



How to build your robot

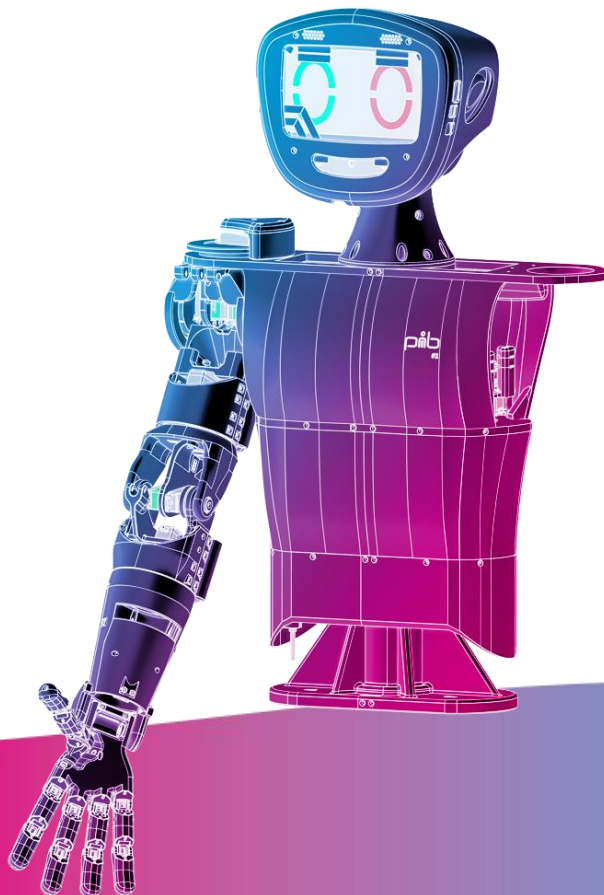
www.piib.rocks/build



assembly instructions for:

Assembly

piib's arm to piib



You
Print
Build
Develop

your own robot!

Printable parts



In order to assemble the arm you need to have completed all the past tutorials regarding arm and hand, as this is the final one.

You can find all our tutorials on pib.rocks/build

Printable parts

2 x **C31**-Wire_cover_upper_arm

Tutorials on pib.rocks

[https://pib.rocks/build/how-to-build-pibs-**finger**/](https://pib.rocks/build/how-to-build-pibs-finger/)

[https://pib.rocks/build/how-to-build-pibs-**hand**/](https://pib.rocks/build/how-to-build-pibs-hand/)

[https://pib.rocks/build/how-to-build-pibs-**elbow**/](https://pib.rocks/build/how-to-build-pibs-elbow/)

[https://pib.rocks/build/how-to-build-pibs-**forearm**/](https://pib.rocks/build/how-to-build-pibs-forearm/)

[https://pib.rocks/build/**how-to-build-pibs-shoulder-joint**/](https://pib.rocks/build/how-to-build-pibs-shoulder-joint/)

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>.

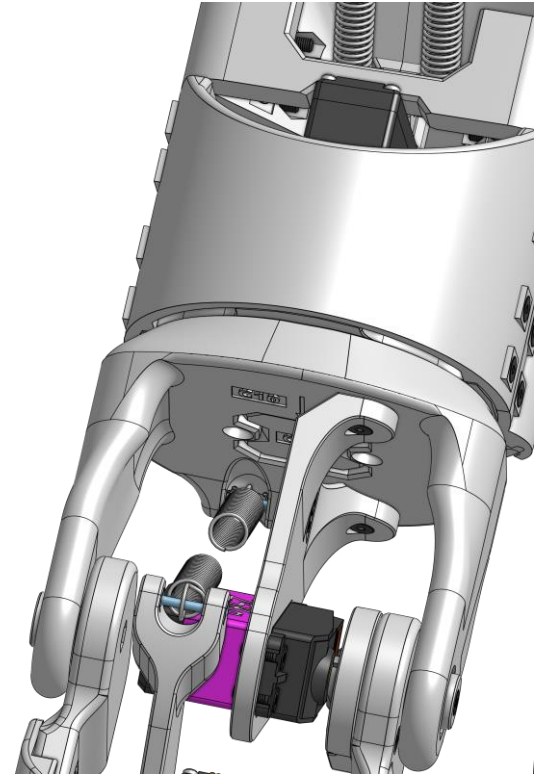
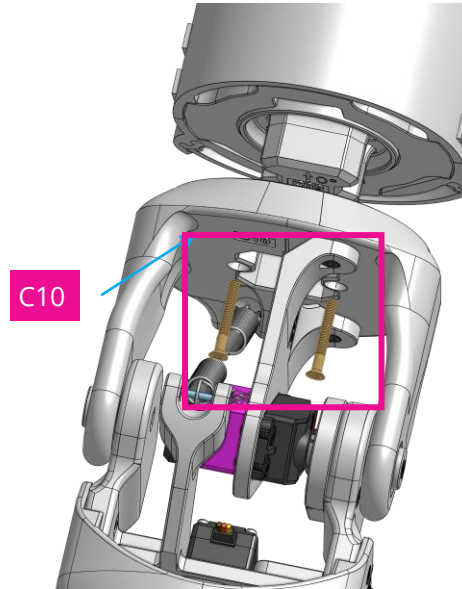
Non-printable parts

