

Maker Box with Cooling Fan for Raspberry Pi 4 Model B



Instruction Guide

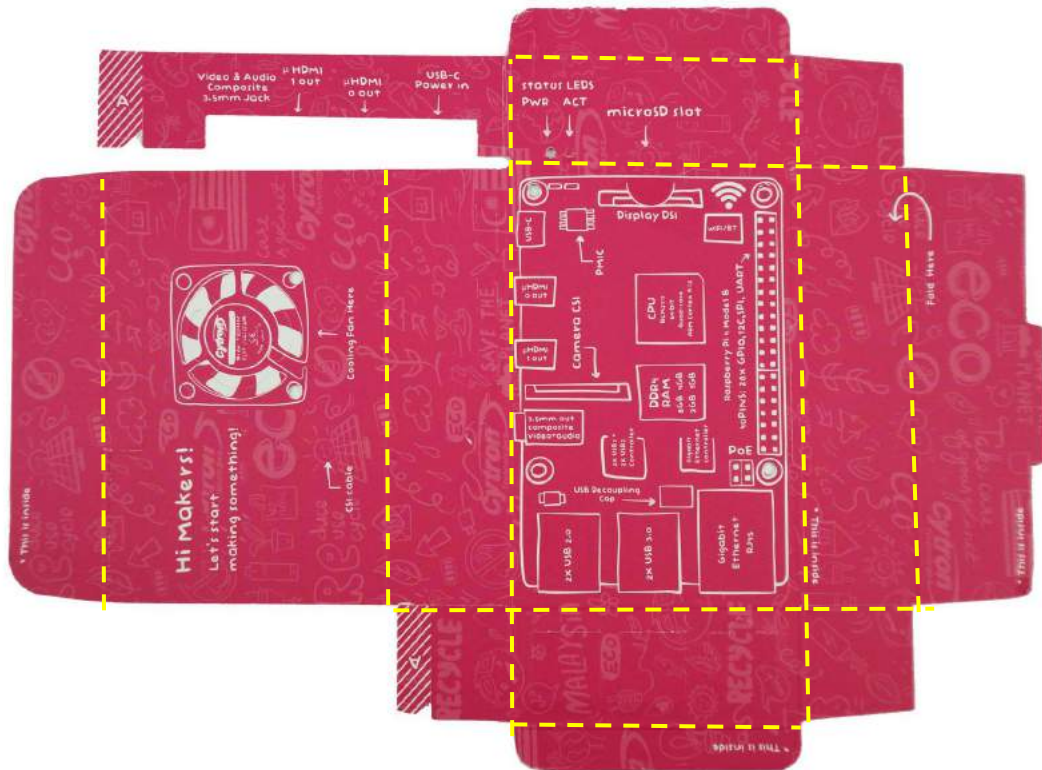


Note: There might be extra rivets :)

Step 1

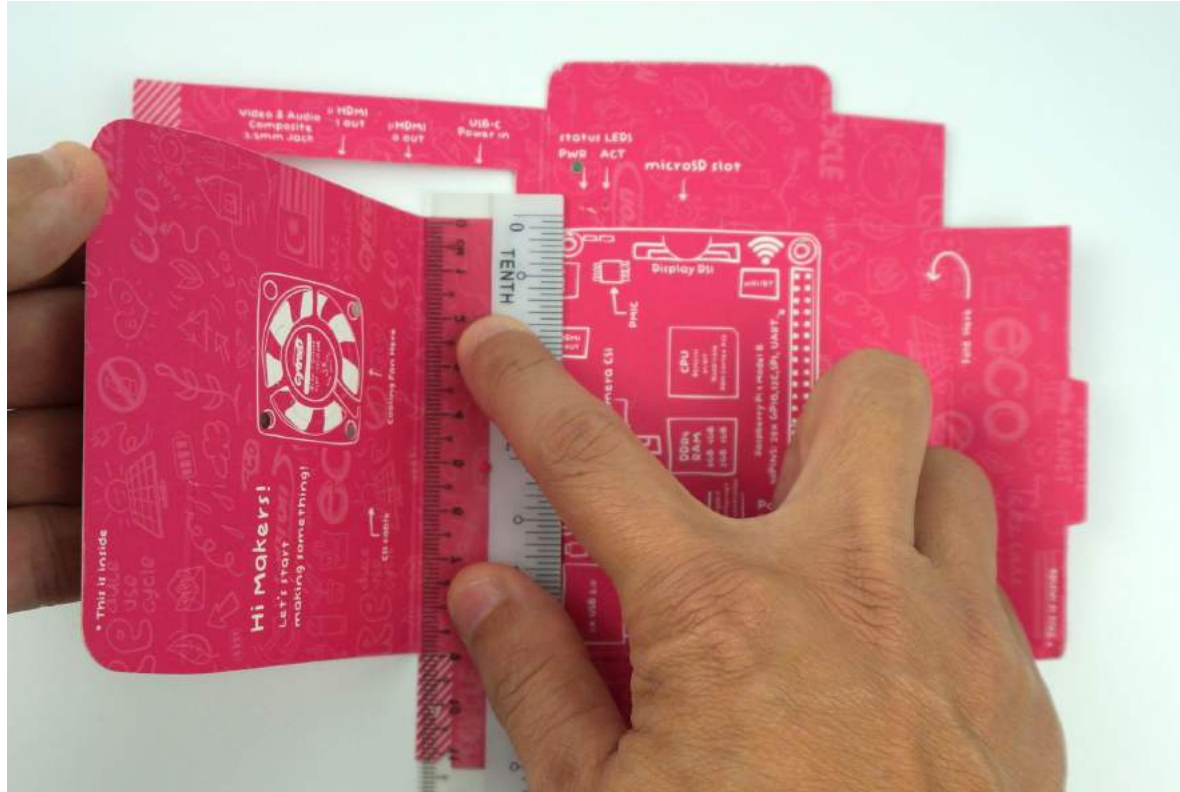
Fold the sides of the box along the score lines, the yellow dotted lines in image below. Some sides are already folded for packaging.

