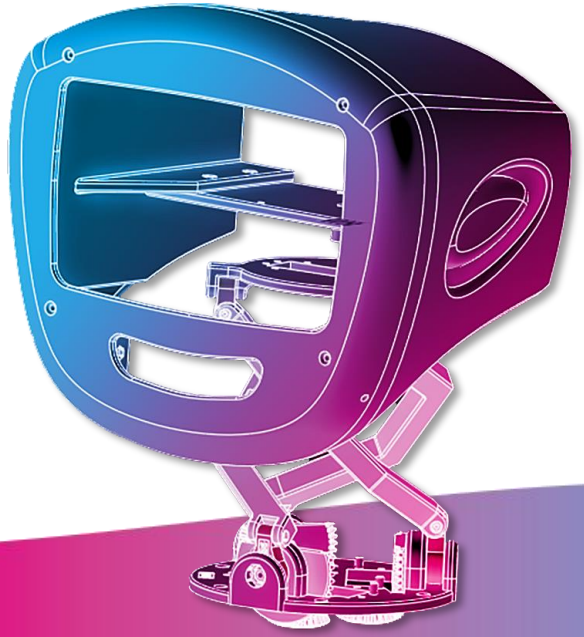
pib

How to build your robot

www.pib.rocks/build

assembly instructions for:

HEAD



You
Print
Build
Develop

your own robot!

Printable parts

Pib´s head consists of **2 printable parts** and is assembled in **15 steps.**

In order to construct the head, you will need to print the parts as seen in the table and also first assemble the neck part.

Please note: For better readability we use the abbreviations in the tutorial: A01 instead of A01-Face.

Printable parts
A01-Face
A03-Face_Plate

Non-printable parts

You will also need the following non-printable parts from our pib.Box Master (please not: Raspberry Pi is not included in the box.)

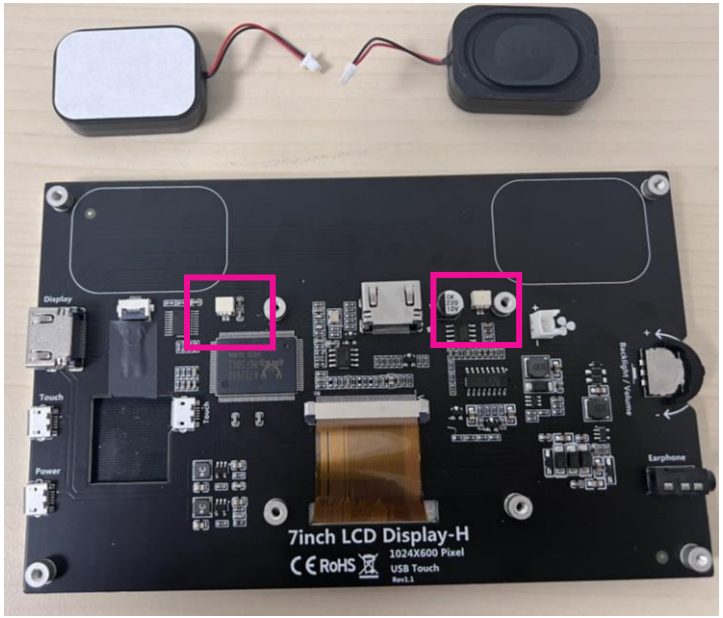
If you do not have it yet, you can buy in our shop https://shop.pib.rocks

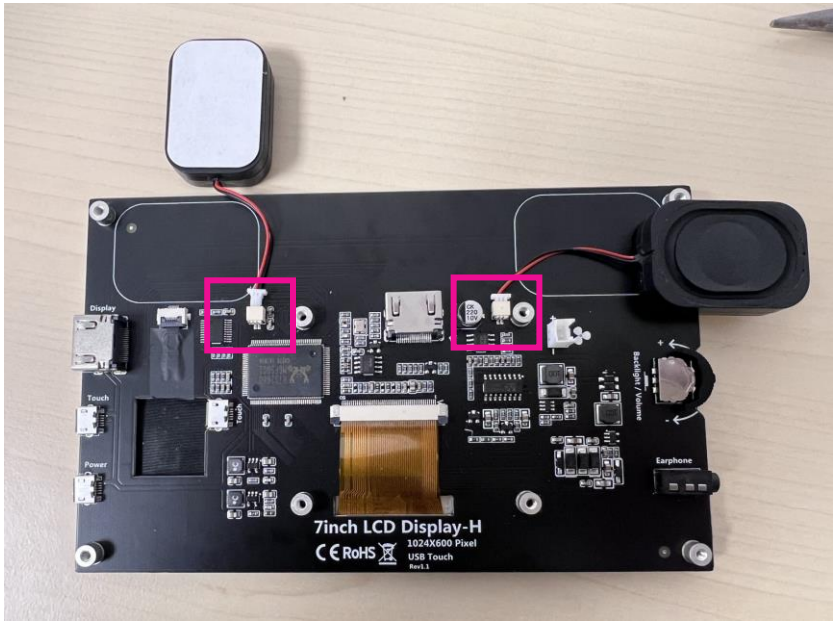
Non-printable parts
2 x **S04** 10mm screws
4 x **S06** 16mm screws
4 x **S01** M3 nuts

Non-printable parts
E01 Raspberry Pi
E02 TinkerForge HAT
E04 OAK D-Lite Camera with screws, distancer etc.
E05 LCD display
E10 Speaker_right
E11 Speaker_left
E12 Microphone
2 x bricklet cable
1 x USB to USB-C cable
90 cm black/red cable

Step 1

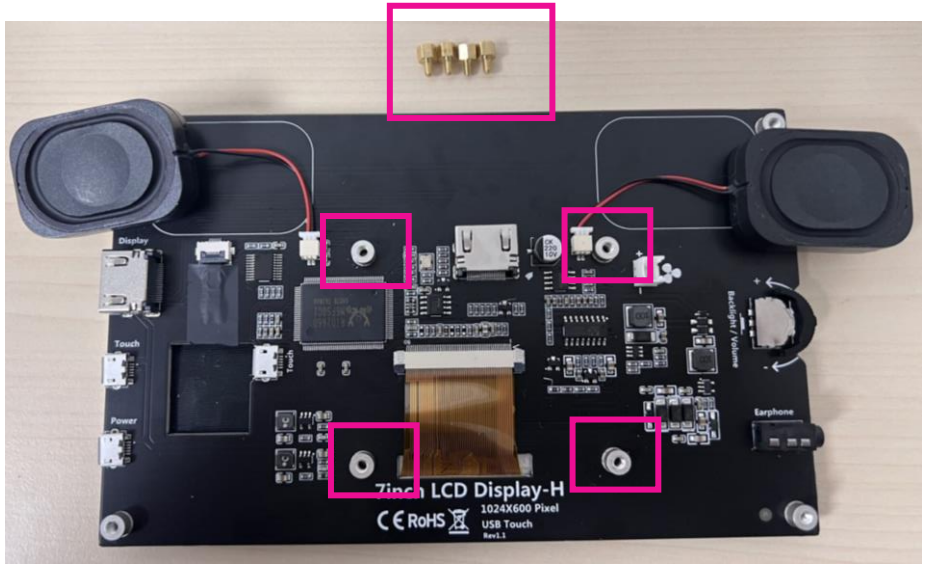
Insert speakers E10 and E11 (part of the screen package) through the shown spots in E05 LCD screen.

