图所示又直又紧地粘贴两排双面胶到液晶显示面板的金属边框上，同时与金属边框内边缘保留 1~2mm 的间隙。



(Stick two lines of double-sided adhesive tape, 贴两排双面胶)

- 3) Clean the rear surface of the touch screen and the LCD panel with alcohol and soft cotton cloth, and then stick the touch screen onto the double-sided adhesive tapes. Please make sure the reflection stripes of the touch screen are out of the frame open area (Viewable Area) of the LCD panel, and do not press the touch screen cables. When assembling the Zero-bezel touch screen, please note that the background area of Zero-bezel touch screen should wholly cover the double-sided adhesive tapes and the metal frame of LCD panel, meanwhile please make the viewable area of Zero-bezel touch screen in alignment with the viewable area of LCD panel.

用酒精和软棉布清洁触摸屏背面和液晶显示面板，然后将触摸屏贴到双面胶上。请注意触摸屏的反射条纹应该在液晶显示面板的可视区范围外，同时不要挤压屏线。安装零边框触摸屏时，请注意将背面的色带完全覆盖双面胶及 Panel 的金属框，触摸屏可视区对准 Panel 可视区。

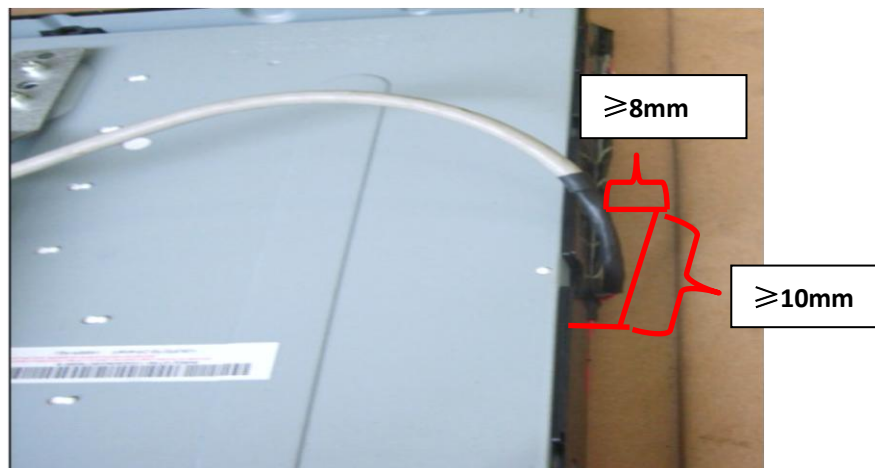


Attention: A space of 10x10 x 8mm(Length x Width x Height) should be reserved on the chassis or back cover as the exit of touch screen cable. Please refer to the pictures of touch screen cable's exit below, which are from the front view, back view and close-up view.

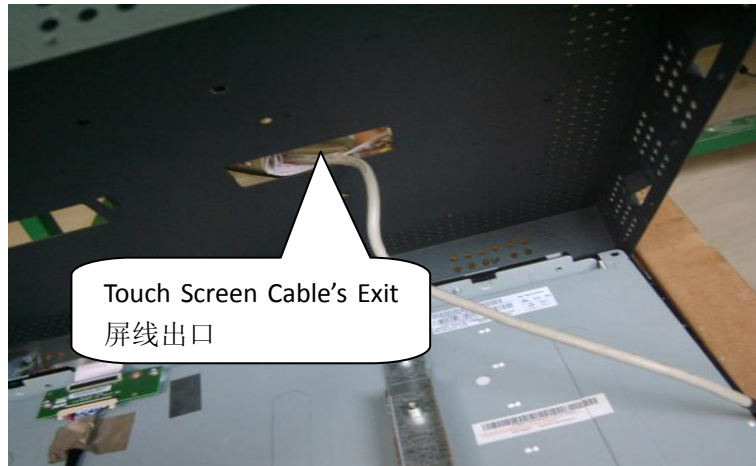
注意：在铁盘或后盖上预留 1 个 10x10x8mm(长 x 宽 x 高)的空间作为屏线出口。请参考下面正面、背面和特写的屏线出口图片。



(The front view after sticking the touch screen, 贴上触摸屏后的正面视图)



(The back view after sticking the touch screen, 贴上触摸屏后的背面视图)



(The close-up view after sticking the touch screen, 贴上触摸屏后的特写视图)

3. Assemble the controller 安装控制器

- 1) The mounting location of the controller is usually selected near the exit of the touch screen cable on the chassis of LCD panel or the back cover of touch monitor. It is necessary to keep the touch screen cable and the controller at some distances from the power board, A/D board and inverter board, which aims to avoid the interference from those boards.

控制器的安装位置通常选择在靠近屏线出口的液晶显示面板铁盘或者触摸显示器后盖上。有必要将控制器和屏线与电源板、高压板和 AD 板之间保持一定的距离，目的是防止这些电路板带来的干扰。

- 2) Please add at least 2 screws with stages onto the chassis or back cover which are used to fasten the two mounting holes on the diagonal of the controller. Meanwhile make sure that, after the assembly, the controller will not touch the chassis in case of short circuit.

请在铁盘或后盖上增加至少两个螺柱，用来固定控制器对角线上的两个安装孔。同时确保安装后，控制器不会接触到铁盘，避免发生短路。

- 3) Assemble the controller onto those screws as shown below in the red circle.

