pib

How to build your robot

www.pib.rocks/build

assembly instructions for:
HEAD

v2024

PRINT
BUILD
DEVELOP
YOUR OWN ROBOT

Printable and pre-assembled 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.

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.

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

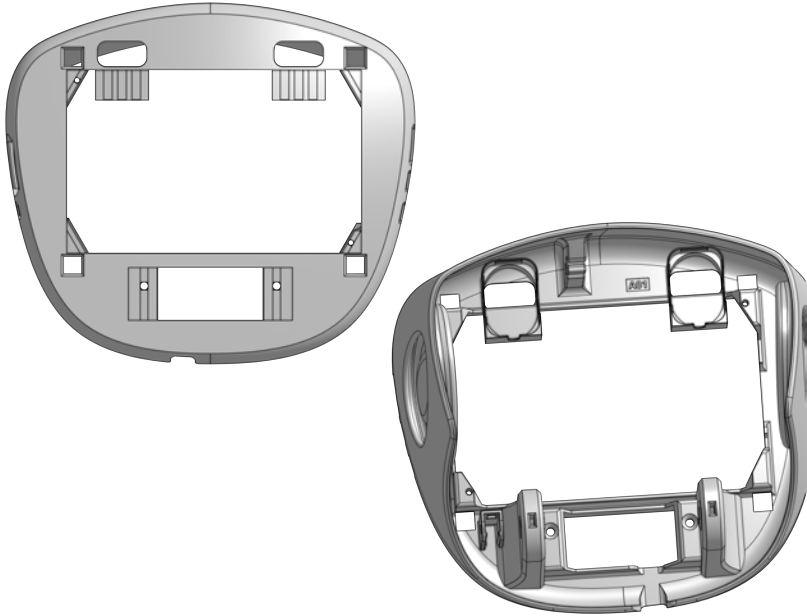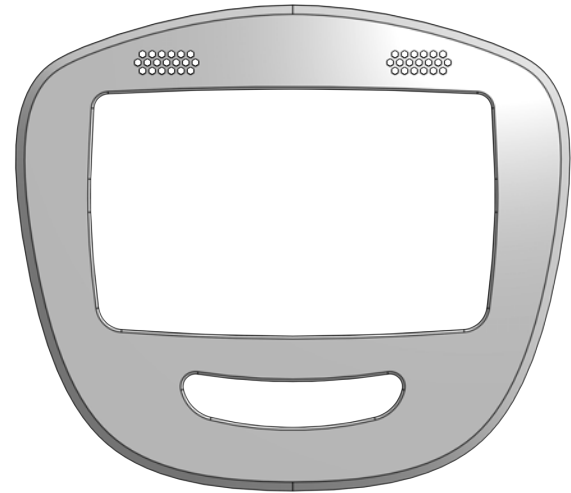| Non-printable parts |
| --- |
| 1 x **E01** Raspberry Pi_5 |
| 1 x **E02** TinkerForge HAT (with 2-pole-connector) |
| 1 x **E04** OAK D-Lite |
| 1 x **E05** LCD screen
    with screws, distancer, speaker, connectors |
| 1 x **E12** USB Microphone |
| 4 x **S01** M3 nuts |
| 2 x **S15** M2.5 12mm screws |
| 4 x **S14** M2.5x6mm |
| 1 x USB to USB-C cable |
| 90 cm black/red cable |
| 1 x Micro-SD-card |

Printable parts - Overview

A01-Face

A03-Face_Plate

Build it better: our suggestion for assembling pib

We recommend **tools** for each step. These are a suggestion, you can of course also use other tools.