Note: Make sure the bottom of the box (**green** color) is facing down when you are folding the box.



Step 2

It is recommended to use a ruler to achieve a perfect edge for the box.



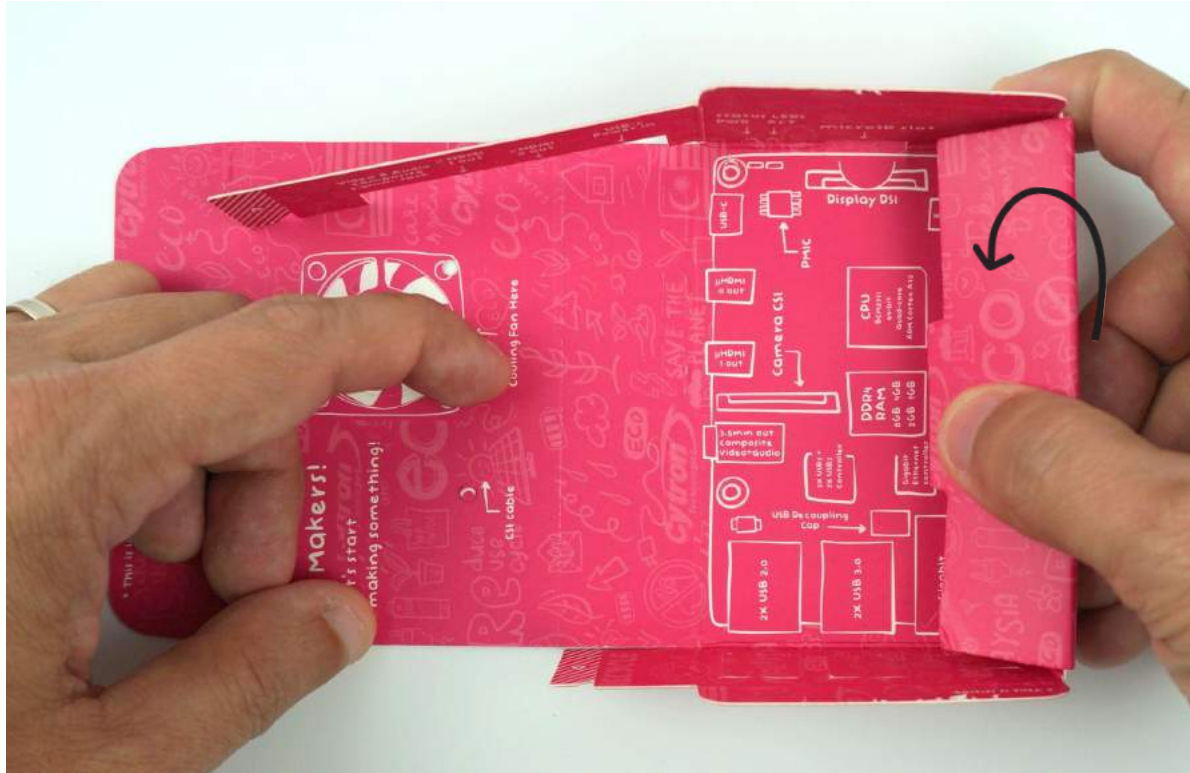
Step 3

Fold up the side of the box that shows “**microSD slot**” and “**Status LEDs**” and the other side of the box that has openings for USB and Ethernet ports. And fold the right and left flaps inwards as shown in the image below.