4 x **S10** M3 25 mm screws

Step 1



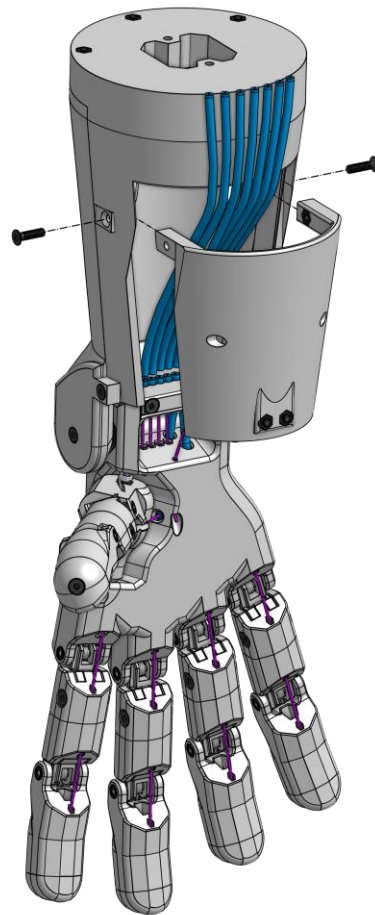
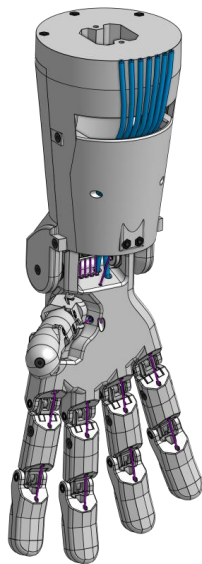
Connect elbow to shoulder using 2 x 25mm screws (use the printed arrows to have the right orientation as shown here).



Step 2

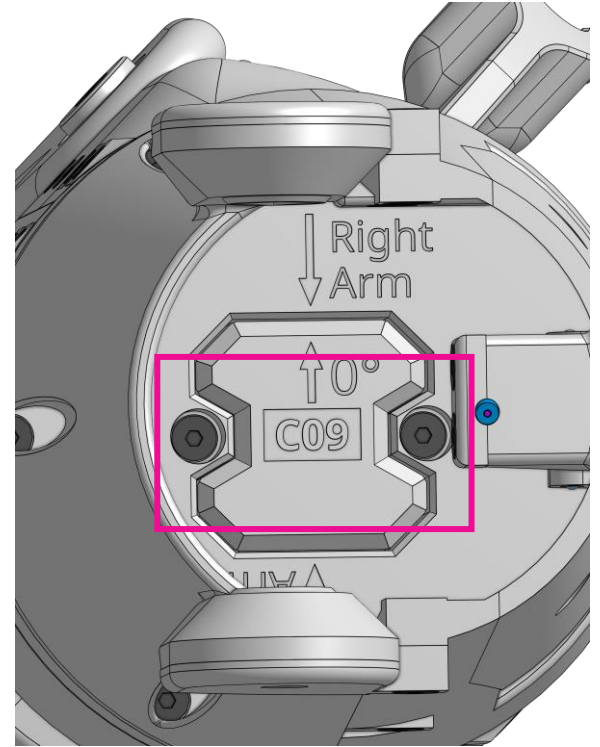
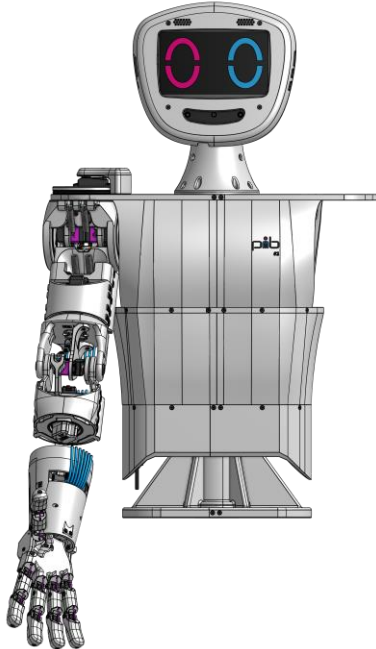


Disassemble C20 on the forearm to easily connect hand and forearm with elbow and shoulder.