1-5

We have categorized each step according to its **difficulty** - from **1-5** (1 being the easiest, 5 the hardest)
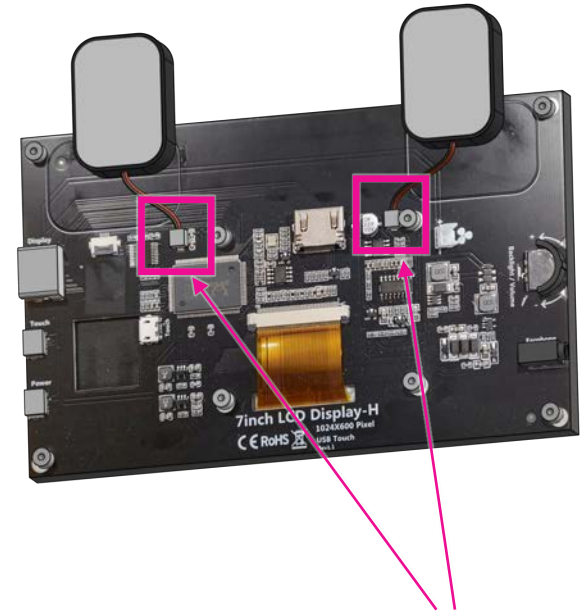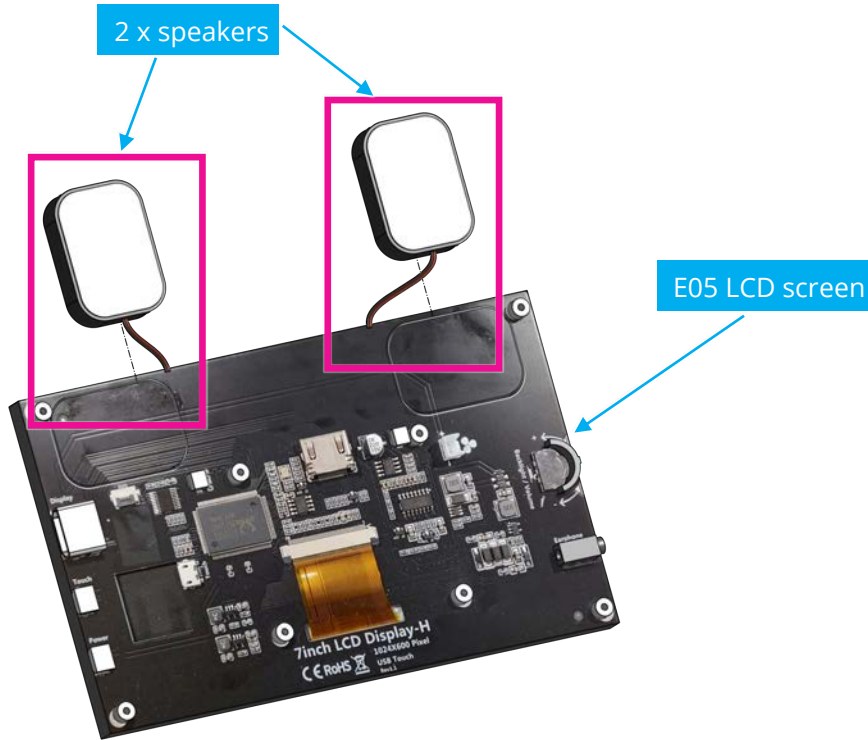
We also show you which **non-printable parts** you need for each step

Step 1

1   2x

Insert **2 x speakers** (part of the screen package) into the shown spots in the **E05 LCD screen**.

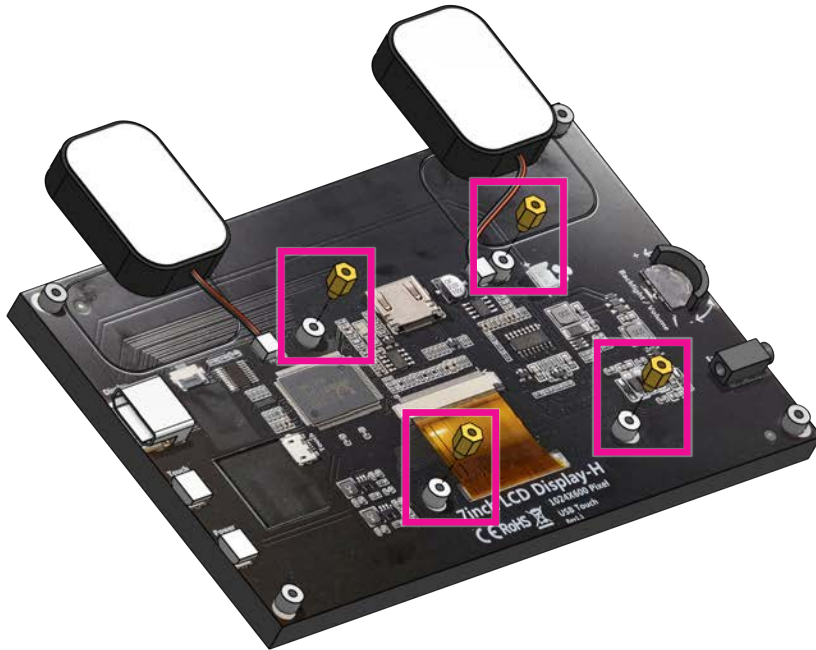2 x speakers

E05 LCD screen

You can see some metal parts on one side of these wire connectors. This side has to face down towards the LCD screen.
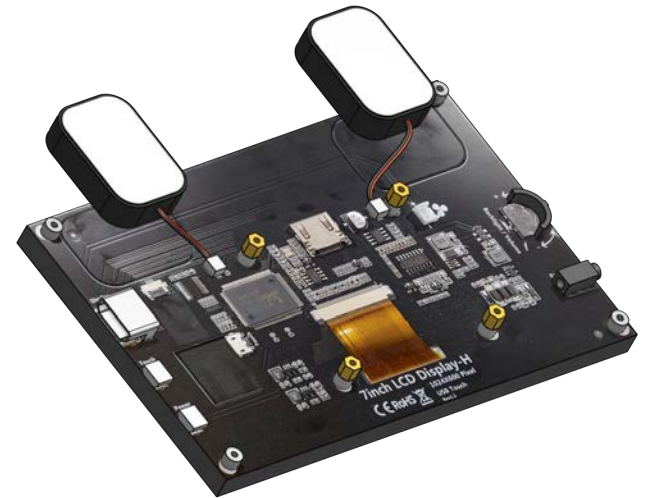
Step 2