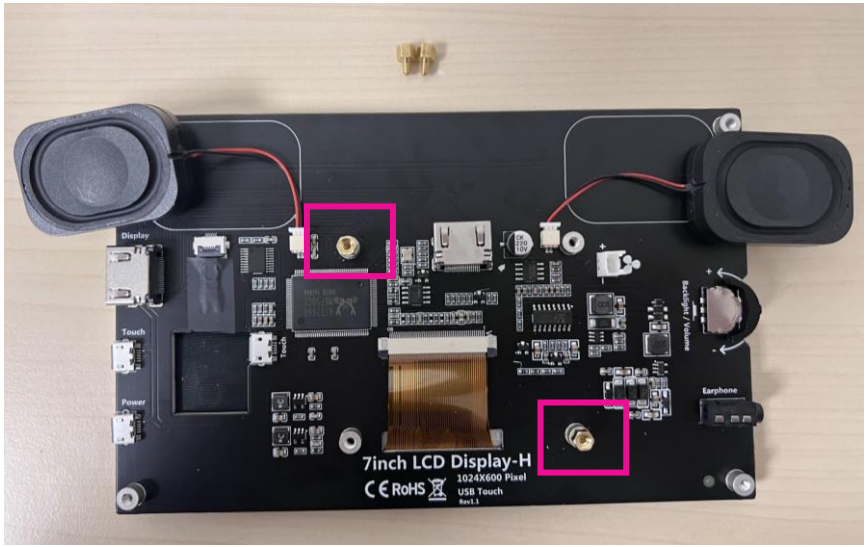




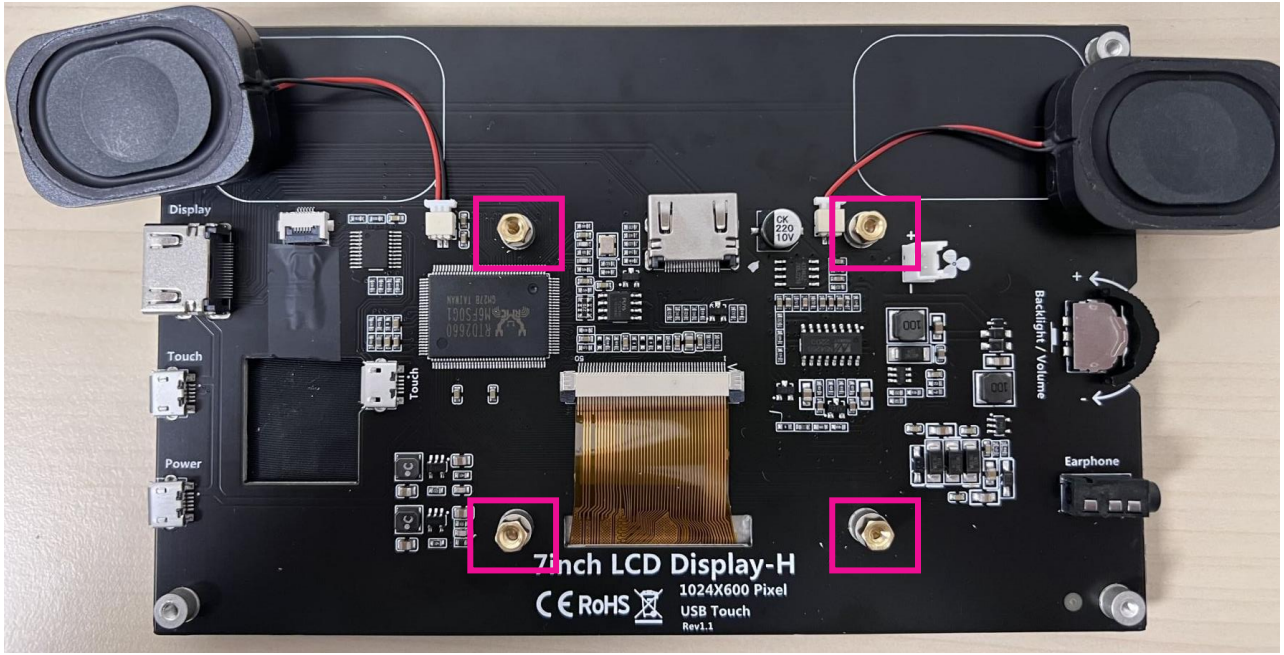
Step 2

Insert 4 x M2.5 distancers (part of the screen package) in the shown spots in LCD screen.