Step 3

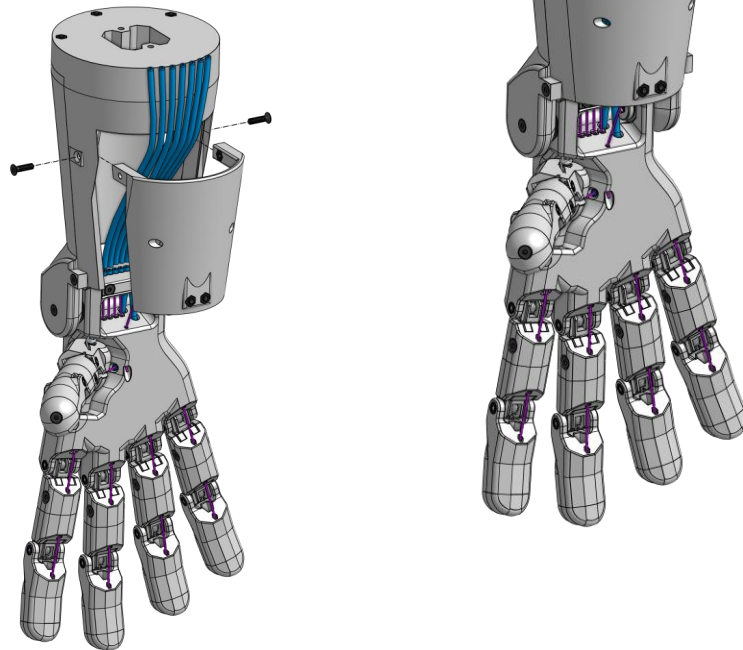
Connect hand and forearm to elbow by using 2 x 25mm screws
(hand is hidden in middle picture for clarity).



Step 4



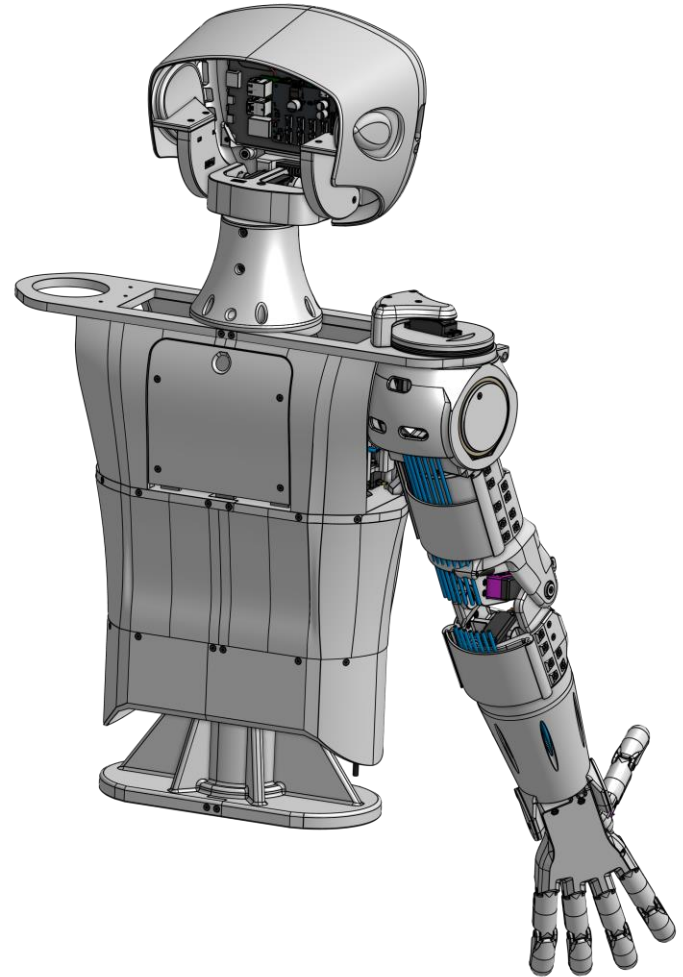
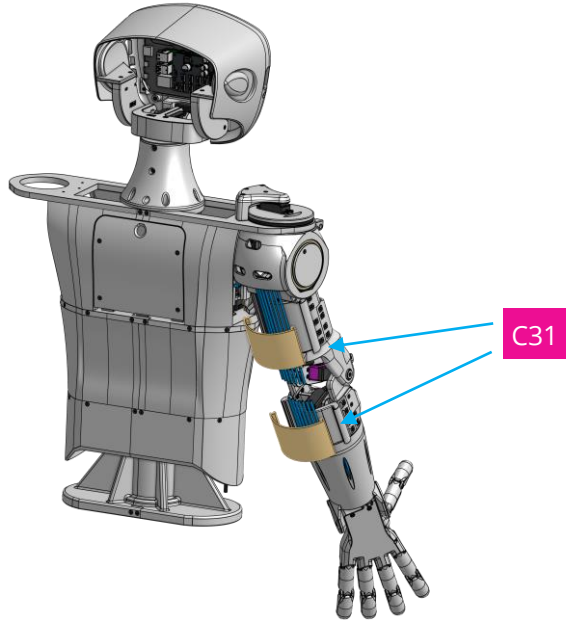
Re-assemble C20 on the forearm.