将控制器安装在螺柱上，如下图中红圈所示。



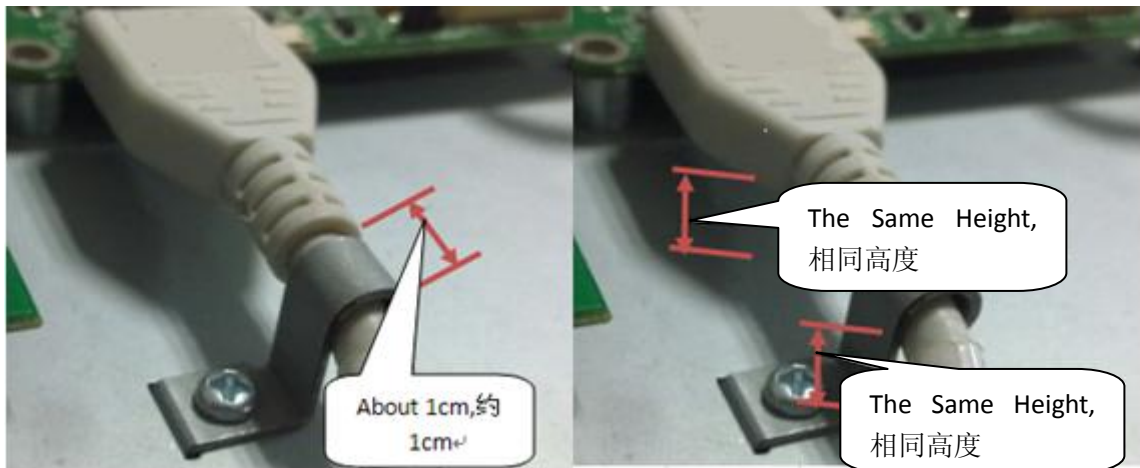
4. Cable routing and the ending 布线 and 完成组装

- 1) Make the touch screen cable go through the hole which is reserved on the chassis or back cover and then connect with the controller. The touch screen cable should be routed on the chassis or the back cover as short as possible to avoid interference. If the controller is near the power board, the interferences from the power board will act on the controller and cables. This kind of interference may cause the cursor jump automatically. If this kind of problem occurs, please try to use aluminum foil to wrap the touch screen cable to solve it.

将屏线穿过铁盘或后壳上预留的孔洞连接到控制器上。为避免干扰，布放在铁盘或后盖内的屏线应该尽可能的短。如果控制器靠近电源板，来自电源板的干扰会作用于控制器和线材，导致光标乱跳。如果有这种问题发生，请尝试用铝箔去包裹住屏线来解决。

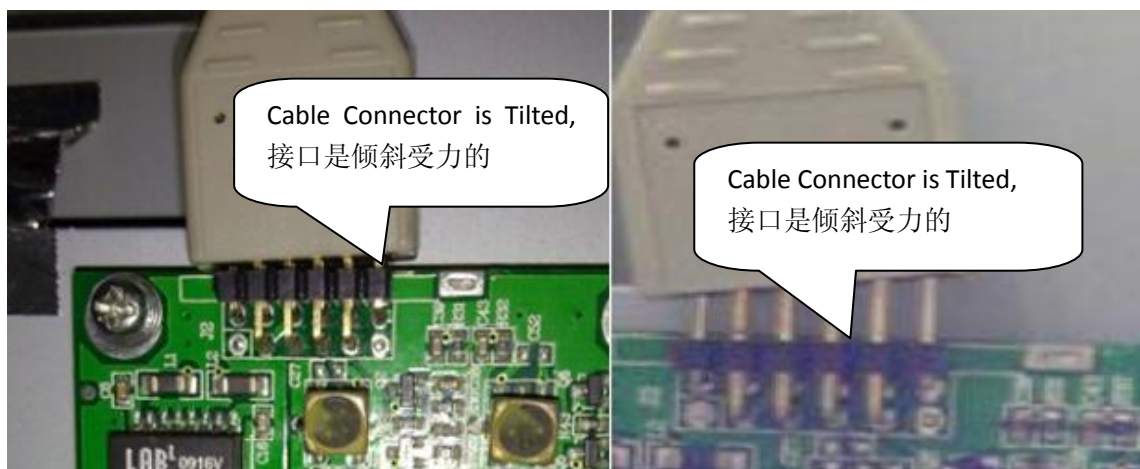
**Attention:** Please fix the touch screen cable at the 1cm distance from the end of the connector, and keep them at the same height. Then the connector will be stress-free after fixing the touch screen cable. Please kindly refer to the pictures below.

注意：请在接头末端 1cm 处固定屏线，并保持两者高度一致。这样固定屏线后，接口处不会承受任何的张力。请参考下面两张图片。



The picture below shows the improper examples on fixing the touch screen cable, it will lead that the touch system works abnormally.

下图展示了不合适的固定屏线的例子，这样会导致触摸系统工作不正常。



**Attention:** For dust-proof, water proof and front frame touch screen, there is a black grounding

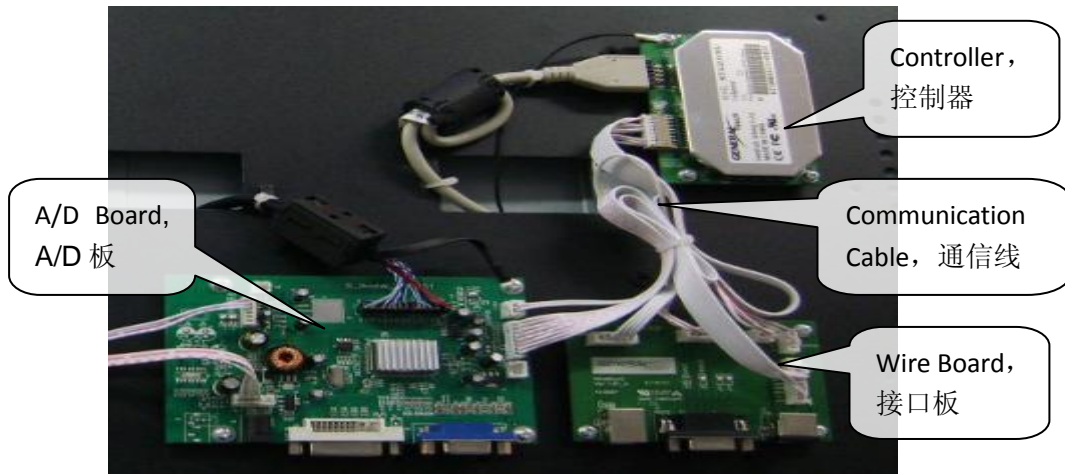
wire bundled with the touch screen cable. When connecting the touch screen cable, please fix the grounding wire onto the chassis or a mounting stud used to fasten the controller to realize grounding