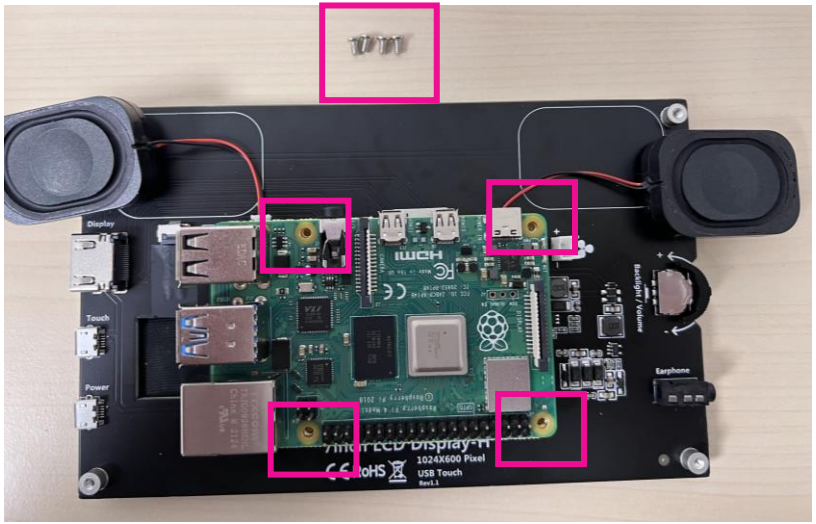


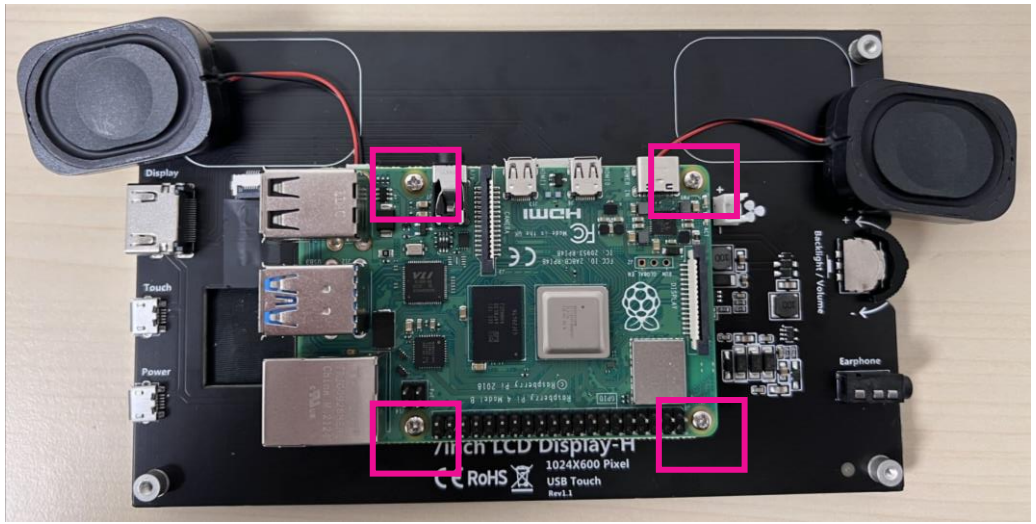
Step 2 - Continued



Step 3

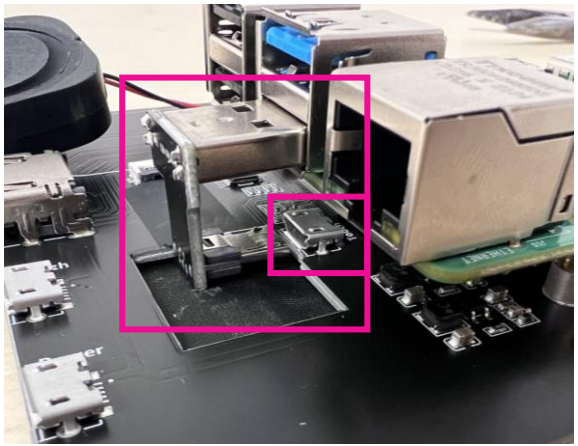
Place a Raspberry Pi on top of the LCD screen and fix it with 4 x M2.5 6mm screws (part of the screen package).

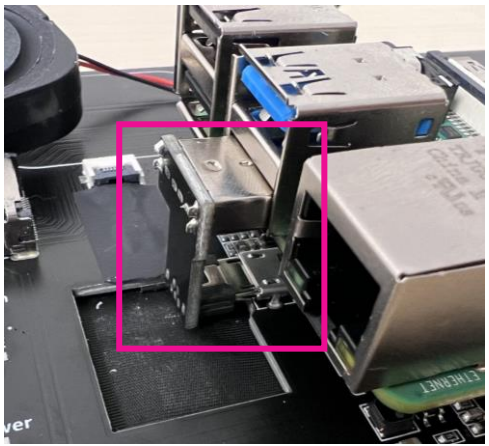




Step 4a

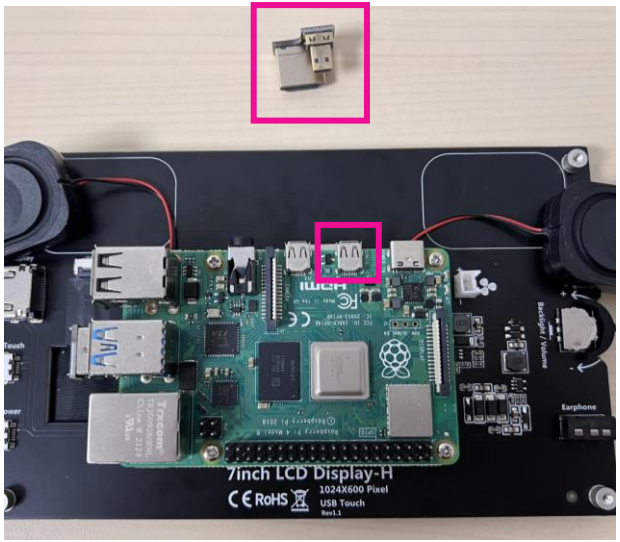
Connect Raspberry Pi with LCD screen through a “Micro USB to USB”-adapter to enable touch.

