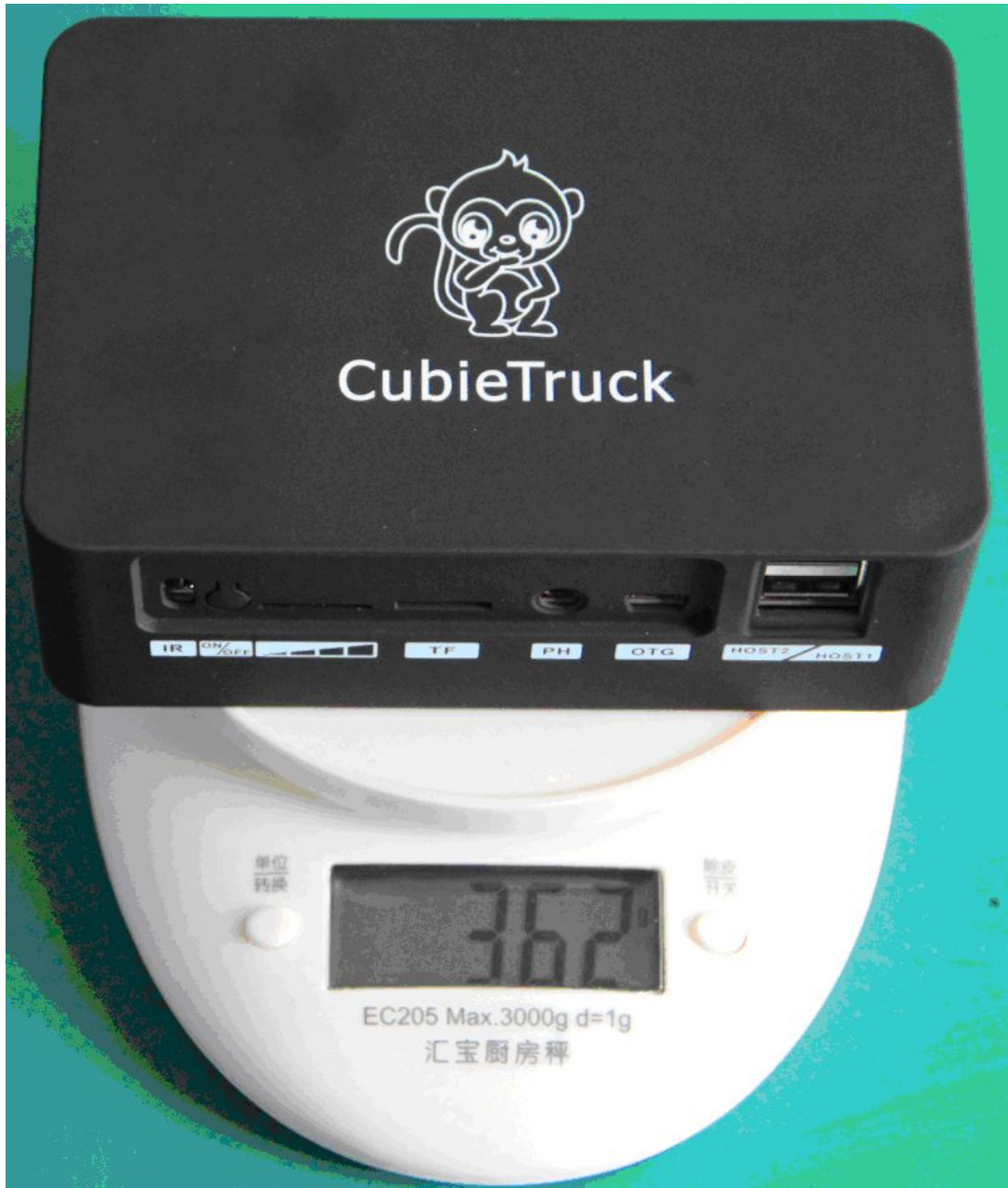


**Ewell Has Come,MiniPC be far behind**

**Ewell Case Installation Recording**



**<http://cubieboard.org>**



Cubietruck's Ewell case is the first one specifically designed for Cubieboard 3 and it makes Cubietruck become a high-end and classy commercialized MiniPC product. Ewell case can support a 5300 mAh lithium battery and a 2.5-inch mechanical hard disk drive or solid state drive. The entire product has a net weight of 362g and you can definitely feel its weight when you hold it in hands, which makes me fond of it very much. I have followed up the whole design process of this case. After two major modifications, we are basically satisfied with the third version. After a long process, we finally have the chance to present it to its fans. I have made several times of trial installation after I get the production version. Here is the recording of the whole installation process for your reference.