注意：防尘屏、防水屏和前框式触摸屏，跟屏线捆绑的有一根黑色的接地线。连接屏线时，请将接地线连接到铁盘或者固定控制器的螺柱上，实现接地。

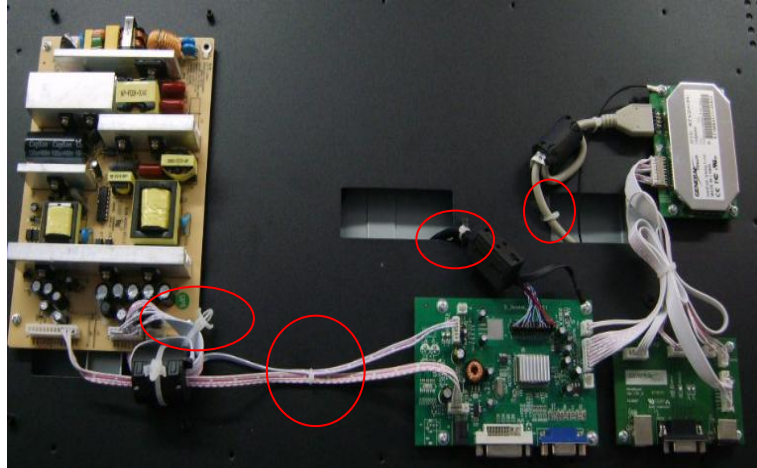


- 2) Make the communication cable routed in a reasonable way and connect the controller with A/D Board or other connectors.

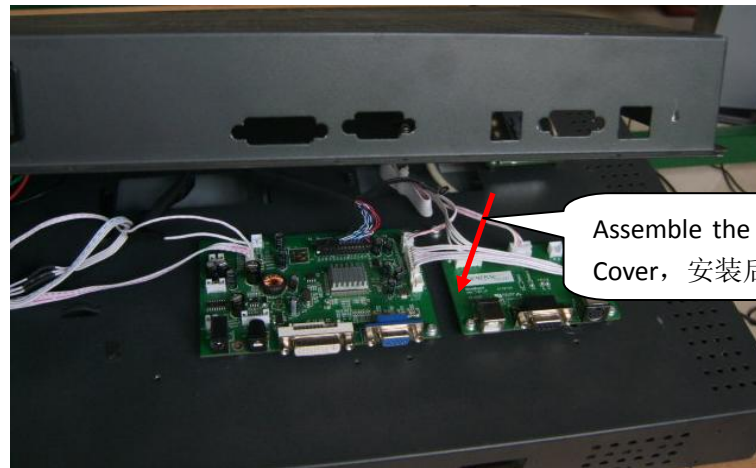
请用一个合理的方式布放通信线，然后连接控制器和 A/D 板及其他接口。



- 3) Fix cables with zip ties as shown below in the red circle. 用扎线带固定线材，如下图红圈中所示：



- 4) Assemble the back cover of the LCD panel. 安装液晶显示器的后盖。



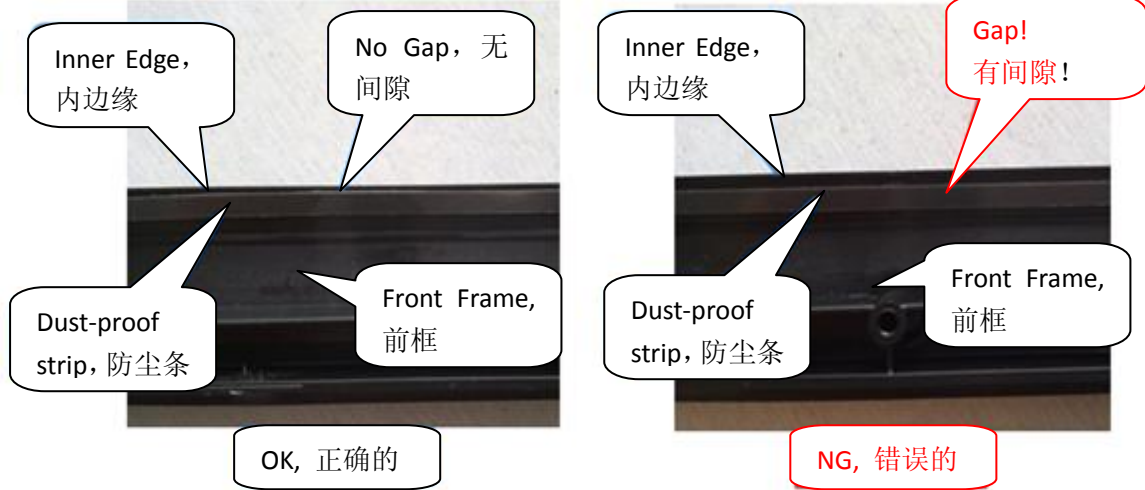
- 5) Stick the dust-proof strips 贴防尘条

*Attention:* When sticking dust-proof strips, please pay attention to the points below, in order to achieve the best dust-proof effect.