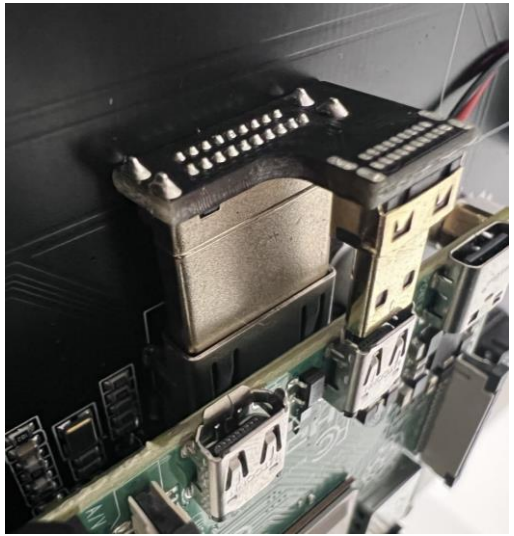


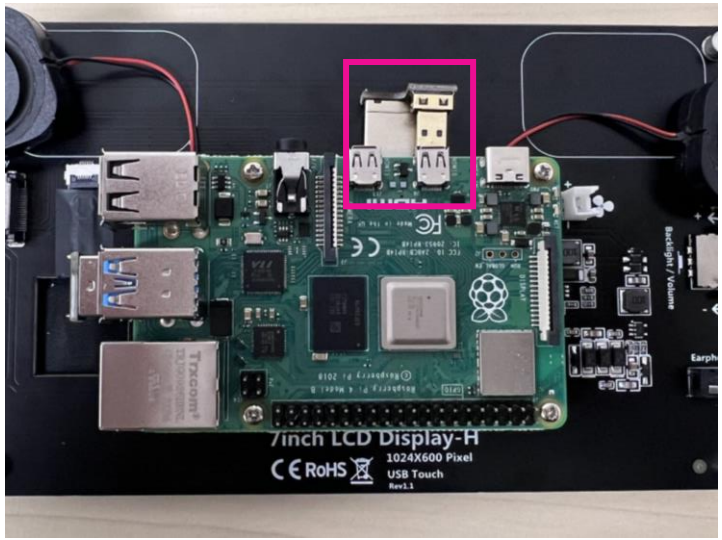


Step 4b

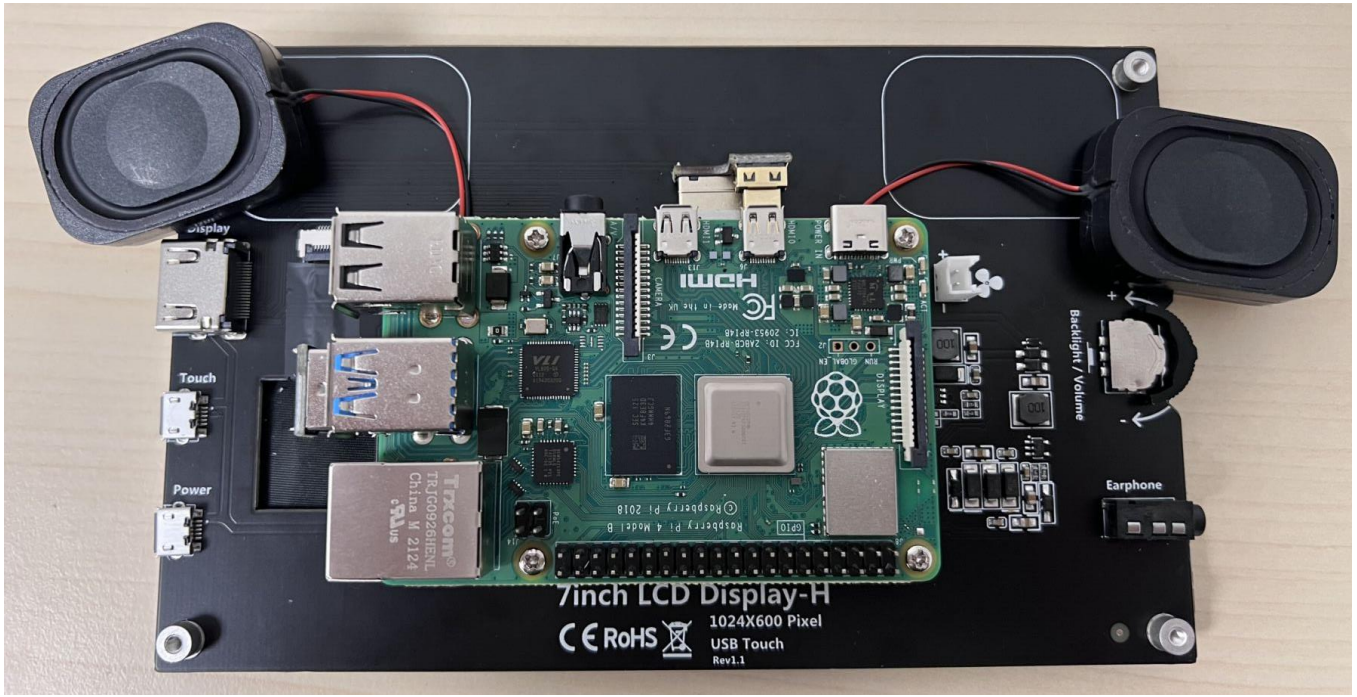
Connect Raspberry Pi with LCD screen through a “HDMI to micro USB”-adapter to enable vision.