Step 4

Then fold over the flaps as shown in the image below.



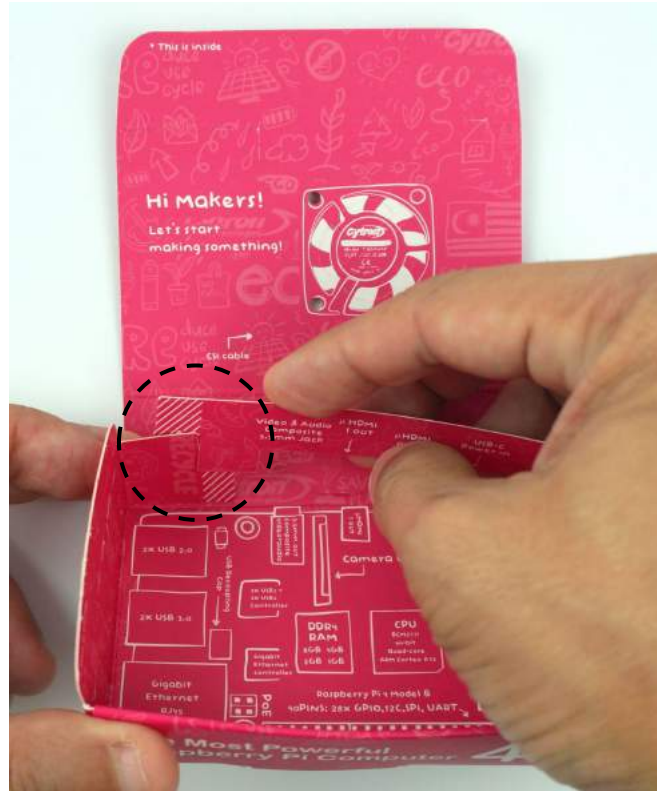
Step 5

Insert the tab into the slot to hold it in place as shown in the image below.



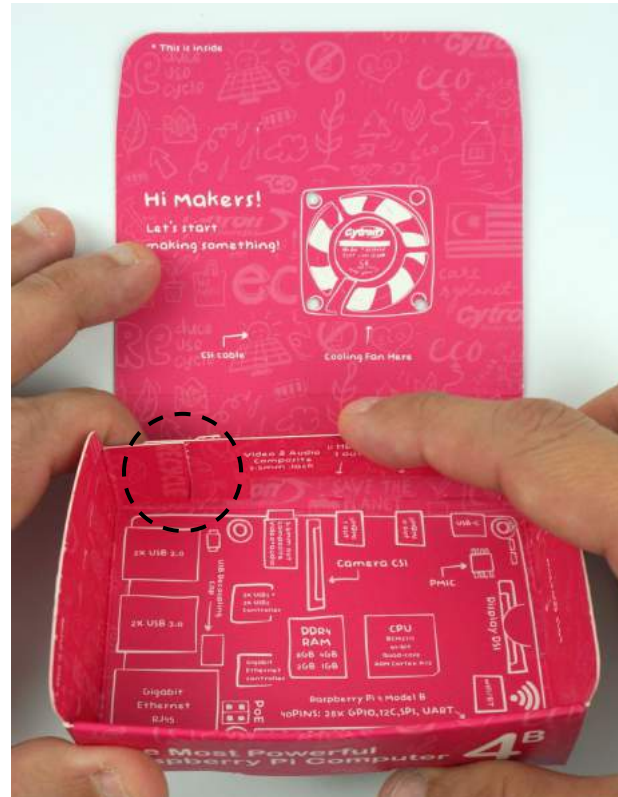
Step 6

Fold the other right and left flaps inwards and slot the ends (marked "A") together as shown below.



Step 7

The ends will overlap after they are firmly slotted together to form the inner side of the box.



Step 8

You may now poke out the openings and pre-cut holes that are necessary. Once the Raspberry Pi board is installed, it will be tricky to do so. The openings should be poked from the outer box. You can start with the microSD card opening.

Note: Be careful not to peel off the graphic printing of the box.



Step 9

The box should look like the image below after the microSD opening is removed.



Step 10

Now, detach the perforated parts on the side to create openings for the USB and Ethernet (RJ45) ports. Of course, you can leave these intact if they will not be used. The box should look like the image below after the USB and Ethernet openings are removed.



Step 11

Next, poke out the perforated holes for “USB-C Power in” and “μHDMI 0 out”. You can leave the perforated parts for micro HDMI 1 and 3.5mm jack intact if they are not used.