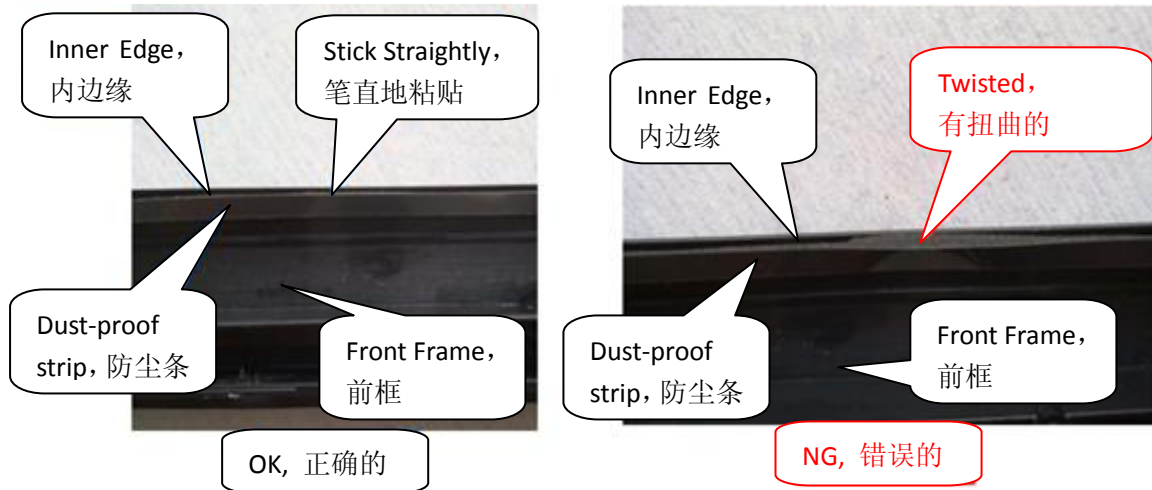
*注意:* 当粘贴防尘条时, 请注意以下几点, 以达到最佳的防尘效果。

1. Please kindly stick the dust-proof strips along with the inner edge of front frame. If the dust-proof strips are stuck with a distance away from the inner edge, the dust and dirt will accumulate in this gap.

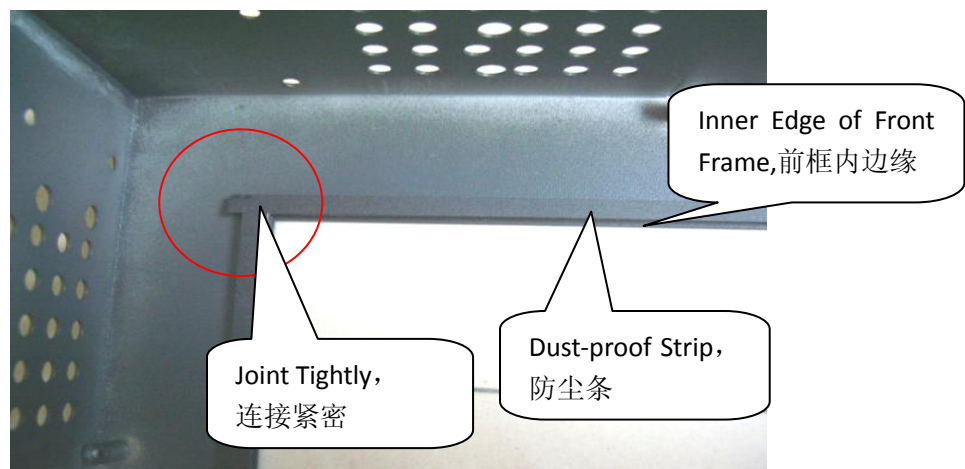
请沿着前框内侧边缘粘贴防尘条。如果防尘条被贴在与前框内侧边缘有间隔的位置, 灰尘和脏污物就会累积在这个缺口。



2. Please do not make the dust-proof strips twisted. 请不要让防尘条扭曲。

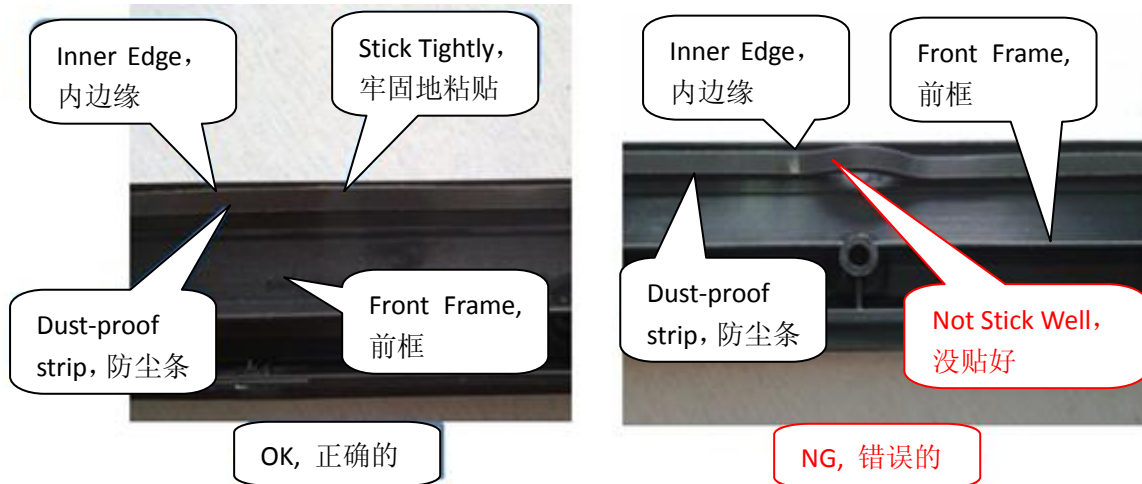


3. Please make the joints at corners adhere to each other closely.  
请确保角落的接头处连接紧密。

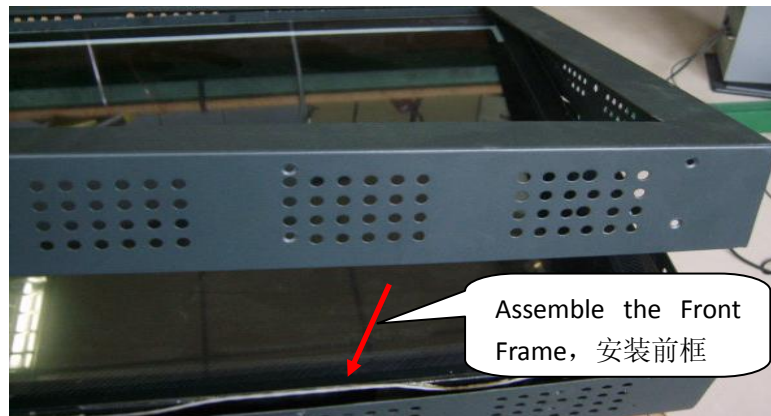


4. After sticking the dust-proof strips, please kindly use your finger to press the dust-proof strips to ensure the contact area is stable and big enough.

粘贴防尘条后，请用手指按紧防尘条以保证接触区域足够大和稳固。



6) Assemble the front frame 安装前框



(Assemble the front frame, 安装前框)

Now the assembly work is finished, and the touch monitor has a certain dust-proof performance.  
现在组装工作完成，触摸显示器有了一定的防尘性能。

5. Notes 注意事项

1) Protect the transducers and the touch screen cable 保护换能器和屏线

During the whole assembling process, please protect the touch screen especially the transducers on the corners from any pressure or impact. Please refer to the details below according to the type of touch screen.