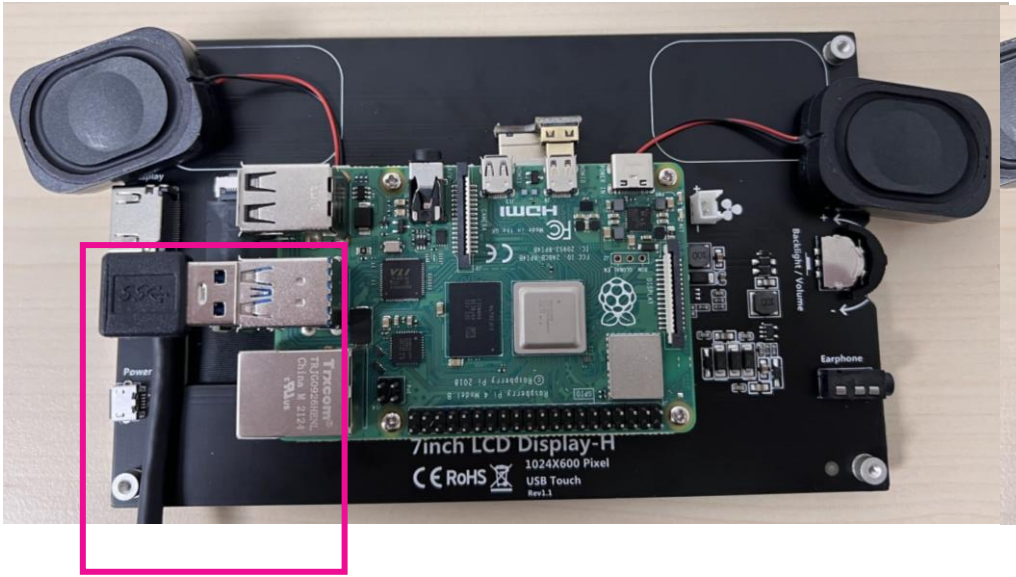


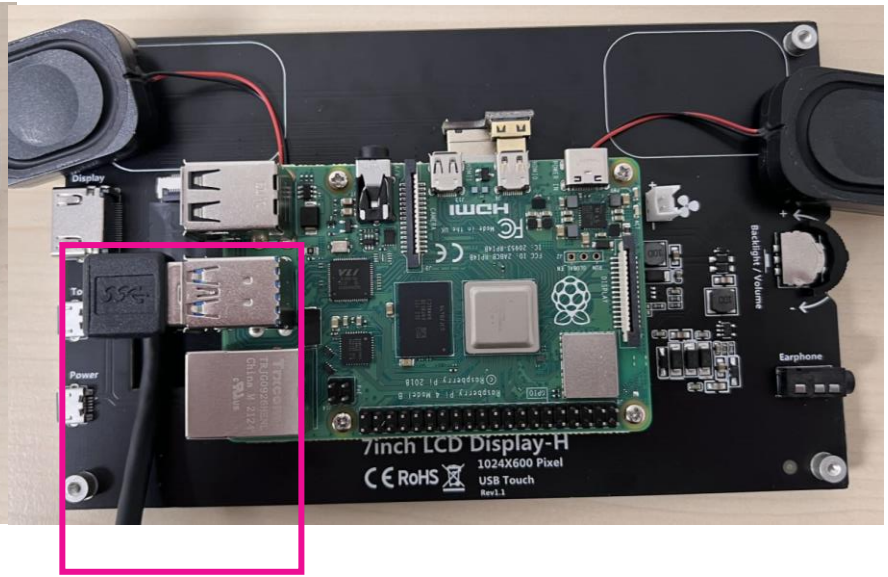
Step 4 - Assembled



Step 5a

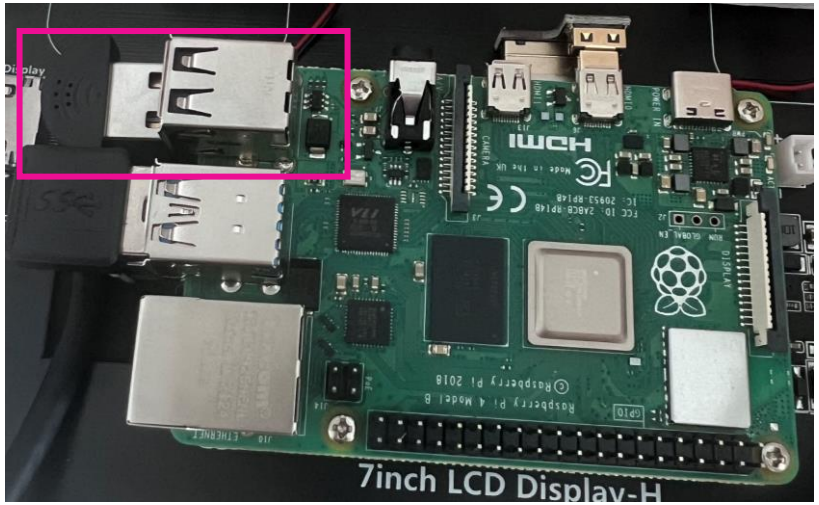
Connect “USB to USB type-c”-cable in the shown spot for usage of the camera.

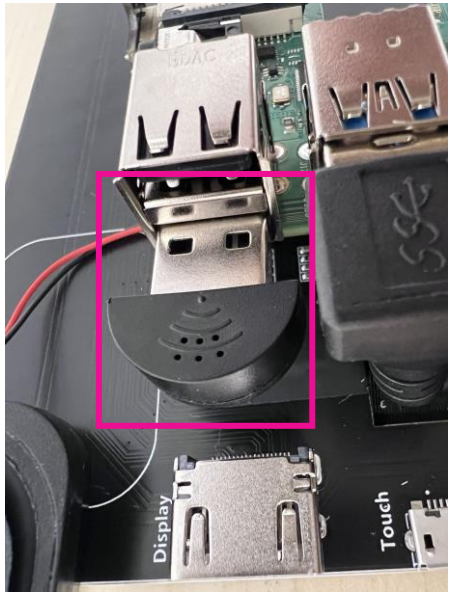




Step 5b

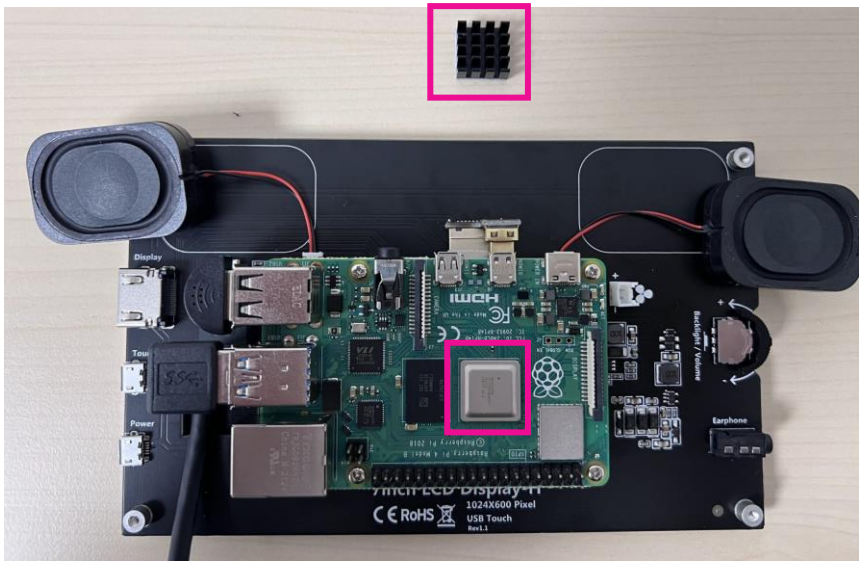
Connect the usb microphone E12 to the shown port.





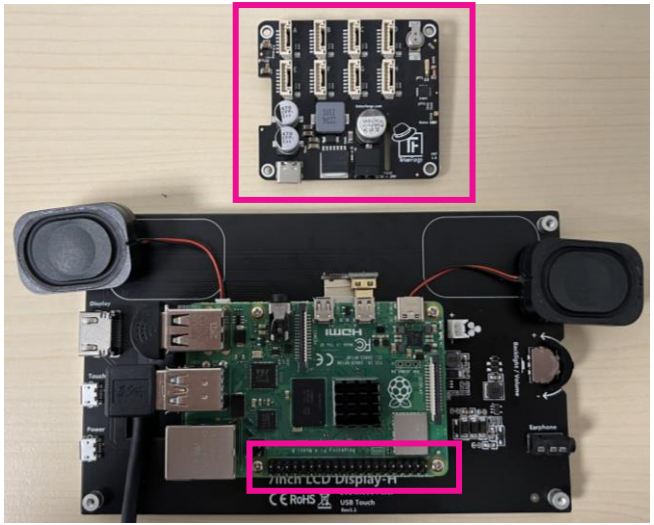
Step 6

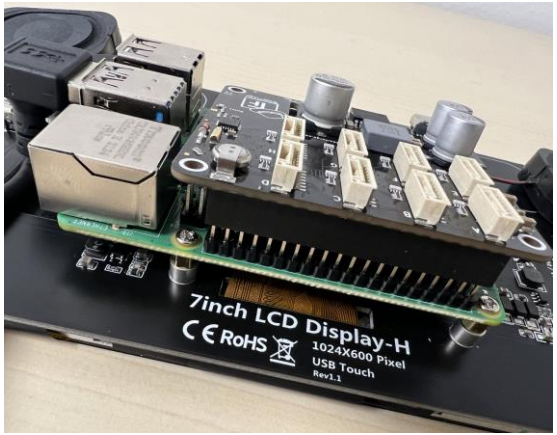
Place a heatsink on the shown spot of the Raspberry Pi processor.



Step 7

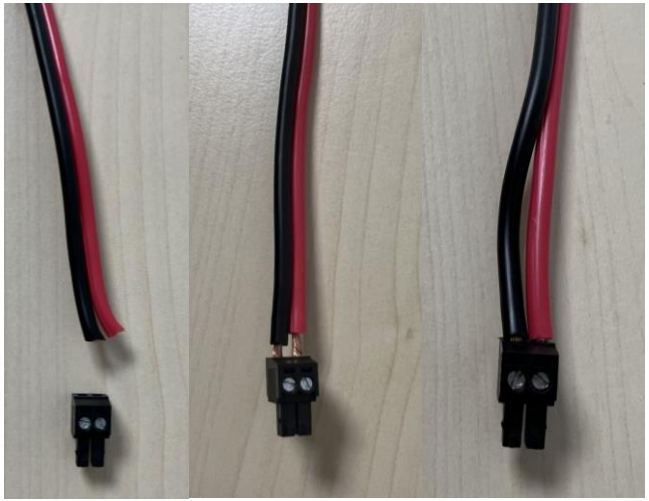
Attach a TinkerForge_hat to Raspberry Pi using the GPIO pins.