## I . Accessories and tools

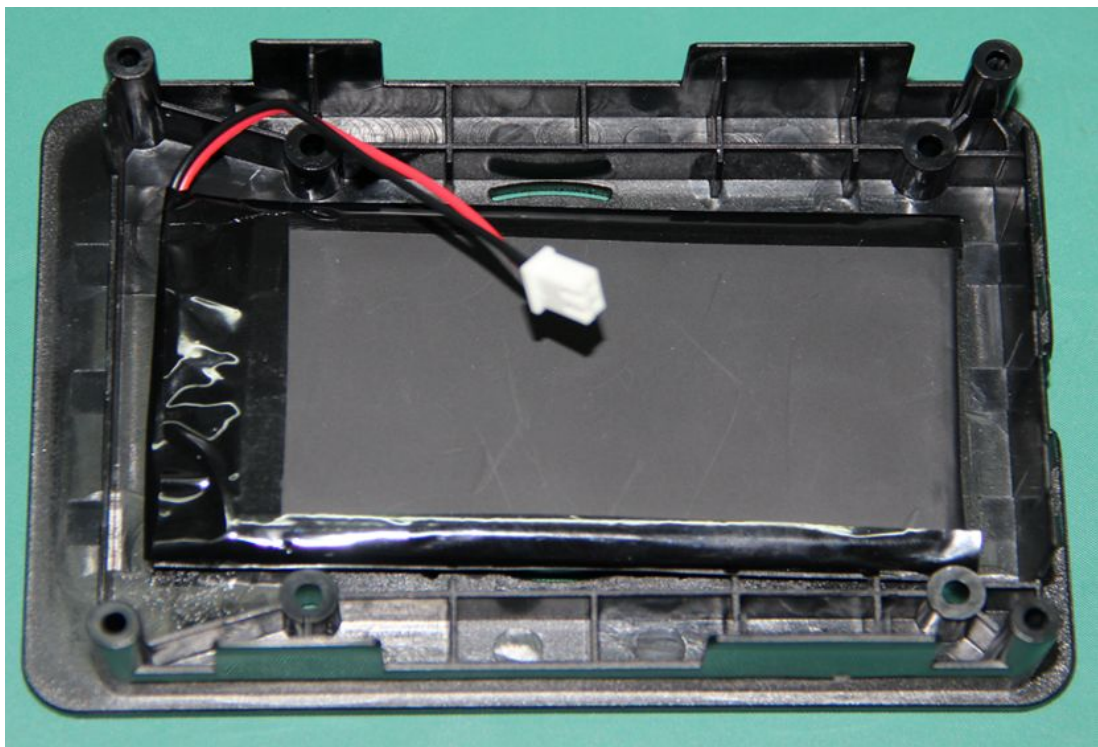
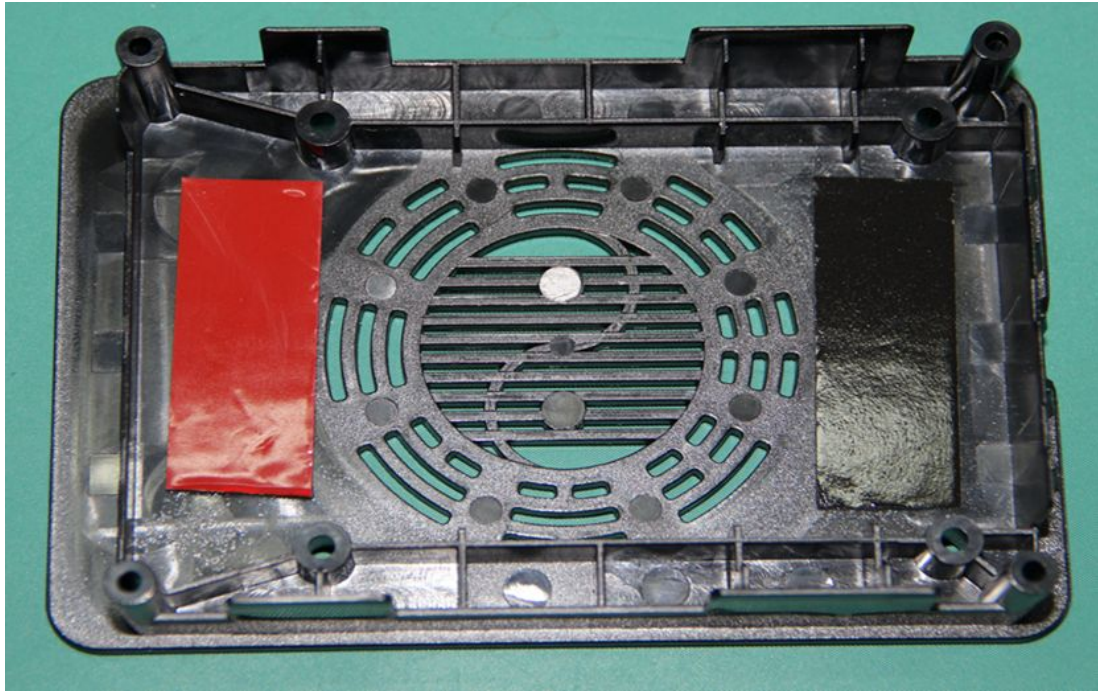


1. One piece of Cubietruck mainboard
2. One set of Ewell case
3. One 5300 mAh lithium battery, with 2.54mm of 2-pin plug, which can be made by yourself.
4. 2.5-inch hard disk drive (SSD is better due to its faster reading, better resistance to vibration, lower power consumption).
5. One SATA wire, which is included in the standard package of Cubietreck

Tools:

6. Prepare a roll of foam rubber to stick battery. Try to buy the product with better quality and stickiness. Usually you can buy it in the stationery shop.
7. 3-mm Phillips screwdriver. Remember the specification: 3-mm cross-shaped.

## II. Installation process recording



### **1. Stick the lithium battery**

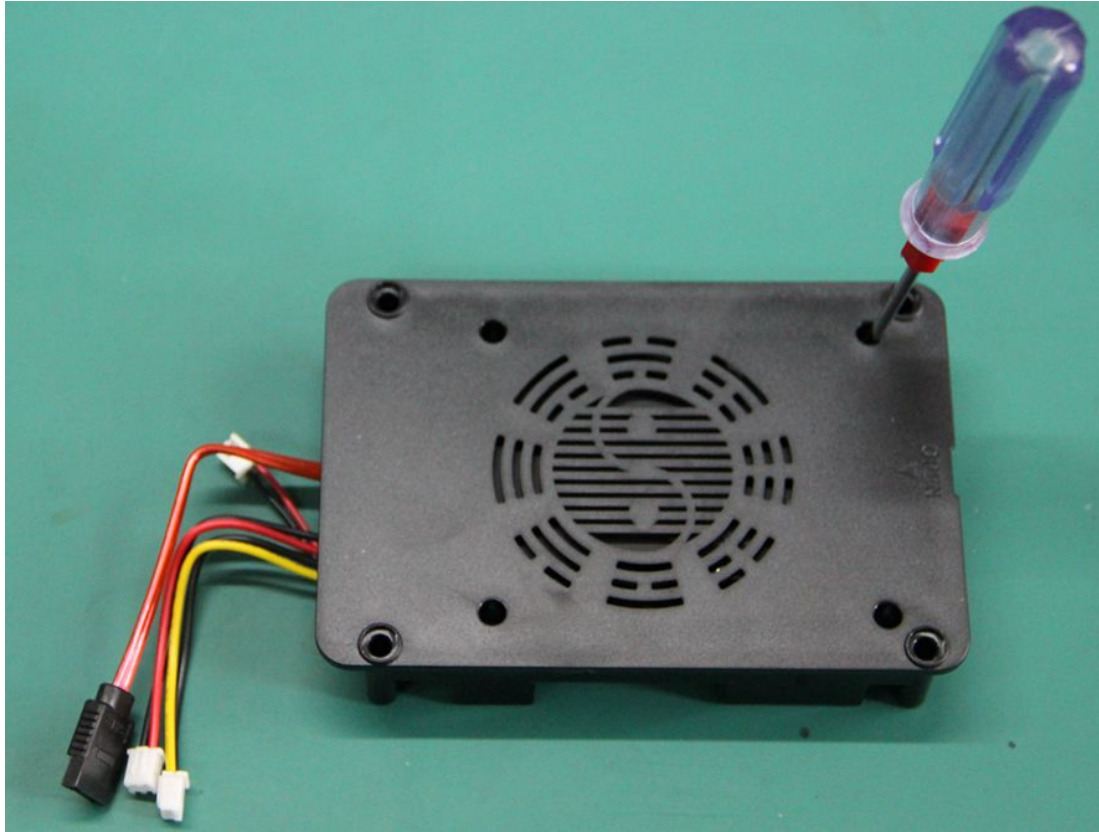
Use the scissors to cut two strips of foam rubber and attached them to the bottom of the Ewell case. You should control the length of the foam rubber properly. After attaching the foam rubber to the lithium battery, pay attention to the direction to stick the battery. Just follow the direction in the photo below.