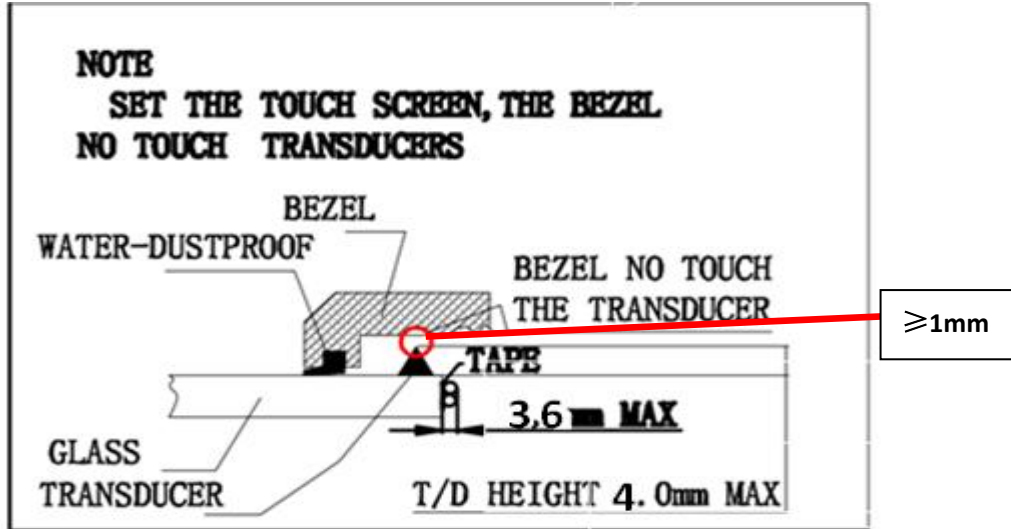
在整个安装过程中，请注意保护触摸屏尤其是屏体角落上的换能器免受任何压力或冲击。请注意参考下面结合屏体类型而给出的细节。

i. Protect the transducers of B-type and V-type touch screen 保护 B 类、V 类屏体的换能器

The transducers of B-type and V-type touch screen are on the front surface of touch screen, and the front frame is at the top of monitor to protect the transducers and the reflection stripes. When assembling the front bezel, please pay attention to protecting the transducers. Meanwhile please be more careful when assembling V-type touch screen, because its transducers are directly on the front surface of the glass. After assembly, there should be at least 1mm reserved between the transducers and front frame for the purpose of protection. At the same time, the transducers and reflection stripes

should be cleaned and without anything sticking. Please refer to the diagram of protection height.

B 类屏和 V 类屏的换能器都在触摸屏的正面，前框在显示器的最前面来保护换能器和反射条纹。因此安装前框时，请注意保护换能器。同时由于 V 类屏的换能器在玻璃的表面，请格外小心。组装后，前框和换能器之间需要保留至少 1mm 的保护高度。同时，换能器和反射条纹区域应该清洁干净，没有任何残留物。如下图所示：



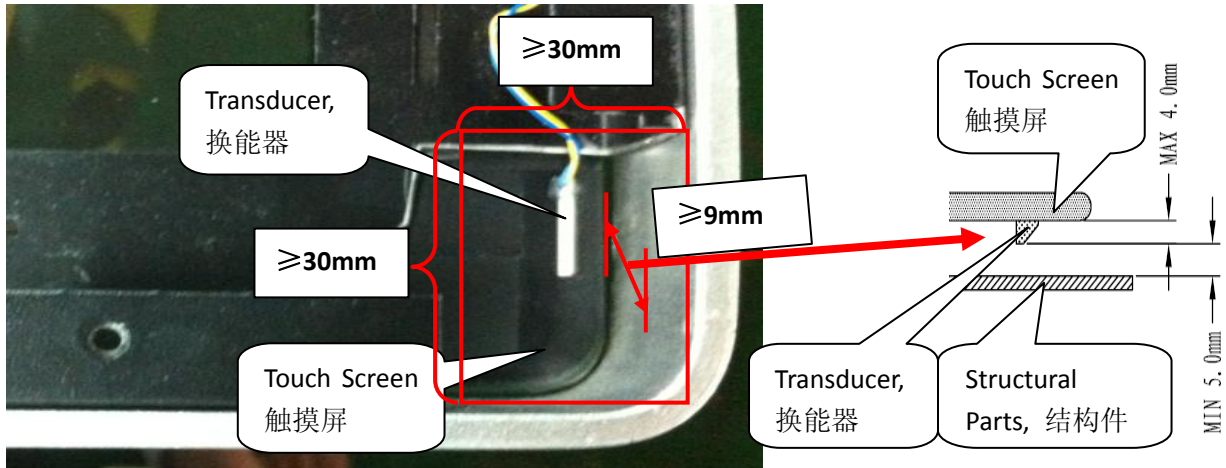
(Protect the transducers of V-type touch screen, 保护 V 类屏换能器)

ii. Protect the transducers of Zero-bezel touch screen 保护零边框触摸屏的换能器

The transducers and touch screen cable of Zero-bezel touch screen are on the back surface of glass, and its front surface becomes a true flat surface, thus Zero-bezel touch screen is usually used as the top layer of the touch monitor. Consequently, the way to protect its transducers is a little different from the B-type and V-type touch screen. Please note that the structural parts cannot place any pressure to the transducers and touch screen cables. Meanwhile please reserve a space of about 30x30x9mm (Length x Width x Height) around the locations of transducers and keep the area from anything sticking. For one Zero-bezel touch screen, please kindly refer to the drawing to confirm the reserved space.