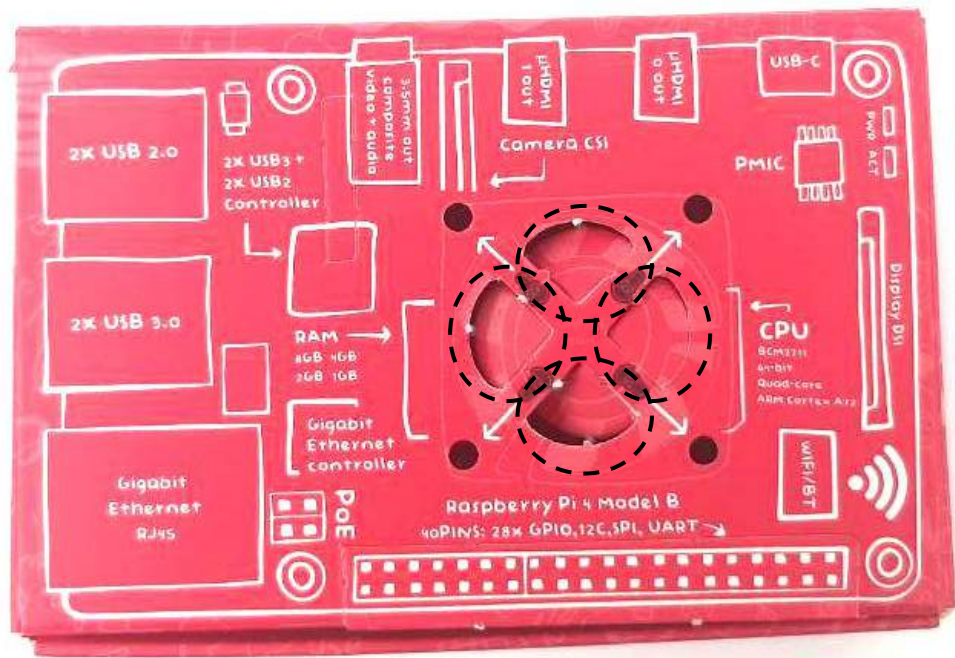
Step 12

The box should look like the image below after the “USB-C Power in” and “μHDMI 0 out” openings are removed.



Step 13

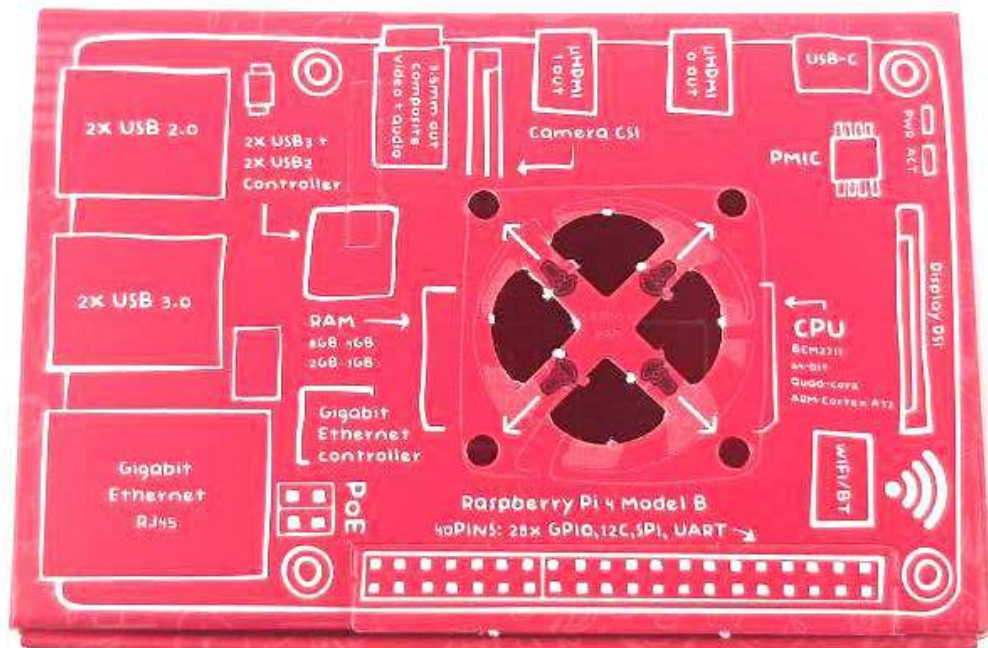
Next, let's prepare for the cooling fan installation. Gently press to remove the perforated parts for the fan ventilation.



Note: Be careful not to peel off the graphic printing of the box.