1   4x

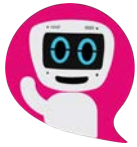Insert **4 x M2.5 distancers** (part of the screen package) in the shown spots in LCD screen.
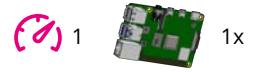

4 x distancers

Remove the protection foil from the shown spots.
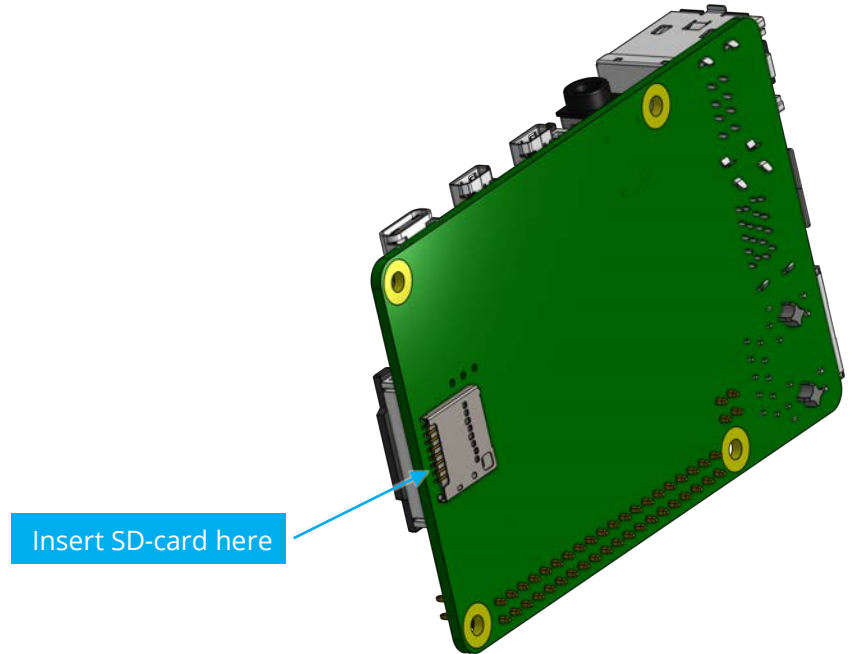*Don't use tools to put the distancers in.*

Step 3

Insert the **Micro-SD-card** into the **Raspberry Pi**.

1

1x

Before you insert the SD card make sure you have
installed the pib.software on it.

You can find the tutorial here:
https://pib.rocks/build/how-to-install-raspberry-pi/