Tip: If the battery is installed in the wrong direction, the battery cable will not be long enough, which will make it impossible to continue the installation.

## 2. Install the hard disk drive



It is relatively simple to install the hard disk drive. The Ewell case is designed with a 2.5 -inch hard disk drive bay and 3.5-inch hard disk drive is not supported. Put the hard disk drive at the right place as shown in the photos above and then lock it with short screws in the back, as shown below. The short screws are provided in the accessories package of the Ewell case.

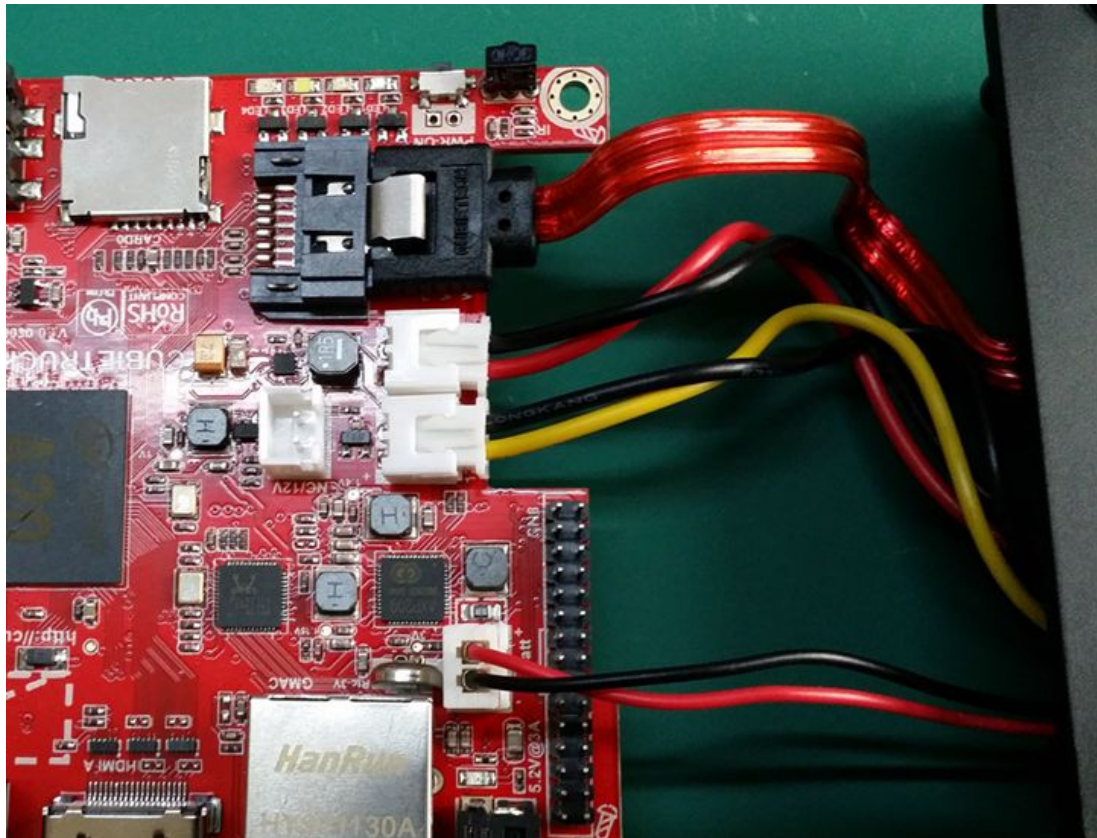


### **3. Install the button for resetting and updating**

Install the button according to way shown above. The conjoined button is placed on the top, which takes not much difficulty. Please note that the LED light guide bar may not be installed for the moment, which will not affect the normal use. If you have to install it, you may need to find someone else to help you to fix the light guide bar. Otherwise, the brute force may easily damage the keys on the PCB.