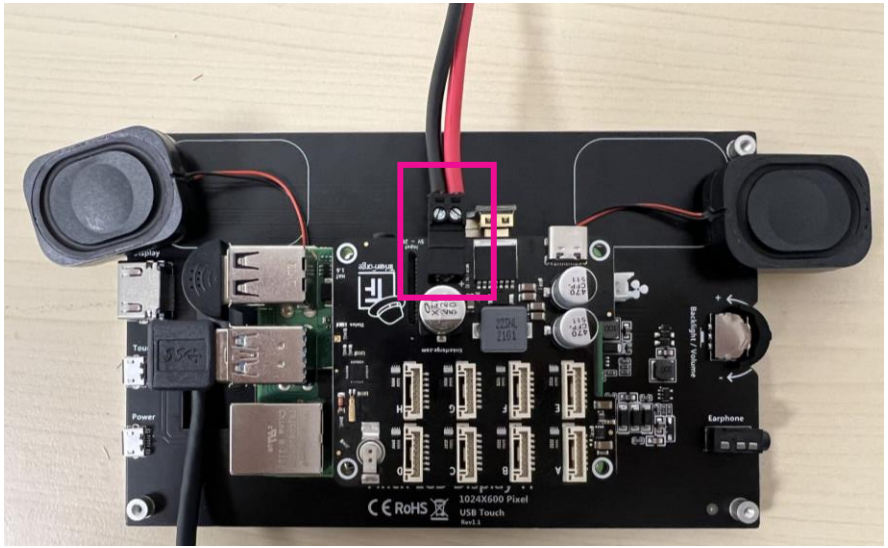




Step 8

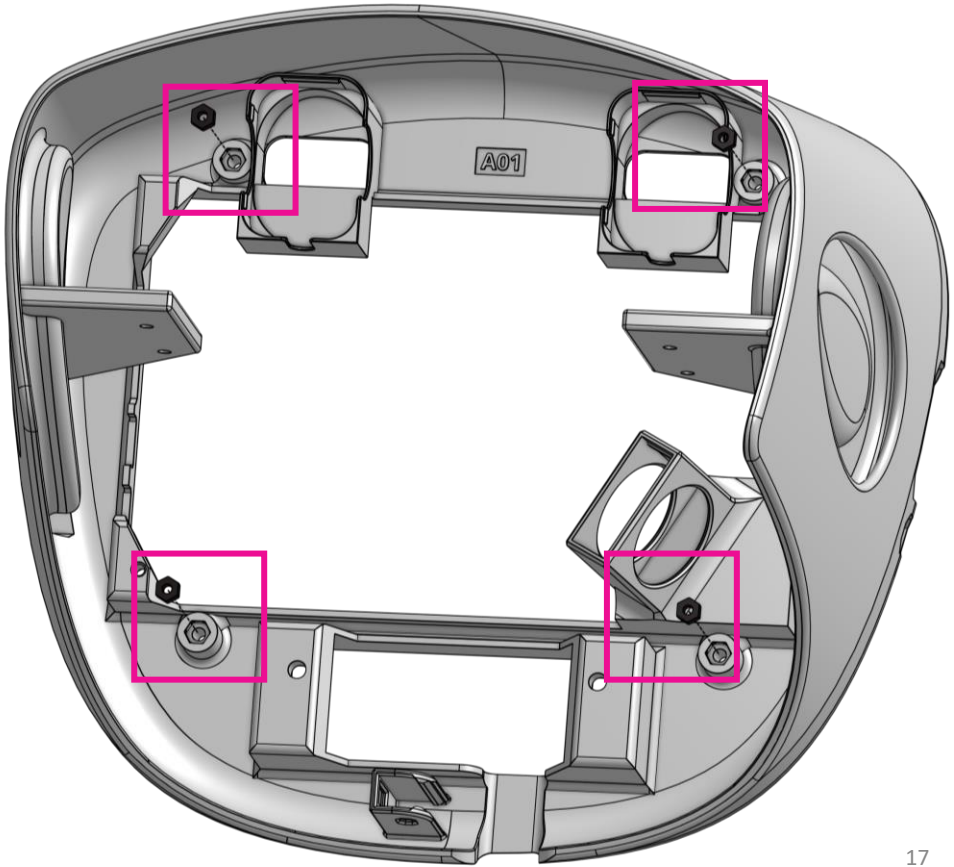
Cut 90cm of Red-Black wire and connect it to “2 pole black connector”, then connect the black connector to TinkerForge_hat in the shown spot.





Step 9

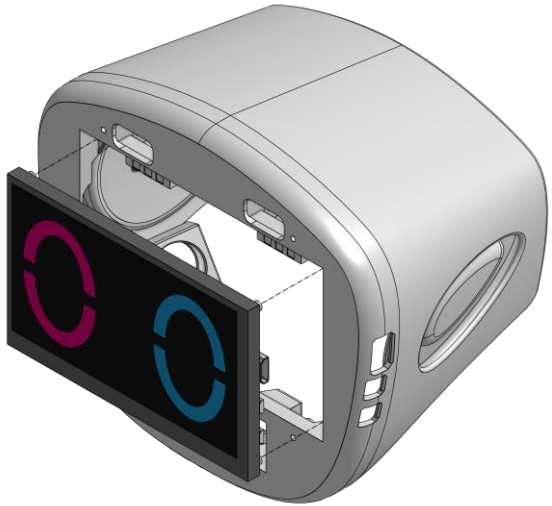
Insert 4 x nuts in the shown spots in A01.