零边框触摸屏的换能器和屏线都在玻璃背面，触摸屏的正面形成一个真正的平面，因此零边框触摸屏通常被用作于触摸显示器的最外层。于是保护零边框触摸屏换能器的方法与 B 类屏和 V 类屏有一些差异。请注意结构件不能对换能器和屏线施加任何的的压力。请在换能器的附近保留 1 个约 30x30x9mm（长 x 宽 x 高）的空间，同时清理该区域，保证没有任何胶质残留物。对于一张零边框屏体，请参考图纸来确认需要预留的空间。

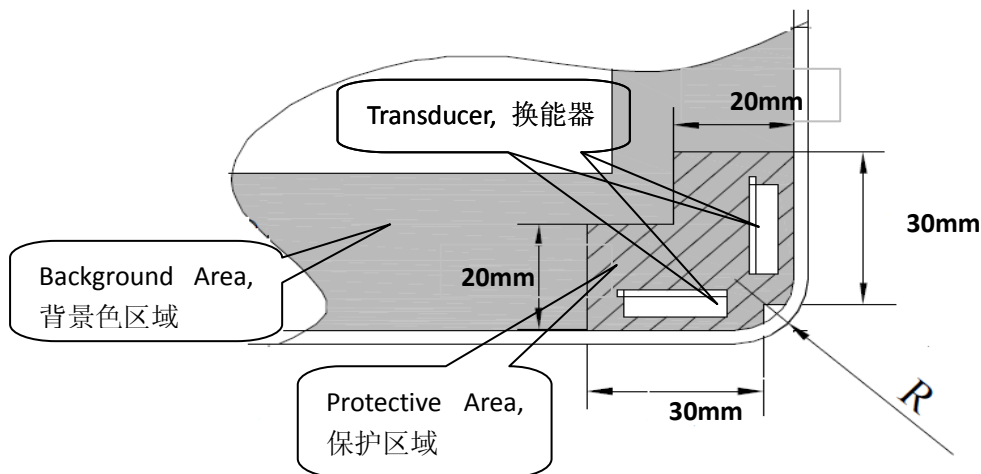




(Protect the transducers of Zero-bezel touch screen, 保护零边框触摸屏换能器)

At the three corners with transducers of Zero-bezel touch screen, in order to protect the transmission of touch signal, please keep the protective areas clean without anything sticking both on front and back surface. The protective area of back surface is the gray area with 45° solid lines as shown below, and the corresponding area on the front surface also needs to be protected well. Please kindly refer to the drawing of the Zero-bezel to get the size of the protective area.

在零边框触摸屏有换能器的三个角落，为了保护触摸信号的传递，请保持保护区域没有任何残留物，包括触摸屏正面和背面。背面的保护区域是下图所示的灰色带 45° 斜实线的区域，相应的正面区域也需要很好的保护。请参考零边框屏体的图纸来确定保护区域的尺寸。

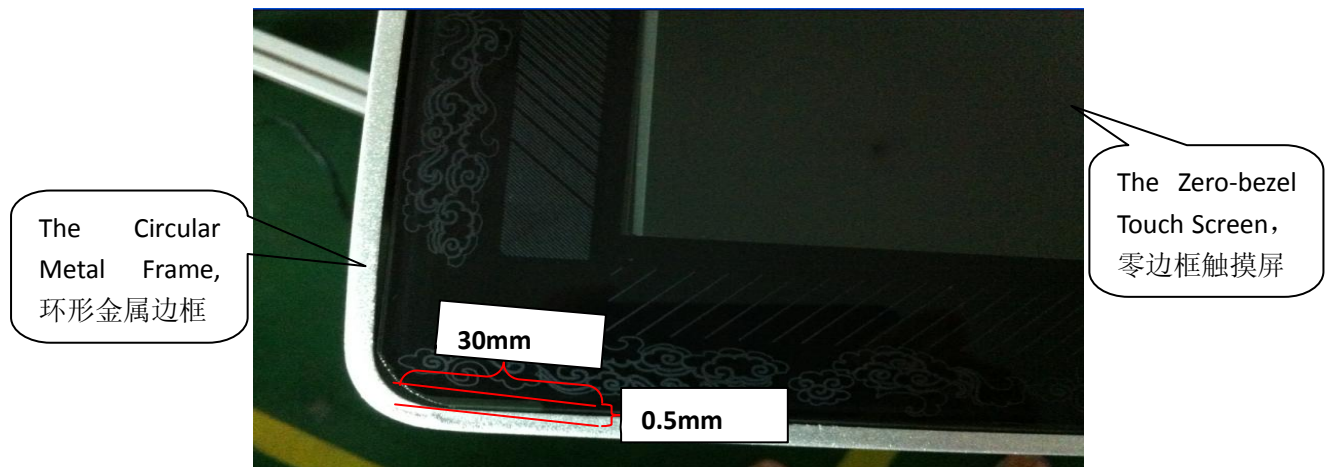


(Protective areas of back surface of Zero-bezel touch screen, 零边框触摸屏背面的保护区域)

As there is no front frame in the front to support the Zero-bezel touch screen, it is necessary to specially design the supporting structure to prevent the touch screen slipping down. The picture below shows an application case, the circular metal frame around the touch screen is designed to support the touch screen. At the three corners with transducers, please keep a clearance of 30x0.5mm between the touch screen and supporting structure to guarantee the transmission of touch signal. At the other place, the supporting structure can contact the touch screen directly but should not place any pressure to the touch screen. Also please clean the area of reflection stripes and the edges of glass carefully after assembly.

由于零边框触摸屏的前面没有前框支撑，因此有必要设计支撑结构来防止触摸屏下滑。下图展示了一个应用

案例，触摸屏周围的环形金属边框是设计来支撑触摸屏的。注意在换能器所在 3 个屏体的角落需要在触摸屏和支撑结构件之间保留一个 30x0.5mm 的间隙。在其他位置，支撑结构可以直接接触触摸屏但是不能挤压触摸屏。完成安装后，请小心的清洁条纹区域和玻璃边缘。