Insert SD-card here

Step 4a

1   4x   1x

Place the **Raspberry Pi** on top of the **LCD screen** and fix it with with

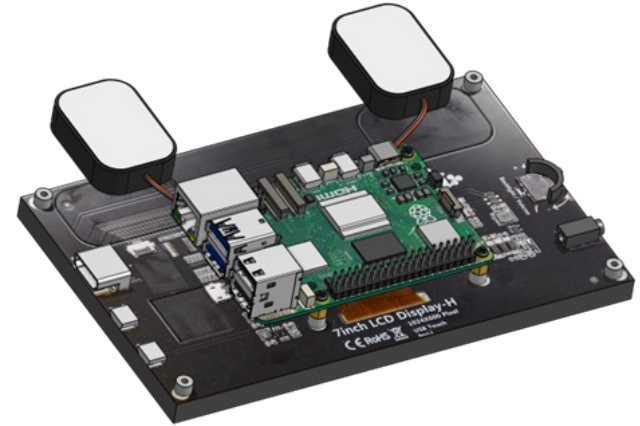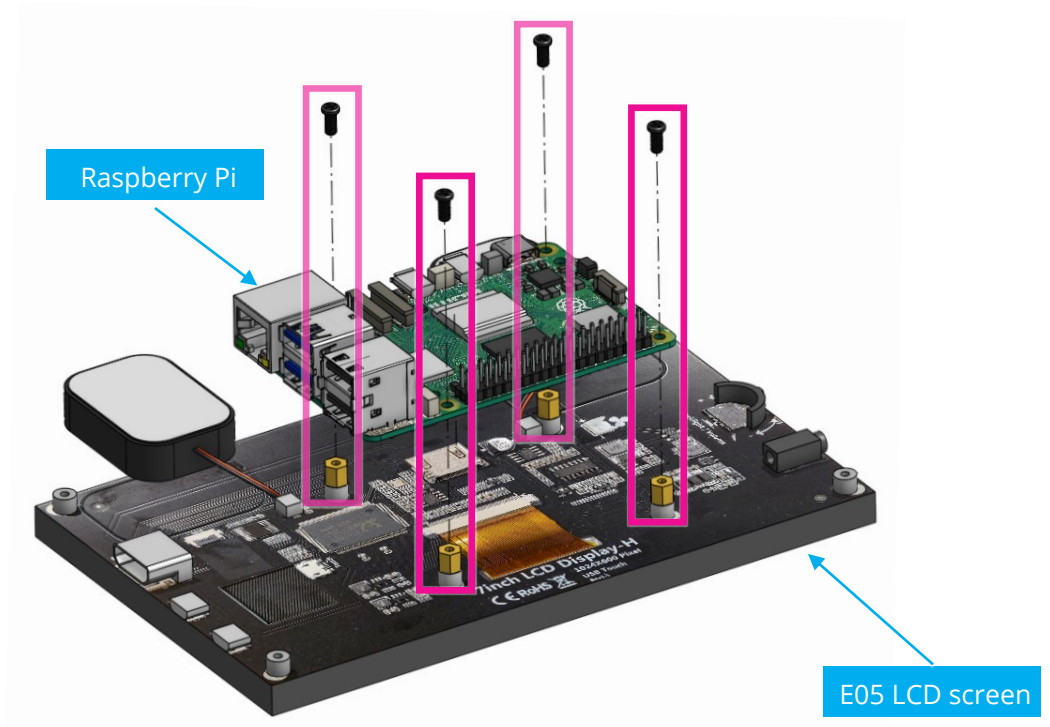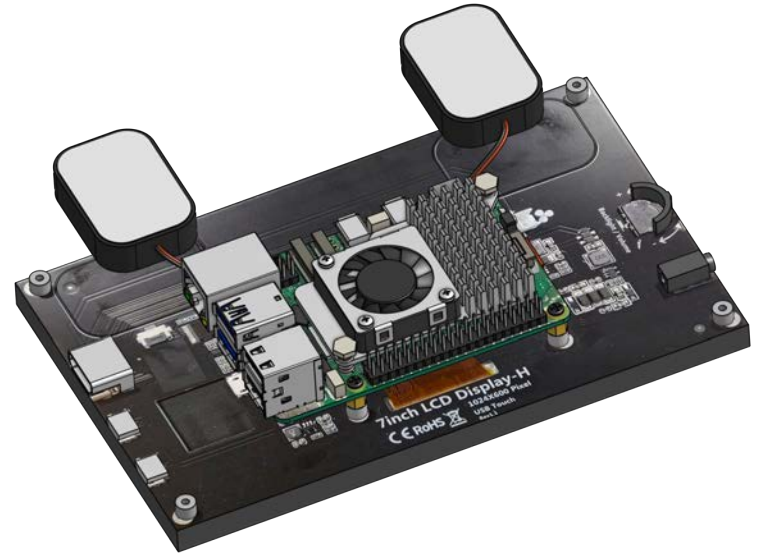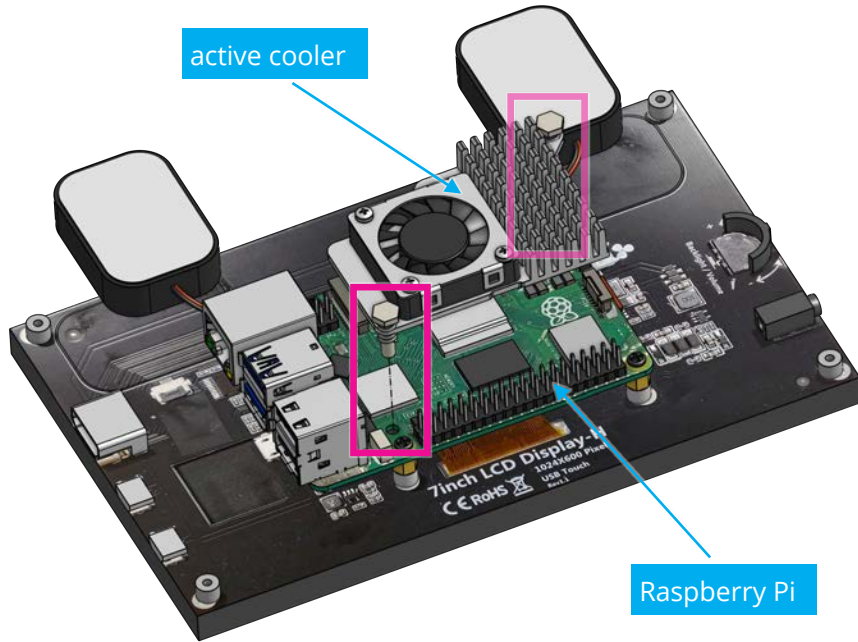**4 x M2.5 6mm screws** (part of the screen package).