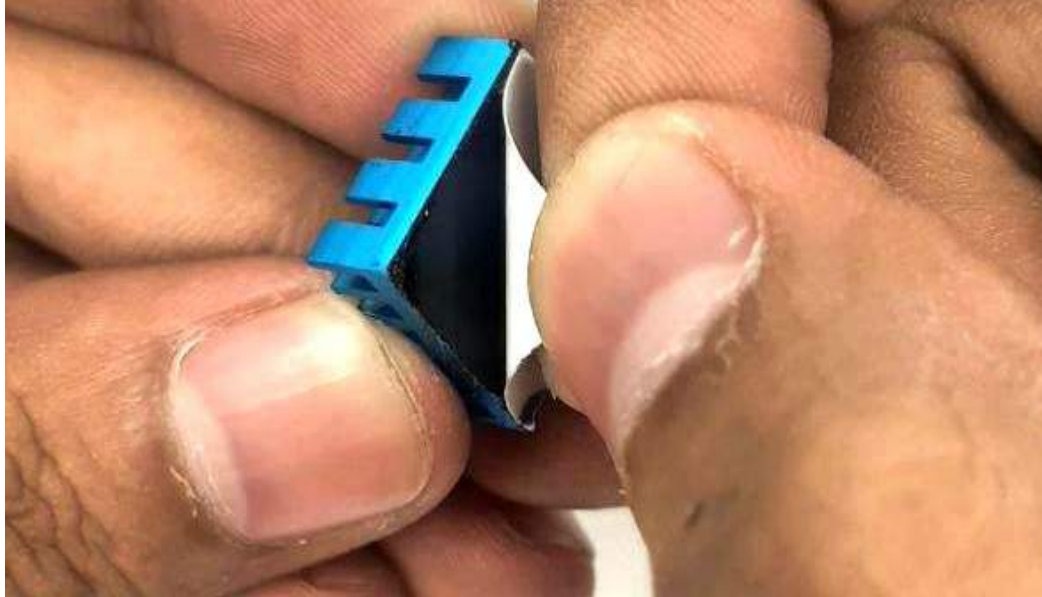
Step 14

The box will look like this after the cooling fan ventilation openings have been removed.



Step 15

Next step is to peel off the protective sheet on the heat sinks.



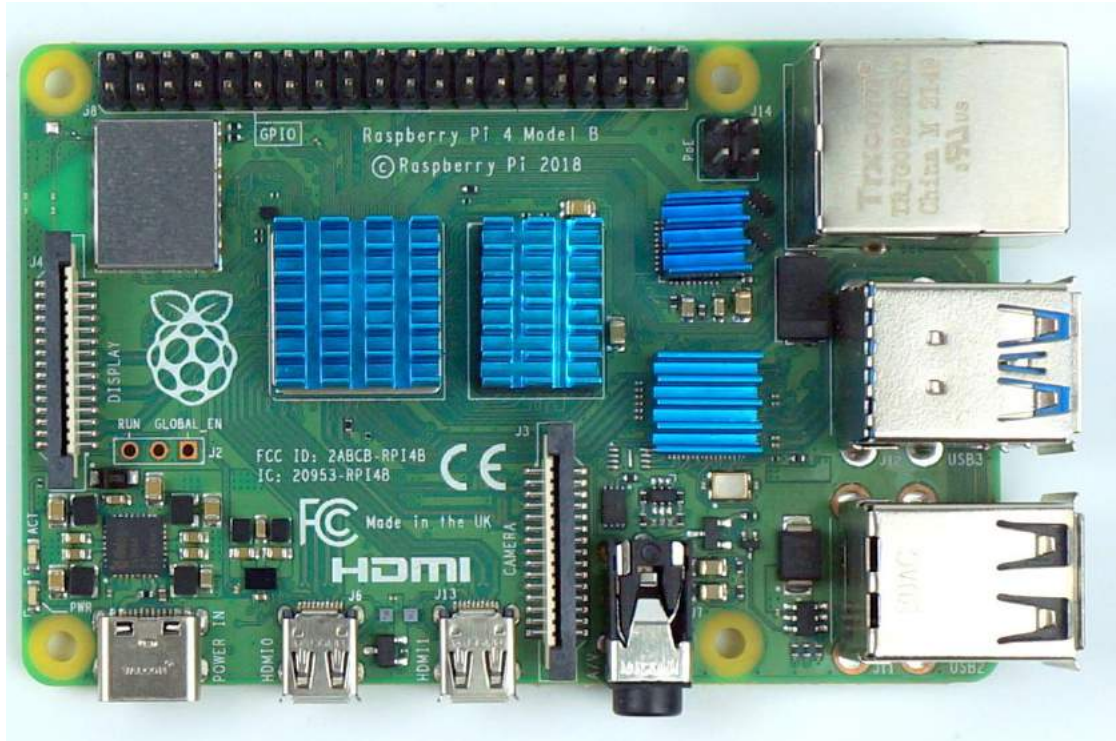
Step 16

If it is too hard to peel off, try to use a tweezer.