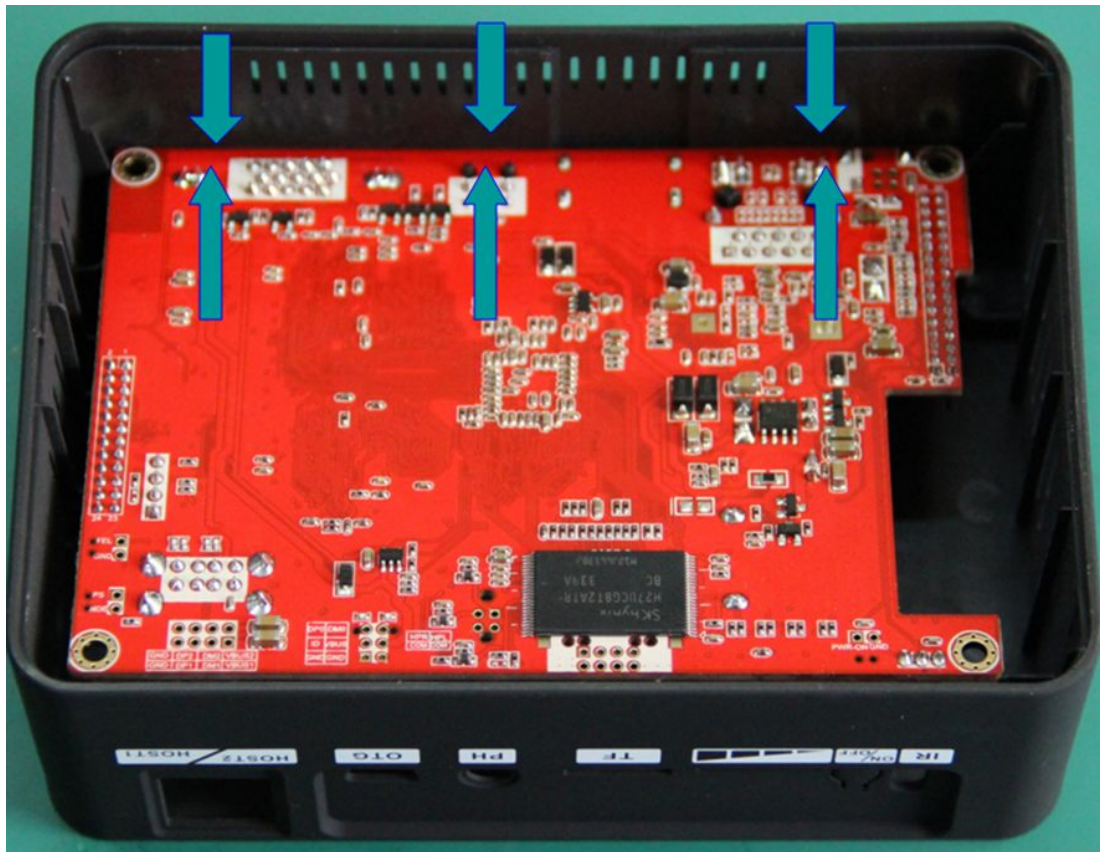
#### 4. Connect the battery and hard disk drive

Connect the battery, hard disk drive with the circuit board before putting the Cubietruck circuit board into the Ewell case. There are 4 sets of wires to be connected, as shown below: directly insert the SATA data cable into the corresponding black connector, the red and black 5V power cord into the middle 5V connector, yellow and black 12V power cord into the 12V connector below (this 12V power line virtually does not work in the 2.5 -inch hard disk drive, here we just put it in the right place only), red and black battery cable into the corresponding lithium battery socket.



#### 5. Install Cubietruck circuit board

The next step is to put the circuit board into the case, which I think is the step requiring highest skills. First, there is only one allowable way to place the Cubietruck circuit board into the Ewell case. Be sure to make the network port VGA side (the rear edge circuit board) get in first and the USB base side (the front edge of circuit board) get in last. Prior to pressing down the front edge of circuit board especially the USB base, ensure the board edges are in close contact with the interior of Ewell case with no gap, as shown by arrows in the following figure. If it is your first time to install, it is recommended to make a trial installation without connecting the battery and hard disk drive because it will become much more difficult with them connected.



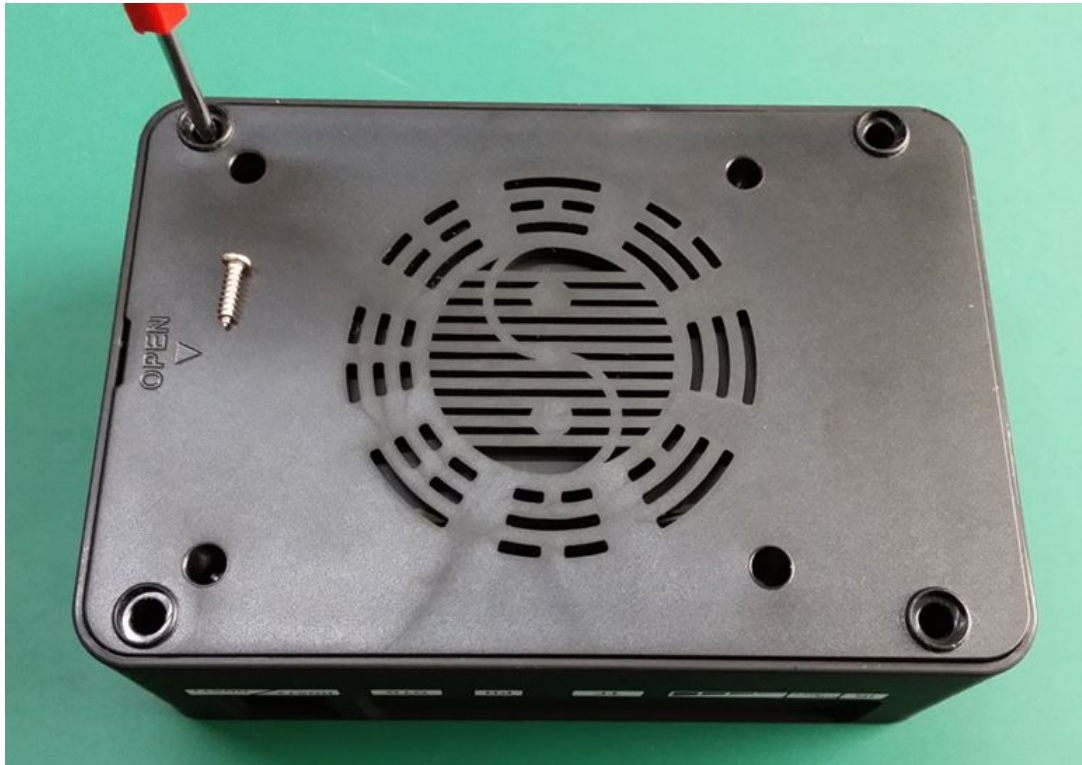
I finished the installation single-handedly, so I just put the relatively heavy bottom case on the table and put the lighter top case standing up in order to complete the installation. Once again, first fully put the rear edge of the board into the case, and then the front edge. Ensure the conjoined button is at the right place before putting the front side in. After the Cubietruck circuit board is completely in, check whether the each key is in normal state, and then check whether each interface is in the right position. If there is no problem, you can fix the cover with screws. Before fixing the cover, tidy up the wires and ensure they stay in good order in the case.