Raspberry Pi

E05 LCD screen

Step 4b

1   1x

Attach **E18 active cooler** to **Raspberry Pi**.
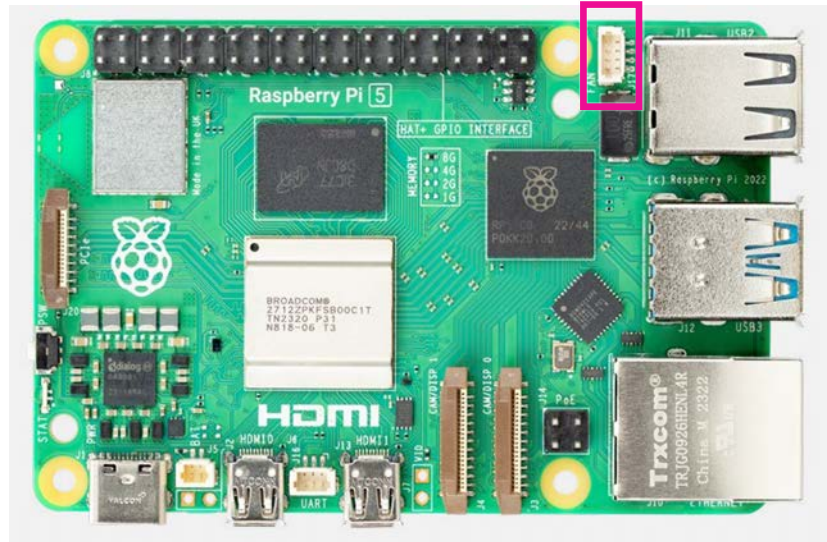

active cooler

Raspberry Pi

Note

Make sure that **E18 active cooler's** fan wire is connected to **"fan"** slot in **Raspberry Pi**.
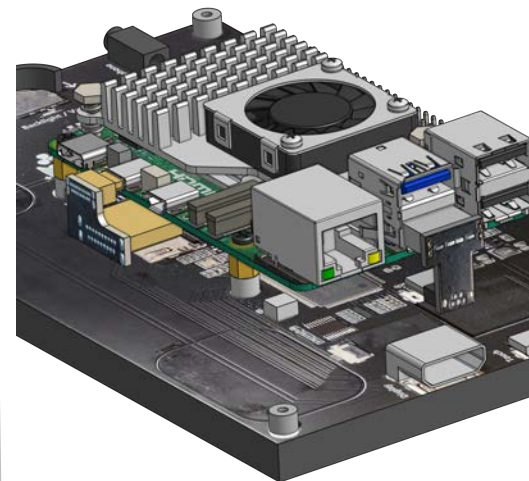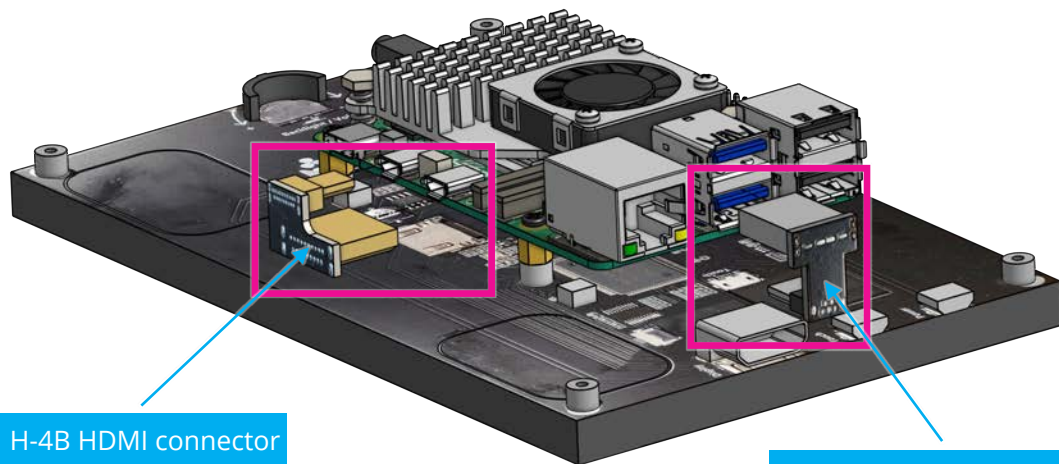
Step 5

Now, we have to connect the **Raspberry Pi** and the **LCD screen** electronically.