Step 17

Attach all the heatsinks on the Raspberry Pi 4 Model B board accordingly.



Step 18

Place the Raspberry Pi 4 Model B and the cooling fan as shown in the image. We should mount the Raspberry Pi 4 Model B first.



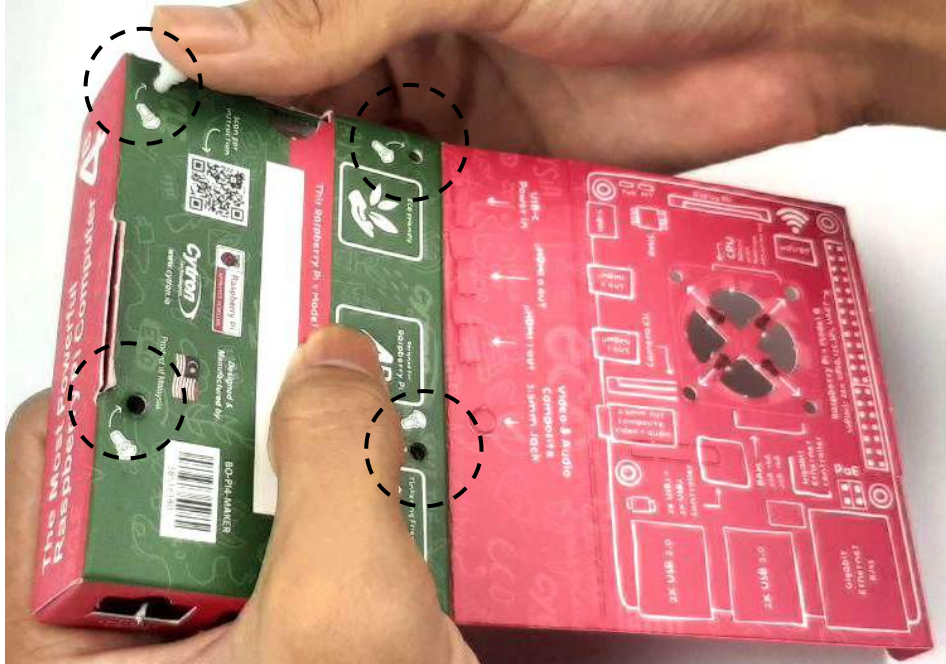
Step 19

Place the Raspberry Pi 4 Model B board inside the box, hold and flip it over. We need to insert the rivets from the bottom of the box.



Step 20

Then insert the **WHITE** rivets through the 4 mounting holes and press firmly to secure the Raspberry Pi 4 Model B board in place.



Step 21

After inserting all 4 **White** rivets, you will get this:



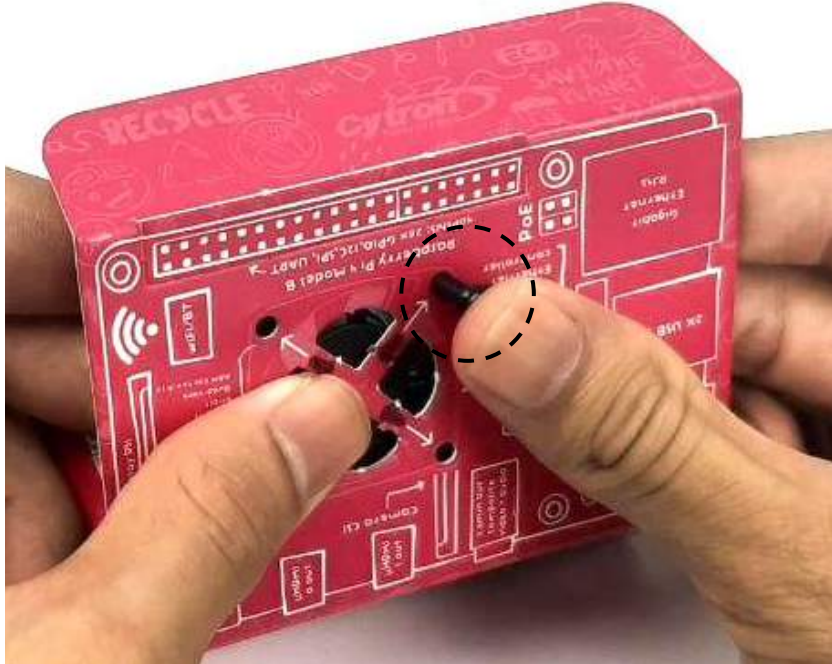
Step 22

Next, we need to mount the cooling fan using the **BLACK** rivets. Please hold the cooling fan as shown - make sure the wires of the fan are close to the Raspberry Pi board and the logo of the cooling fan is facing you.