**6. Fix the rear cover with screws and attach the non-slip mat**

After the necessary check, you can fix the rear cover with screws. Use four slightly longer screws, as shown in the photos below:



After fix the screws, the final step is to attach the non-slip mat. The whole process takes about 20 minutes with a total of six steps. If it is your first time to install it, be careful and take your time. Do not damage the circuit board. If the power key doesn't work after installation, it may be caused by battery protection. You need to use DC5V power supply to break through the battery protection board.



Ewell 外壳来了，MiniPC 会远吗？

## Ewell 外壳安装实录



<http://cubieboard.org>



Cubietruck 的 Ewell 外壳是第一个专门为 Cubieboard3 设计的外壳，装上这个外壳让 Cubietruck 变成了一个高端大气上档次的商业化 MiniPC 产品。Ewell 外壳可以支持一个 5300mAh 的锂电池，一个 2.5 寸的机械硬盘或固态硬盘。整个产品净重 362 克，拿在手中还是有相当的分量，竟然让楼主我点儿爱不释手的感觉。

Ewell 外壳的设计过程楼主我全程跟进了，中间经过了 2 次修改设计，到了第 3 版才让我们基本满意，整个时间拖得比较长，现在才终于敢让它与各位爱好者见面。

量产版的外壳回来之后，楼主经过了多次试装，现将整个安装过程记录一下，供各位爱好者参考。

## 一、配件及其工具准备：



- 1、Cubietruck 主板一块
- 2、Ewell 外壳一套
- 3、5300mAh 的锂电池一块，带 2.54mm 的 2 针插头，这个电池爱好者们也可以自己 DIY 一个。
- 4、2.5 寸硬盘一个，如果是 SSD 固态硬盘效果更佳，主要体现在读取速度更快，抗震动更好，耗电更低。
- 5、SATA 线一条，这个配件在 Cubietruck 的标配包里有了

工具方面：

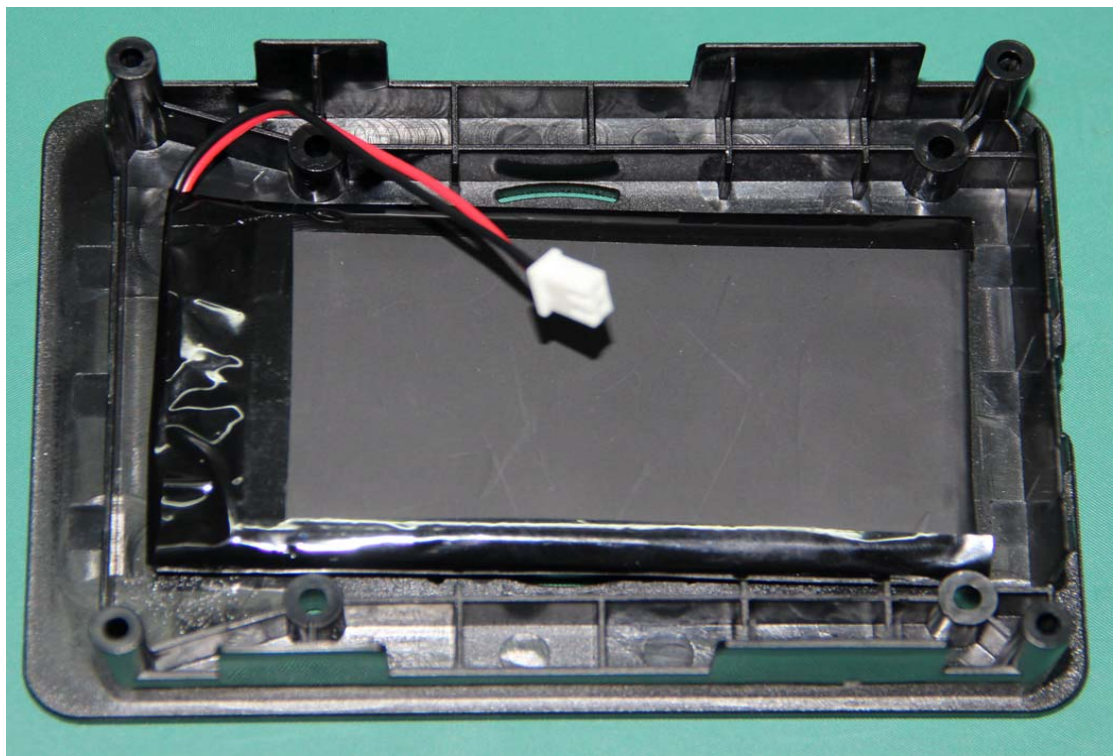
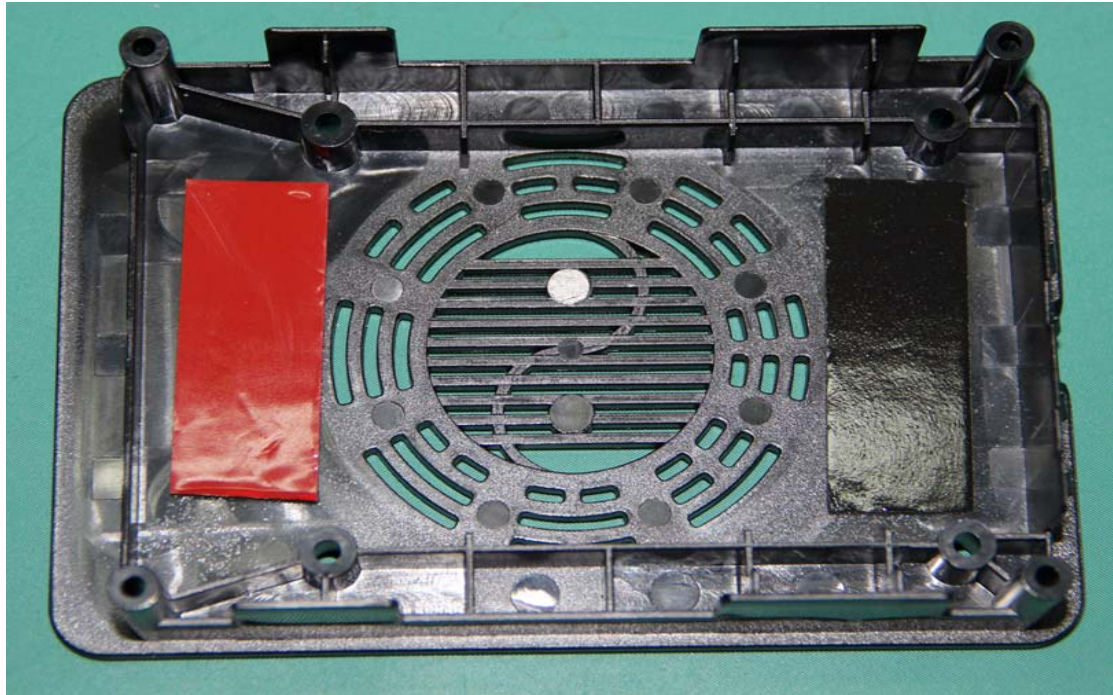
- 6、主要是准备泡沫胶一卷，用来贴电池用，尽量买质量和粘性好些的泡沫胶，一般在文具店里可以买到。
- 7、3 厘十字螺丝刀一把，在这里请爱好者注意，螺丝刀的规格是 3 厘十字。