For this, there are two connectors (part of the screen package):

- **USB-H 3B** USB connector (responsible for touch screen functionality)
- **H-4B** HDMI connector (responsible for video signal)

1   1x   1x

H-4B HDMI connector

USB-H 3B USB connector

Step 6

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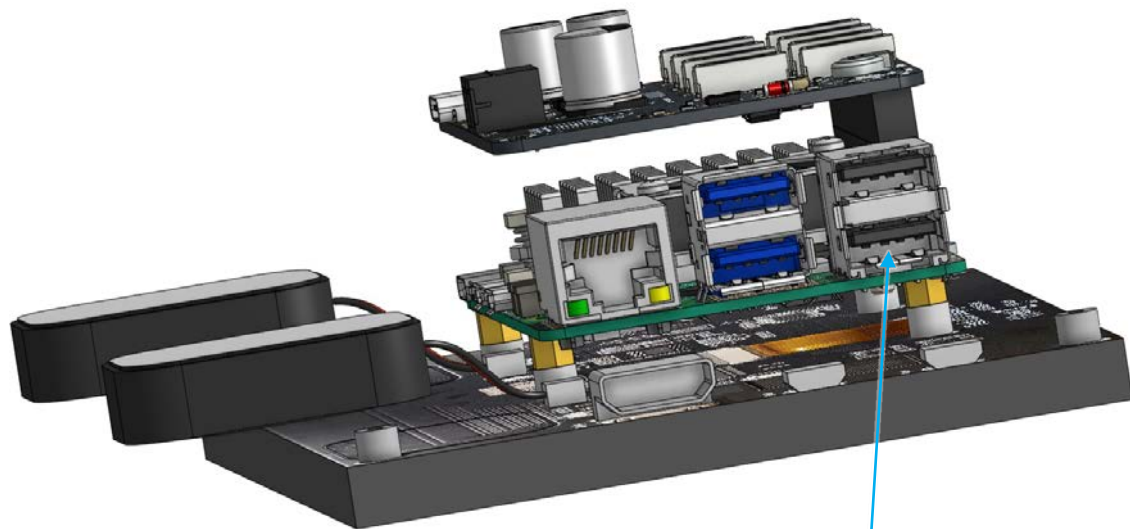