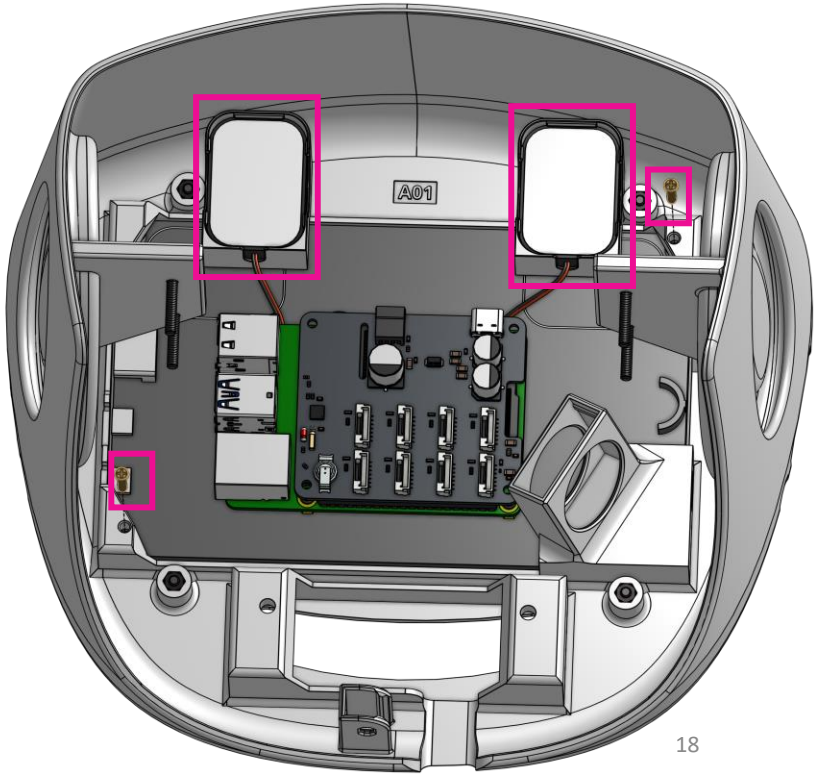


Step 10

Insert the assembly from previous steps to A01 and tighten it using 2 x M2.5 12mm screws (part of the screen package).

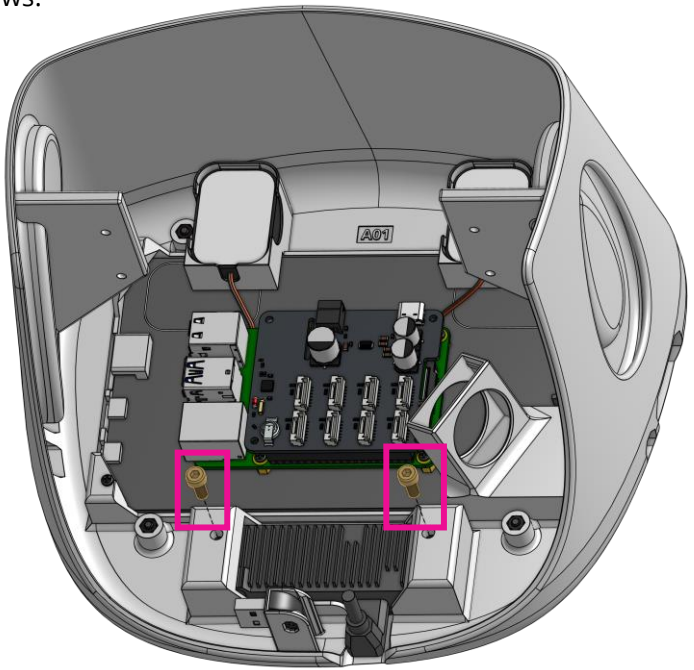
Additionally place the speakers in the shown spots of A01.





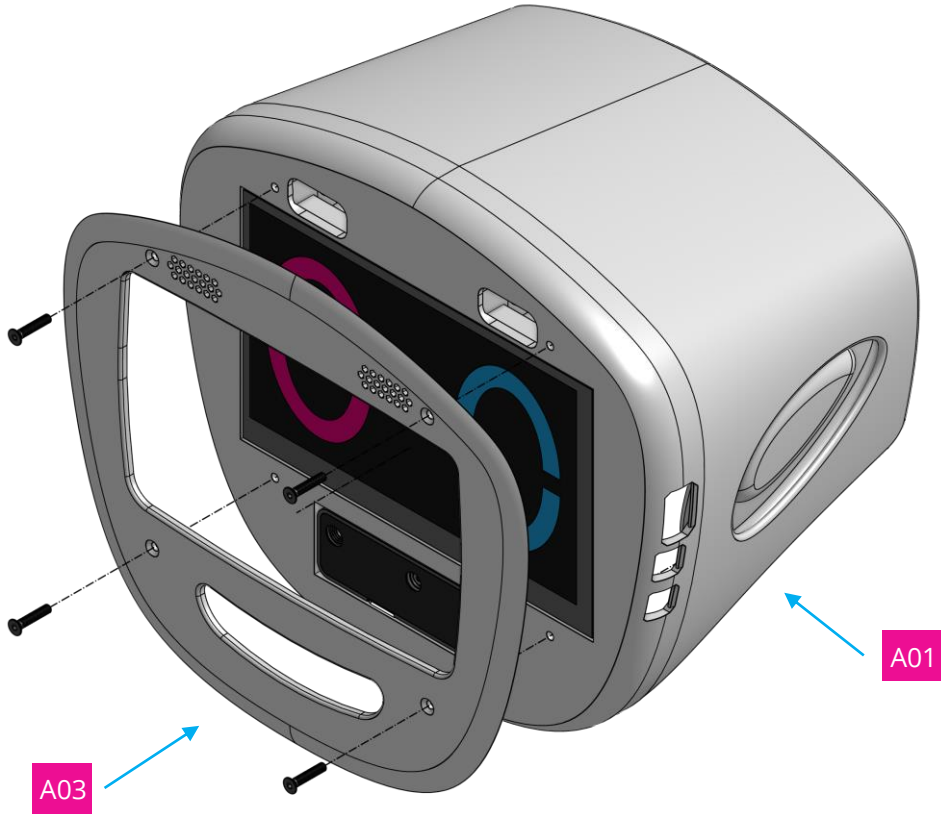
Step 11

Insert the Oak-D-lite camera into A01 and tighten it using 2 x 10mm screws.