## 二、安装过程实录

### 1、 粘贴锂电池

用剪刀剪2条泡沫胶，贴在 Ewell 外壳的底面壳上，泡沫胶的长度自己控制一下，尽量要剪得长度合适。贴好泡沫胶后把锂电池贴上，这时要注意一下电池粘贴的方向，按照下面照片的方向粘贴好即可。

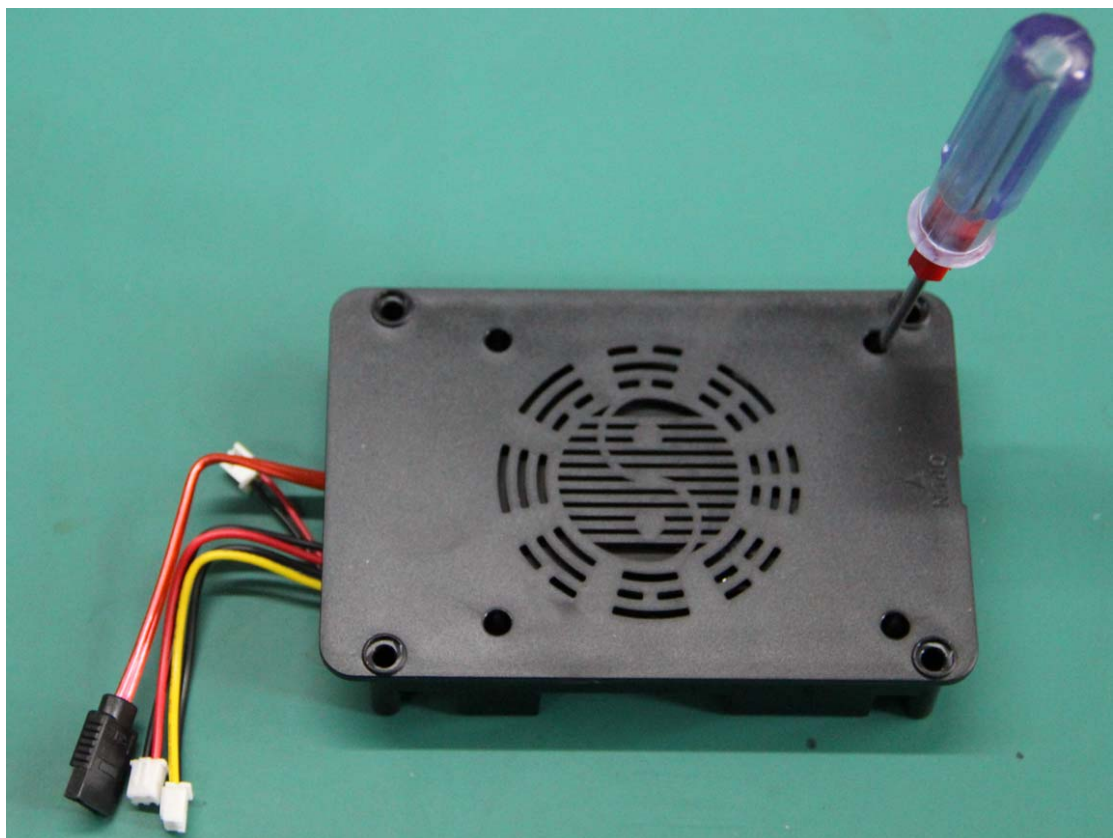
友情提示，如果电池粘贴方向错了，电池线会不够长，导致无法继续安装。



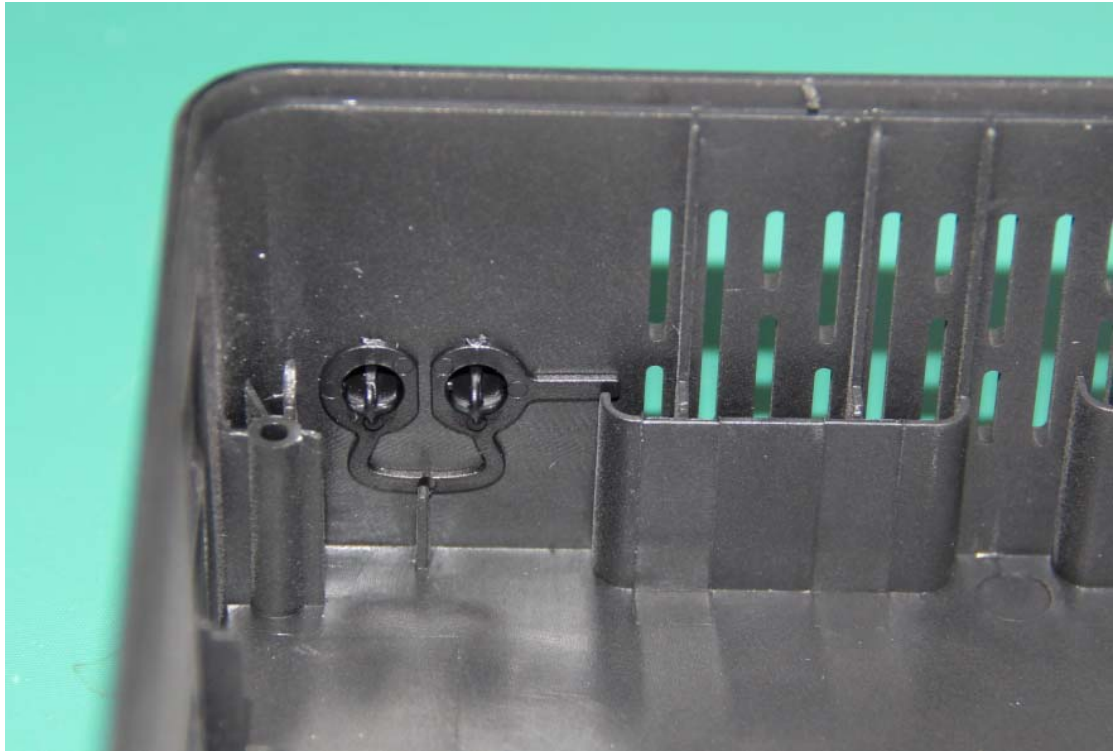