USB to USB type C cable

Step 7

1   1x
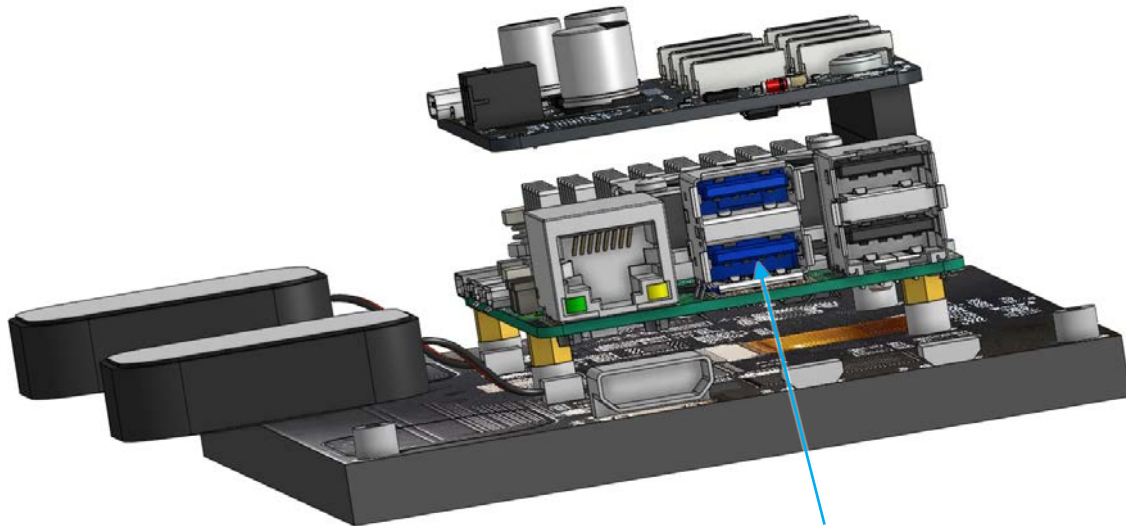
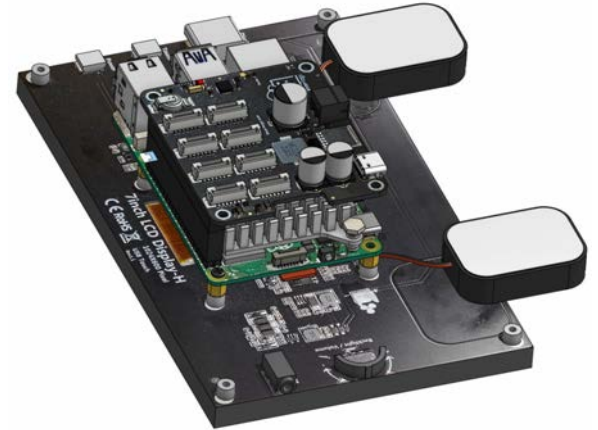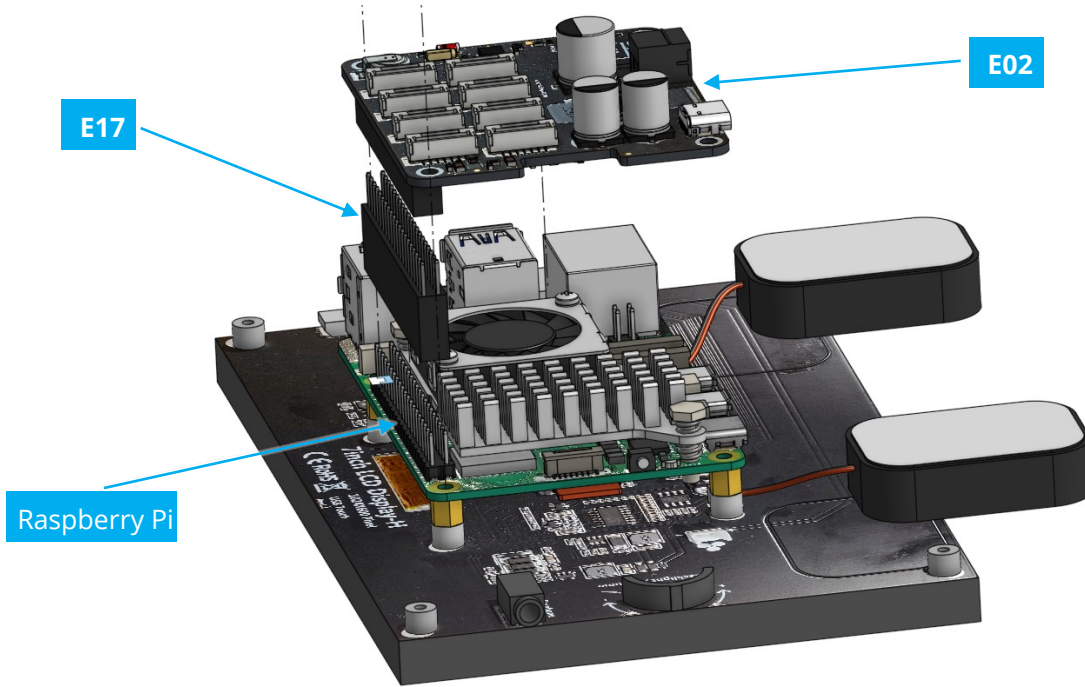Connect the **USB microphone E12** to the shown port of the Raspberry Pi.
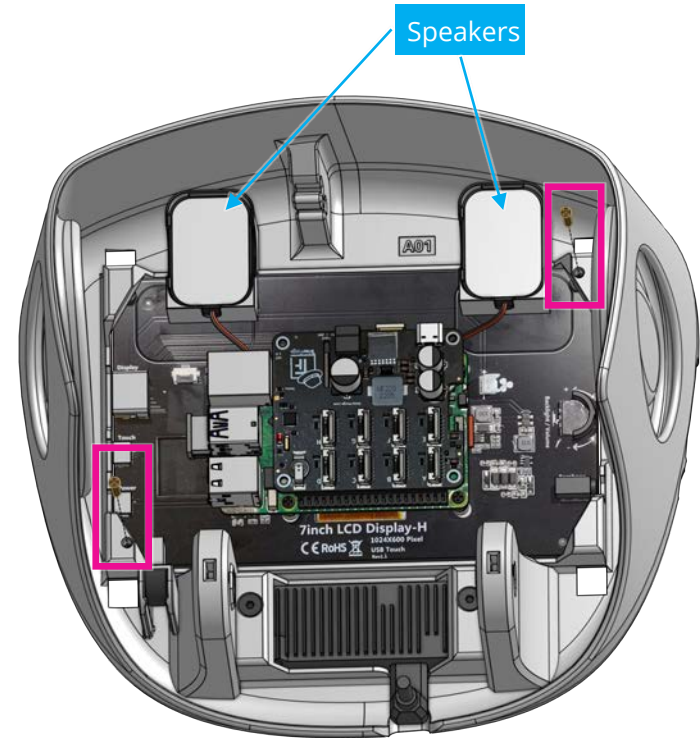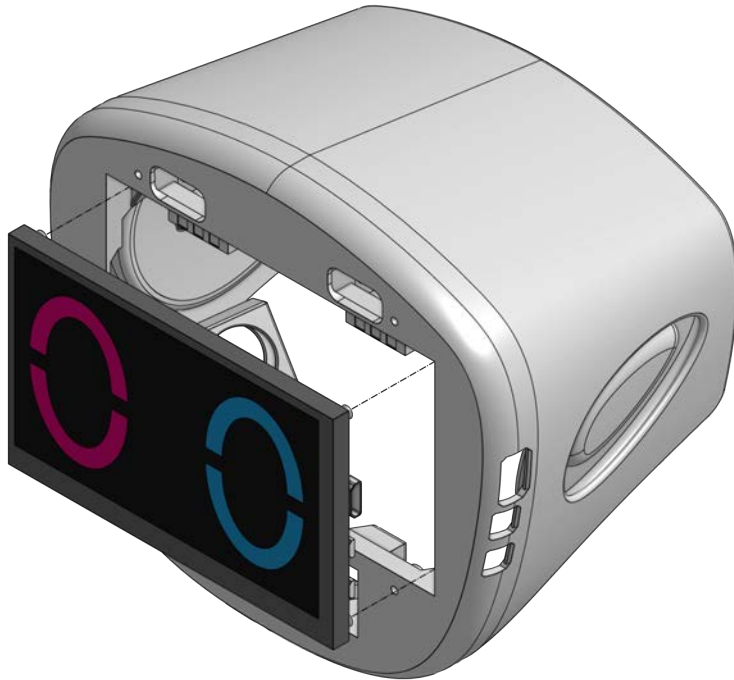