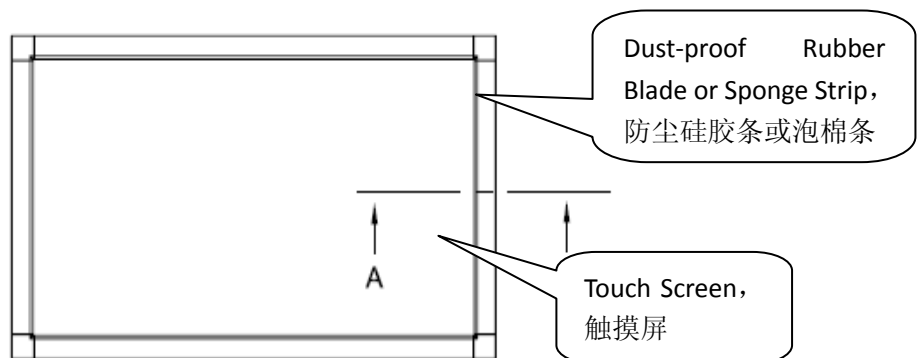


(The supporting structure of Zero-bezel touch screen, 零边框触摸屏四周的支撑结构)

2) The dust-proof solution 防尘方案

In order to keep the good touch performance, it is necessary to choose a proper dust-proof solution to keep the reflection stripes area against from dust. There are two typical technical solutions to achieve the dust proof purpose. One is to use the dust-proof rubber blade, the other is to use the dust-proof sponge strip. The location of the dust-proof rubber blade or sponge strip is shown in picture below.

为了让触摸屏保持良好的触摸性能，我们有必要选择一个合适的防尘方案去保护反射条纹区域遭受灰尘影响。现在有两种典型的技术方案来达到防尘的目的，一种是用防尘硅胶条，另一种是用防尘泡棉条。防尘硅胶条或泡棉条的位置如下图所示：



(The location of dust-proof rubber blade or sponge strip, 防尘硅胶条或泡棉条位置)

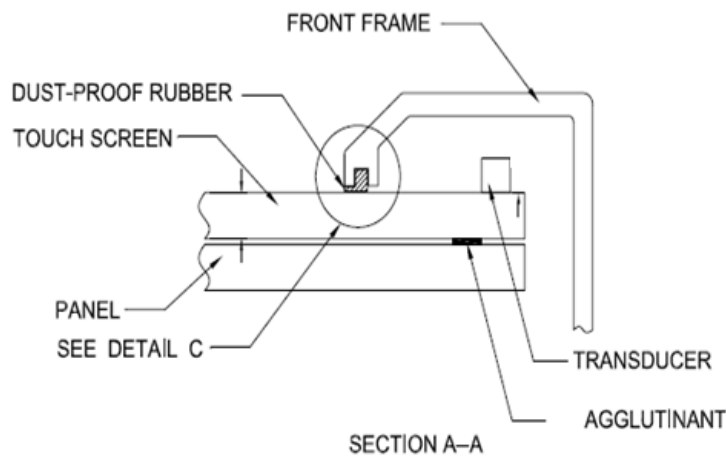
**Attention: Make sure that the dust-proof materials including dust-proof rubber blade and dust-proof sponge strip do not press the reflection stripes tightly, and it is better not to touch the reflection stripes.**

**注意: 请注意防尘物料包括防尘硅胶条和防尘泡棉条不能紧压触摸屏反射条纹区域, 最好不接触该区域。**

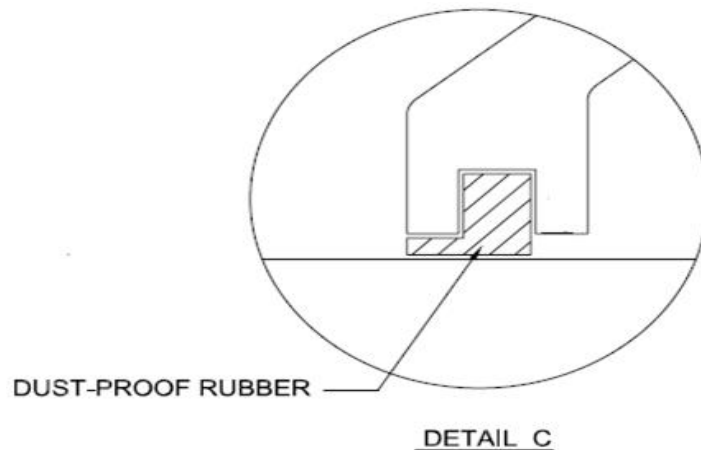
i. The dust-proof rubber blade solution 防尘硅胶条方案

The schematic diagram and enlarged picture of this solution are shown in the two pictures below. This solution can be used in worse environment than the dust-proof sponge strip solution. For this solution, there should be a groove in the inner side of the front frame. The size and the shape of the dust-proof rubber blade depend on the front frame's design. After assembly, this solution can make the touch monitor achieve not only dust-proof performance, but also a certain water anti-penetration performance. If the front frame will be redesigned and opened new mold, we prefer to recommend this dust-proof rubber blade solution.

下面两张图片是防尘硅胶条方案的原理图和放大图。相比于防尘泡棉条方案，这种方案能使用更加恶劣的环境。同时这种方案要求在前框上有一个槽来装上防尘硅胶条。防尘硅胶条的大小和形状取决于前框的结构设计。组装后，这种方案不但能让触摸显示器有防尘性能还有一定的防渗水性能。如果前框将重新设计和开模，我们更推荐防尘硅胶条方案。



(Dust-proof rubber blade solution, 防尘硅胶条方案原理示意图)



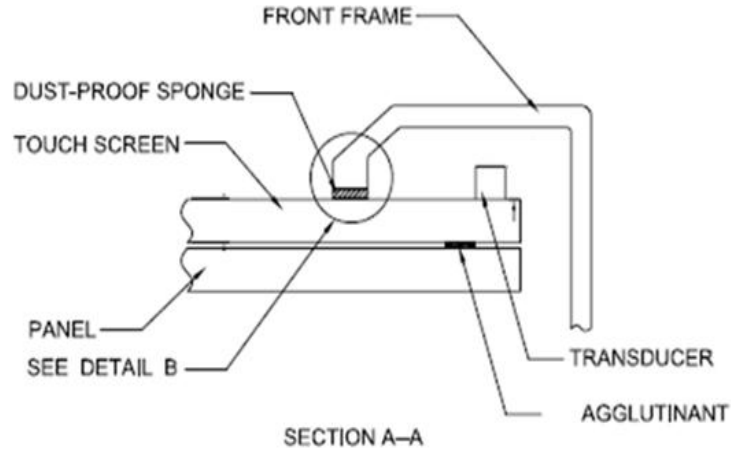
(Enlarged picture for dust-proof rubber blade solution, 防尘硅胶条结构放大图)