Step 5



Enclose teflon tubes coming out of the forearm with 2 x C31.



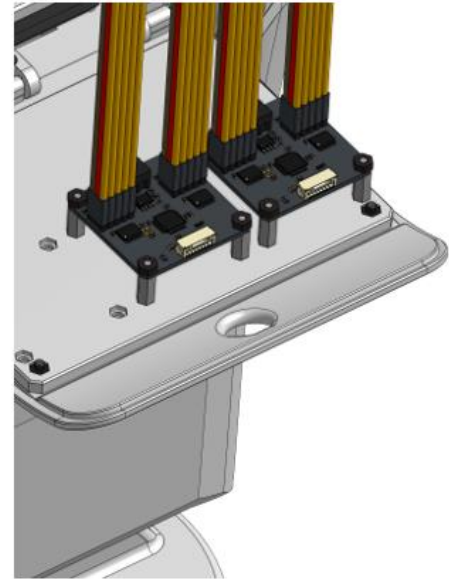
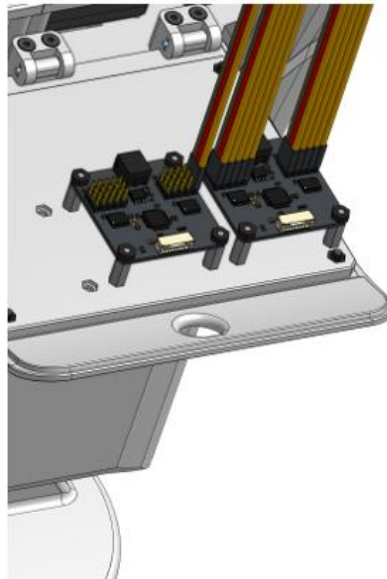
Step 6



Lastly, connect motors in arm and head to E03 Servo bricklet in B08 according to the table in the next slide.

Use servo extension cables if wire is too short and ignore any joint name with „left“ in it if you are assembling pib with right arm.

(Real picture added of bricklet not assembled, just for illustration.)