USB microphone

Step 8

1   1x

Attach the **E02 TinkerForge HAT** to **Raspberry Pi** using the **E17 GPIO extender**.

E02

E17

Raspberry Pi

Make sure, the TinkerForge HAT is
placed in the shown orientation.

Step 9

2   2x

Insert the assembly from previous steps to **A01** and fix it using **2 x M2.5 12mm screws** (part of the screen package). Place the speakers in the shown spots of **A01**.

Speakers

Step 10

2 | 2x | 1x

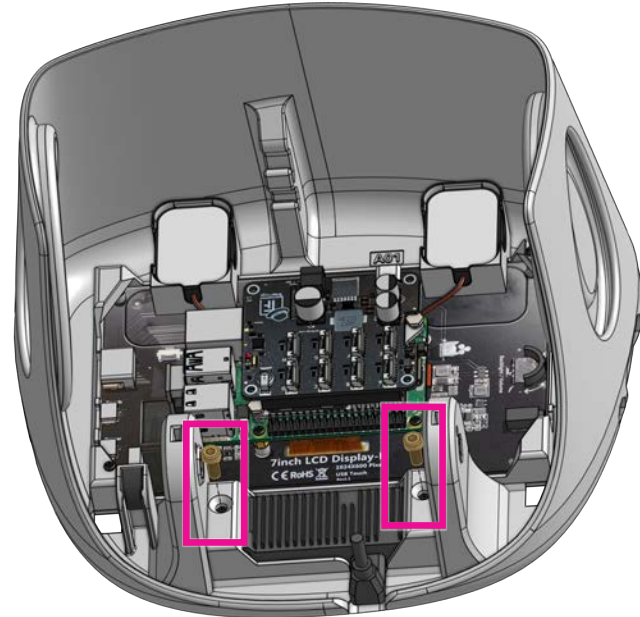Insert the **Oak-D-lite camera** into **A01** and tighten it using **2 x M4 10mm screws**.

Step 11

Connect the **"USB to USB-type-C"-cable** from **step 6** into the shown spot of the camera.
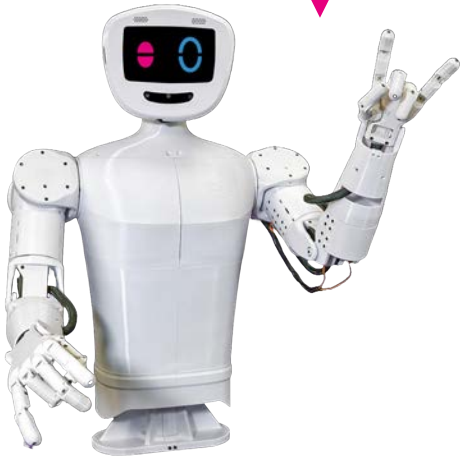

USB to USB-type-C cable

Step 12

Finally, connect **A03** to **A01**

A01

A03

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
Send us an email.

discord.com/invite/GRdpyeDu7P
Join us on Discord.

shop.pib.rocks
Order non-printable parts for pib.