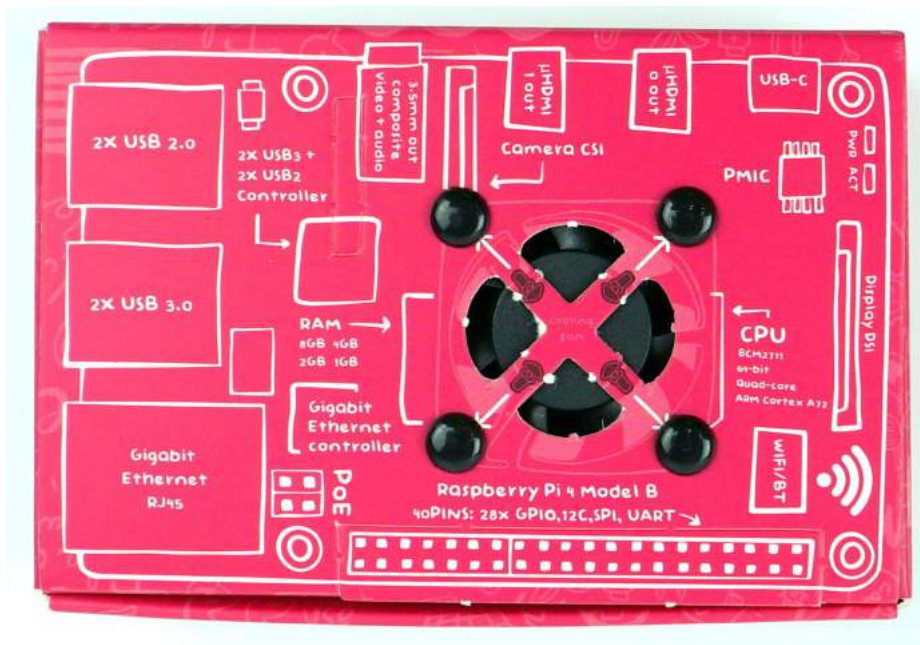
Step 23

Align the cooling fan mounting holes with the 4 holes on the maker box. Insert **BLACK** rivets (from the top of the cover) and press firmly to secure the cooling fan in place.



Step 24

After inserting all 4 BLACK rivets, you will get a box as shown.



Step 25

Finally, wire up the cooling fan. Please connect:

- **RED** wire to pin 4 (5V) of the GPIO headers
- **BLACK** wire to pin 6 (Ground) of the GPIO headers



3V3 Power	1	2	5V Power
GPIO2 SDA3, I2C	3	4	5V Power
GPIO3 SCL3, I2C	5	6	Ground
GPIO4	7	8	GPIO14 UART0_TXD
Ground	9	10	GPIO15 UART0_RXD
GPIO17	11	12	GPIO18 PCM_CLK
GPIO27	13	14	Ground
GPIO22	15	16	GPIO23
3V3 Power	17	18	GPIO24
GPIO10 SPI0_MOSI	19	20	Ground
GPIO9 SPI0_MISO	21	22	GPIO25
GPIO11 SPI0_SCLK	23	24	GPIO8 SPI0_CS0_N
Ground	25	26	GPIO7 SPI0_CS1_N
ID SD IO ID EEPROM	27	28	ID SC IO ID EEPROM
GPIO5	29	30	Ground
GPIO6	31	32	GPIO12
GPIO13	33	34	Ground
GPIO19	35	36	GPIO16
GPIO26	37	38	GPIO20
Ground	39	40	GPIO21

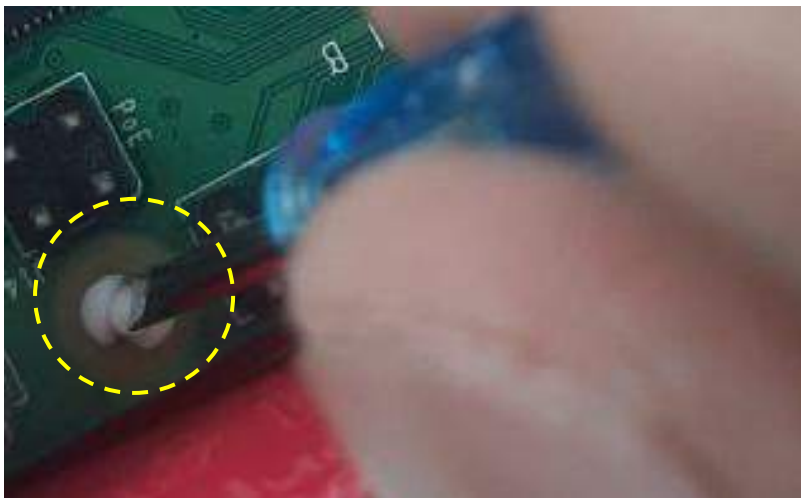
Done!