ii. The dust-proof sponge strip solution 防尘泡棉条方案

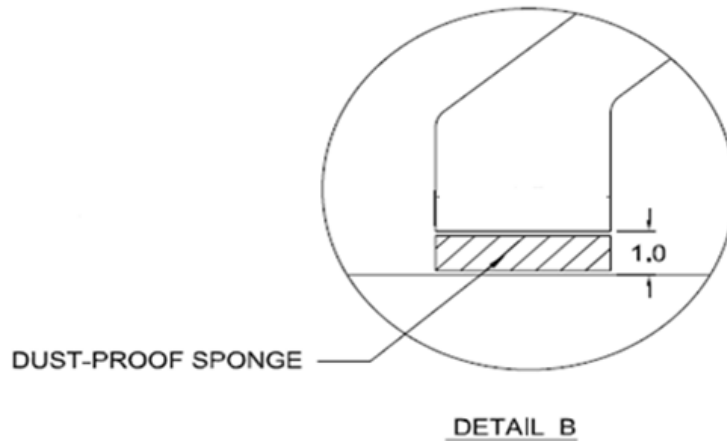
The schematic diagram and enlarged picture of this solution are shown in the two pictures below. This solution is usually used in most requirements for indoor applications such as office, hospitality and gaming. The compression amount of the dust-proof sponge strip is usually about 30% of its original thickness after assembly. In the case below, its thickness is 1.5mm before assembly. When finishing

the installation, about 1mm height space should be kept between the touch screen and the front frame.

下面两张图是防尘硅胶条方案的原理图和放大图。这种方案通常应用在室内环境，比如办公室，餐馆和游戏场所。完成组装后，防尘泡棉的压缩量大约是防尘泡棉原始厚度的 30%。下图所示的例子，防尘泡棉的初始厚度为 1.5mm，那么完成安装后，在前框和触摸屏之前的防尘泡棉应该保持大约 1mm 的厚度。



(Dust-proof sponge strip solution, 防尘泡棉条方案原理示意图)



(Enlarged picture for dust-proof sponge strip solution, 防尘泡棉方案结构放大图)

After assembly, if you find any touch function problem which may be caused by improper assembly or any other reasons, please feel free to contact our technical support by the contact information in the end of this Installation Guide.

安装完成后，如果你发现因任何安装过程不合理的操作或其他原因导致触摸功能故障的问题，请根据安装指导最后的联系信息联系我们的技术支持。

The END of the SOP!

## Appendix 附录

**Touch Screen Care and Cleaning 触摸屏的维护和清洁**

The touch screen requires very little maintenance. GeneralTouch recommends that you use a 50:50 isopropyl alcohol and water solution to clean the touch screen surface periodically. You can also use straight isopropyl alcohol or other **neutral** glass cleaner. If you use non-neutral cleaner, it may corrode the special surface treatment layer of touch screen and then cause the special surface treatment layer loses function. If the glass cleaner enters into the area of reflection stripes, the reflection stripes may be corroded and finally the touch function will be affected.

Apply the cleaner with a soft, lint cloth. **Always dampen the cloth and then clean the screen. Be sure to spray the cleaner onto the cloth, not the screen.** This method is helpful to control the cleaner consumption. If directly spraying the cleaner onto the touch screen, too much cleaner is likely to be sprayed, then the cleaner mixed with dust and dirt will seep into the area of reflection stripes through the clearance between the front frame and touch screen, thus it will affect the touch function.

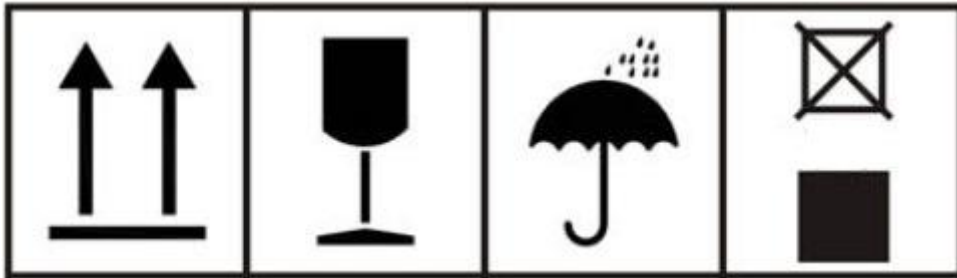
触摸屏只需要较少的维护，我司推荐定期使用 50:50 的酒精和水溶液清洁触摸屏玻璃表面，你也可以直接使用纯异丙醇或者其他**中性**玻璃清洁剂。如果使用非中性清洁液，可能会腐蚀屏体表面的特殊处理层，使特殊处理层功能失效。如果非中性清洁液流入条纹区，也可能造成条纹的腐蚀，最终影响触摸性能。

请使用软布料配合清洁剂进行清洁，**先将清洁剂喷到软布料上，注意不是喷到触摸屏上，再用软布清洁触摸屏。**这样会帮助控制清洁剂的用量。如果直接将清洁剂喷到触摸屏，很容易喷洒过多的清洁液，这样混有灰尘和脏污的清洁液就会通过前框和屏体间的缝隙渗入条纹区，影响触摸性能。

**Touch Screen Transportation 触摸屏运输**

GeneralTouch SAW touch screen are made by glass, so proper transportation is needed. Please pay attention to the following transportation warnings marked on the box:

吉锐声波触摸屏是由玻璃加工而成，因此需要采用合理的运输方式。请注意下面在包装箱上的运输警示标识：



When receiving the touch screens from the forwarder, please make sure to open the box and check the products before signing the receipt. If there is any abnormality, please kindly inform us at once.

当你从托运公司收到触摸屏，请首先开箱检验货物是否完好后再签署收据。如果您发现任何异常，请立刻告知我们。

**Contact Information 联系方式**

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**Contact Information of Technical Supports**

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**THE END!**