Step 6 - Table



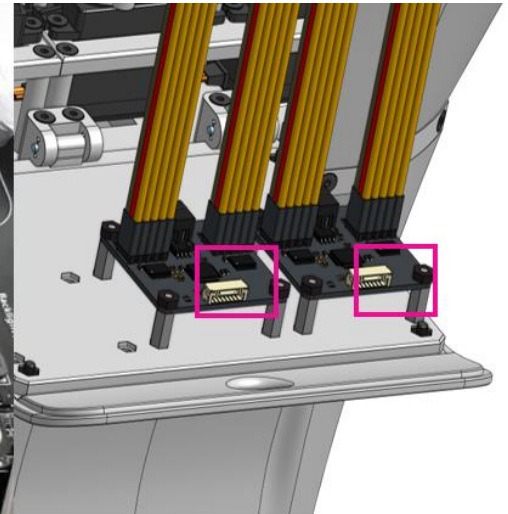
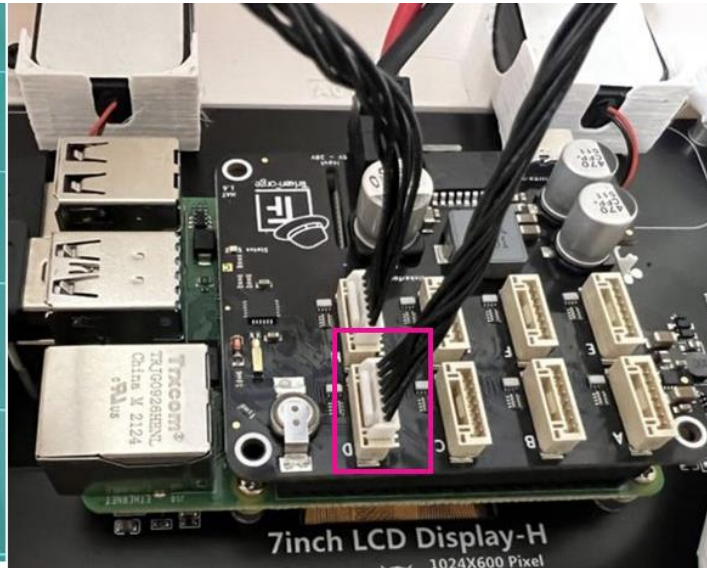
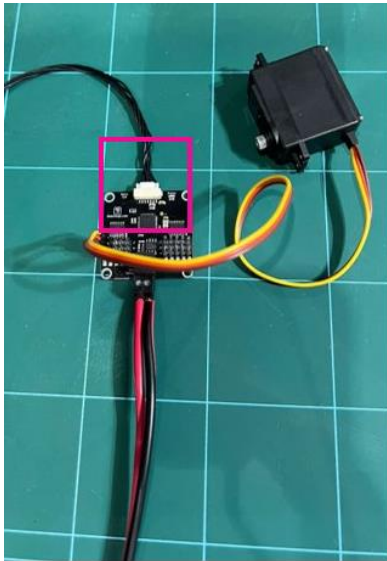
Motor name (joint connected to motor like thumb rotator)	Bricklet number(When assembled bricklet 1 will be the left and 2 is the right)	Bricklet pin (pin on bricklet that servo will be connected to, 0 to 9)
"/upper_arm_left_rotation"	2	5
"/elbow_left"	2	6
"/lower_arm_left_rotation"	2	7
"/shoulder_vertical_left"	3	Uses 2 motors one connected to pin 7 and the other connected to pin 9
"/shoulder_horizontal_left"	3	0
"/upper_arm_right_rotation"	3	1
"/elbow_right"	3	2
"/lower_arm_right_rotation"	3	3
"/shoulder_vertical_right"	3	Uses 2 motors one connected to pin 5 and the other connected to pin 8
"/shoulder_horizontal_right"	3	6
"turn_head_motor"	1	0
"tilt_forward_motor"	1	1

Step 7



Connect E03 in B08 to E02 TinkerForge HatBrick using bricklet cables.

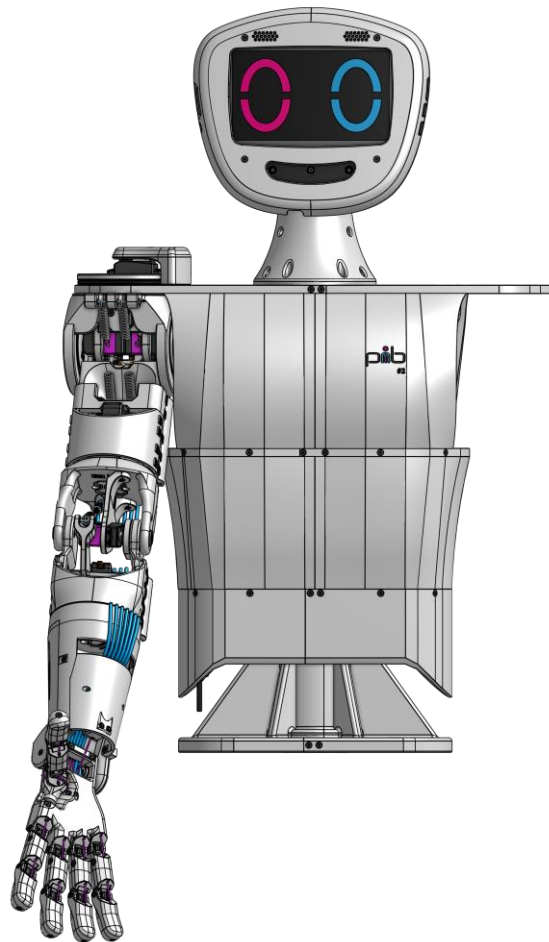
(Real picture added of bricklet not assembled. Just for illustration.)



Congratulations



You did a great job, pib 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.



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Order non-printable parts for pib.