You can now power up the Raspberry Pi 4 Model B in the box, Enjoy tinkering with it.



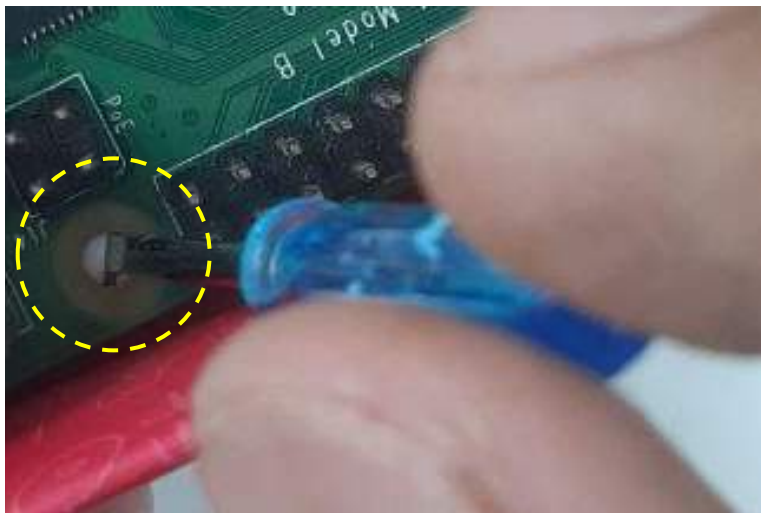
Removing Rivet - Step 1

If you need to remove the rivets, please get a small flat screwdriver (or something pointy), push the middle of the rivet from inside. This method applies to both WHITE and BLACK rivets.



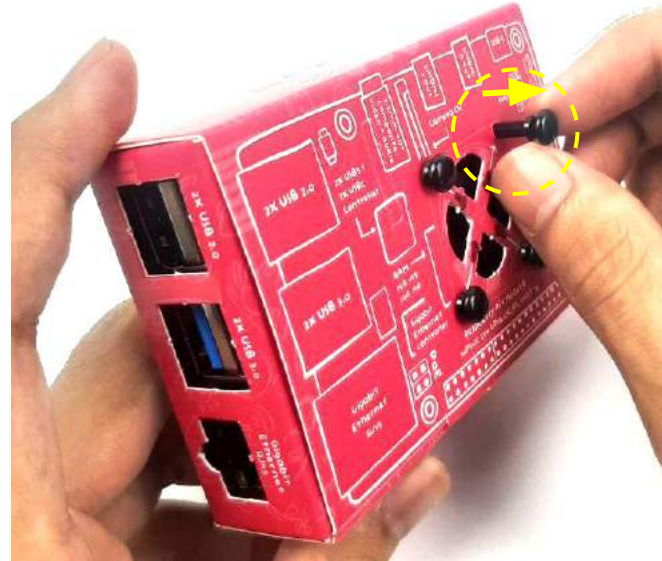
Removing Rivet - Step 2

Push the center of the rivet until it loses its grip.



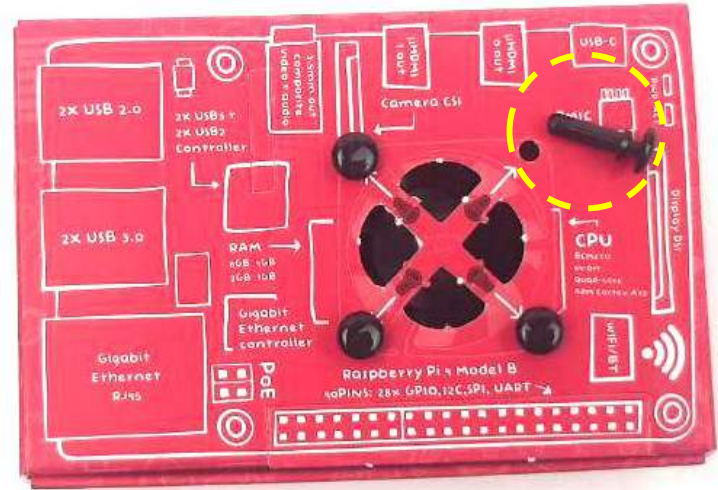
Removing Rivet - Step 3

Lastly, pull out the rivet from the other side of the box.



Removing Rivet - Step 4

Lastly, pull out the rivet from the other side of the box.



Thank You