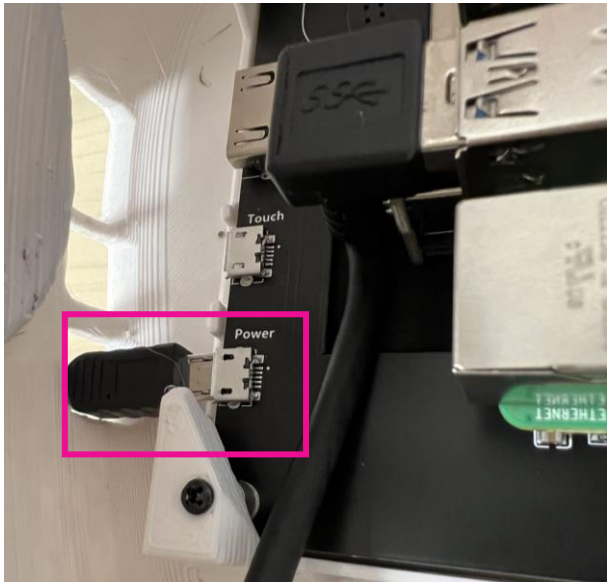
Step 12

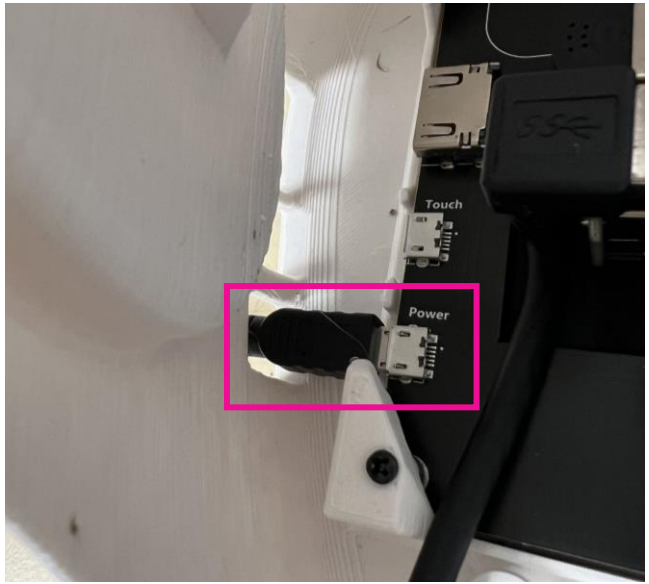
Connect A03 to A01 using 4 x 16 mm screws.



Step 13

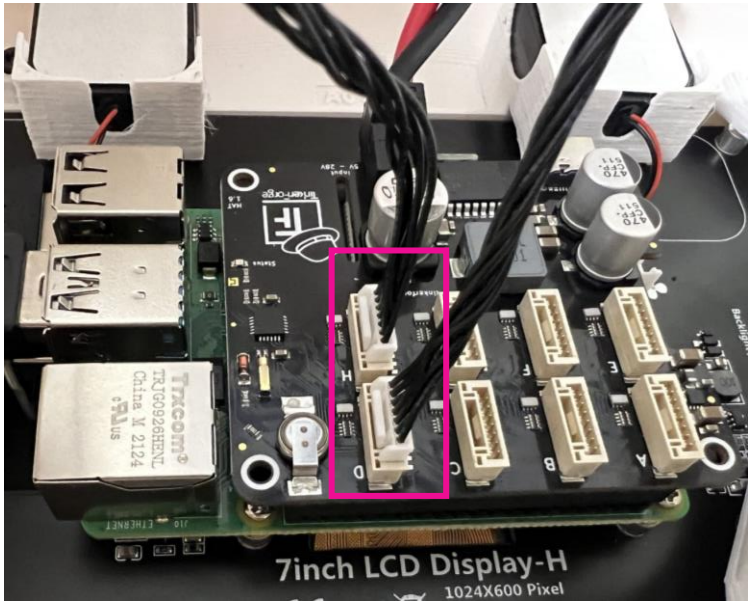
Connect the power-adapter (from the screen package) to the shown spot in the screen.

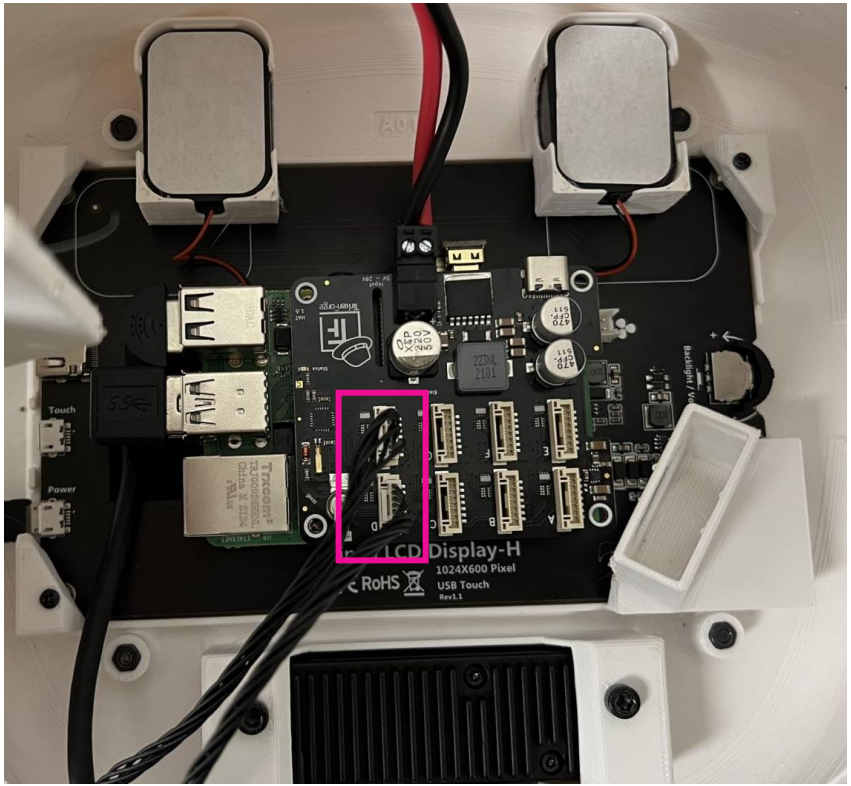




Step 14

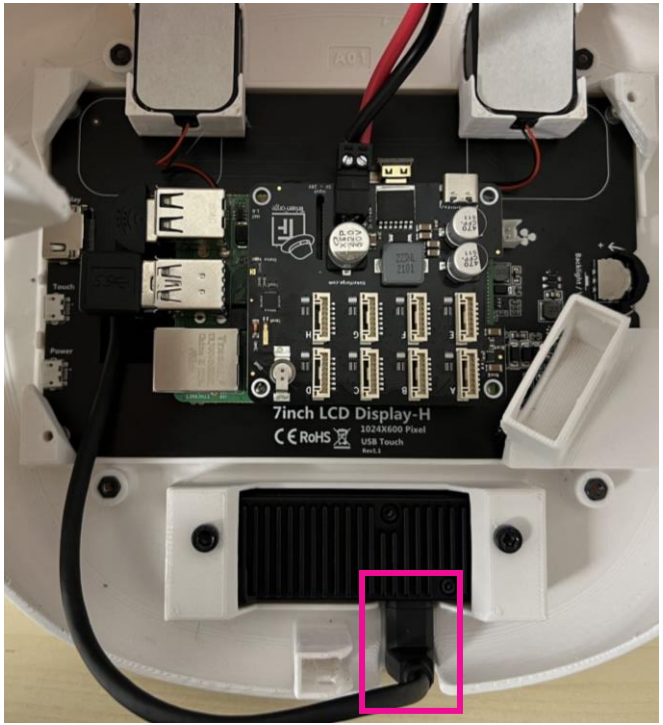
Insert 2 bricklet cables in the shown spots.





Step 15

Finally, connect “USB to USB-type-C”-cable into the shown spot of the camera.



Congratulations

You did a great job, pib´s head is assembled!

Do you need support?

Or do you need our pib.Box with all non-printable parts?

Or maybe you have some new ideas and improvements?

Please contact us.

team@pib.rocks
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