## 2、 安装硬盘



安装硬盘比较简单，Ewell 外壳设计了一个 2.5 寸的硬盘盘位，对于 3.5 寸的硬盘是不支持的。按照上图的方向放好硬盘，在背面用短螺丝锁住硬盘，如下图所示，装硬盘用的短螺丝在 Ewell 外壳的配件包里提供了。



### 3、安装复位键和刷机键的按钮

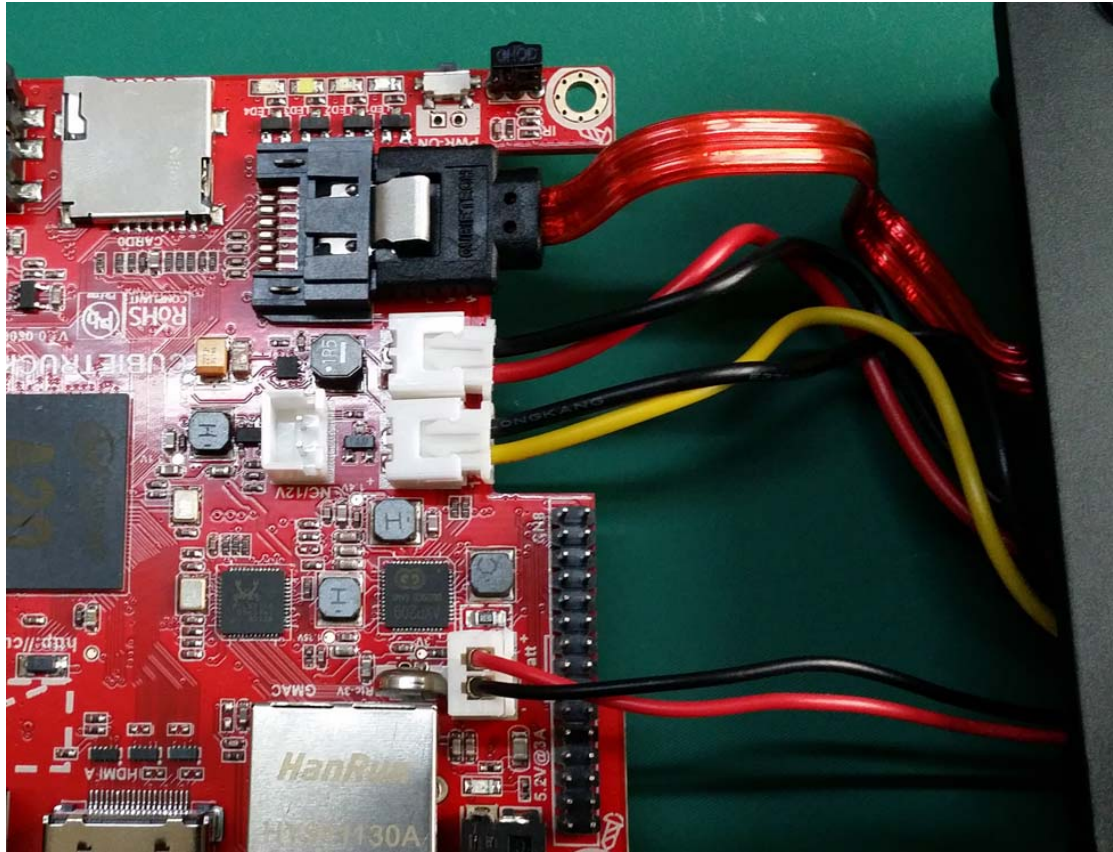


根据上图的方式安装好按钮，联体按钮是放置在上面的，无须非常吃力。在这里补充一条，LED 的导光条暂时可以不装，不影响正常使用。如果一定要安装的话，可能你需要找个帮手来帮你固定导光条，否则使用蛮力容易损坏 PCB 上的按键。



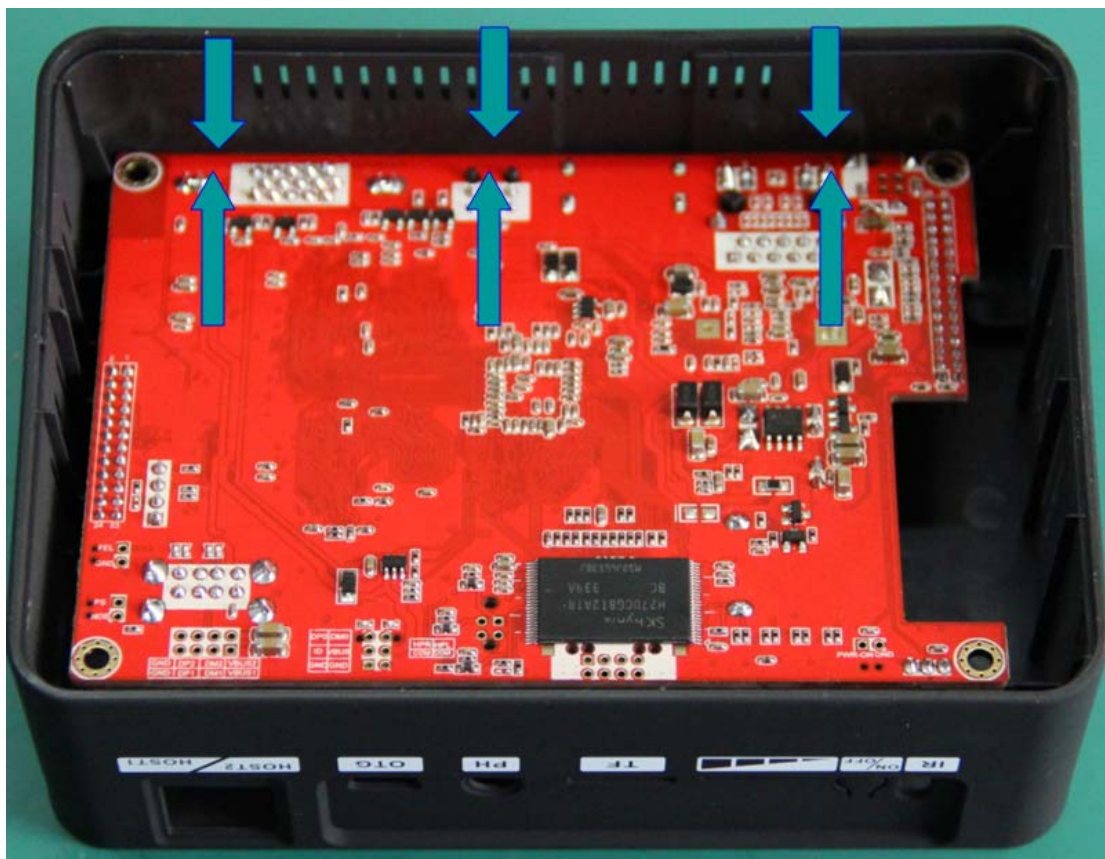
## 4、连接电池和硬盘

在把 Cubietruck 电路板放入 Ewell 外壳之前，要先把电池、硬盘与电路板连接好。要连接的一共有 4 组线，见下图：SATA 数据线直接插入相应的黑色连接器。红黑的 5V 电源线插入中间的 5V 连接器，黄黑的 12V 电源线插入下面的 12V 连接器（这组 12V 电源线在 2.5 寸硬盘中实际上没有作用，在这里接上只是让它就位），红黑的电池线插入对应的锂电池插座。



## 5、安装 Cubietruck 电路板

接下来就是把电路板放入外壳中了，楼主认为这步是技巧性最高的一个步骤了。首先要告诉大家，Cubietruck 电路板装入 Ewell 外壳只有一个姿态和方向可行，一定要网口 VGA 这边（电路板后沿）先进入，USB 座子这边（电路板前沿）最后卡下去。在将电路板前沿特别是 USB 座子按下去之前，务必要保证板边和 Ewell 外壳内部紧密接触，不能留下间隙，如下图的箭头所示。如果大家是第一次安装，建议先不要连电池和硬盘来试装，带上电池和硬盘后安装的难度会增加少许。

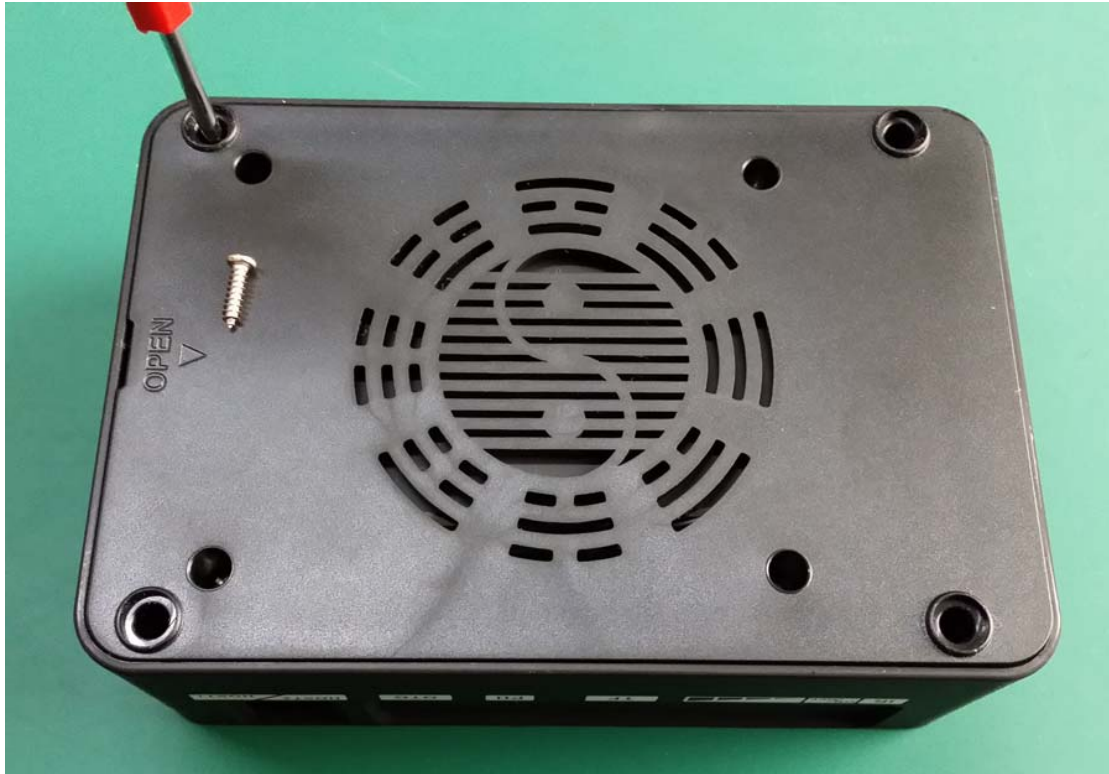


由于楼主是单枪匹马完成安装的，我是把比较重的底壳放在桌上，把比较轻的面壳立在桌上而完成的。再次强调一点，要把接口多的电路板后沿完全插入面壳后，再卡入电路板前边，在卡入之前要保证壳体按键是就位的。Cubietruck 电路板完全放入之后，检查一下各个按键是否正常可按，再检查一下各个接口是否正位，如果没有问题就可以封盖上螺丝了，封盖之前要整理一下那几条线材，保证他们在盒内比较顺畅。



## 6、上后盖螺丝、贴防滑脚垫

封好后盖之后，经过检查就可以上螺丝了。螺丝是用那四颗稍长的，见下图：



上完螺丝后，最后一步就是贴防滑脚垫。整个过程大概 20 分钟，一共 6 个步骤。初次装壳的爱好者不要着急，不要损伤了电路板。如果装好后按电源键不开机，可能是电池保护了，需要用 DC5V 供电冲开电池保护板。

