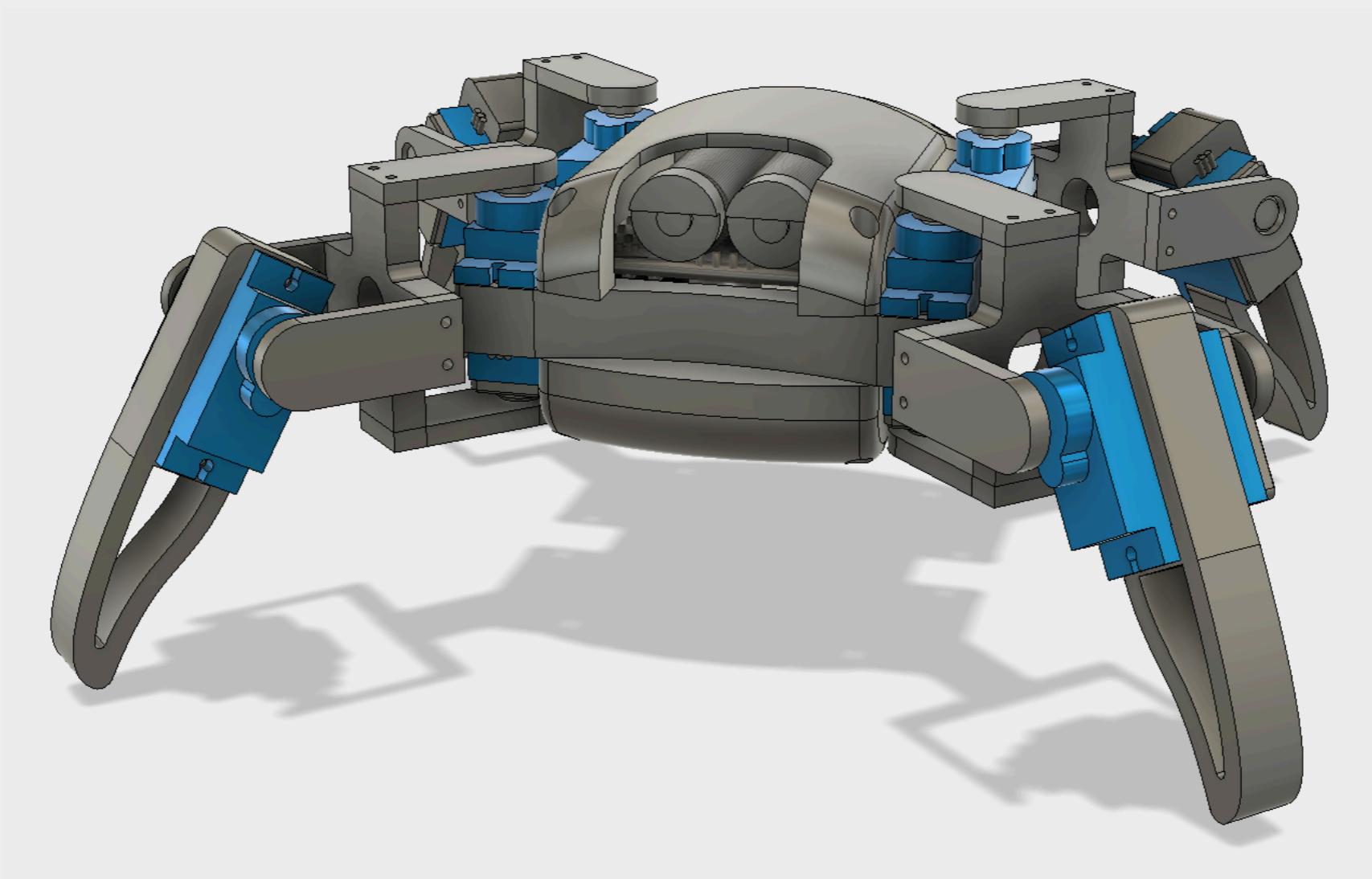
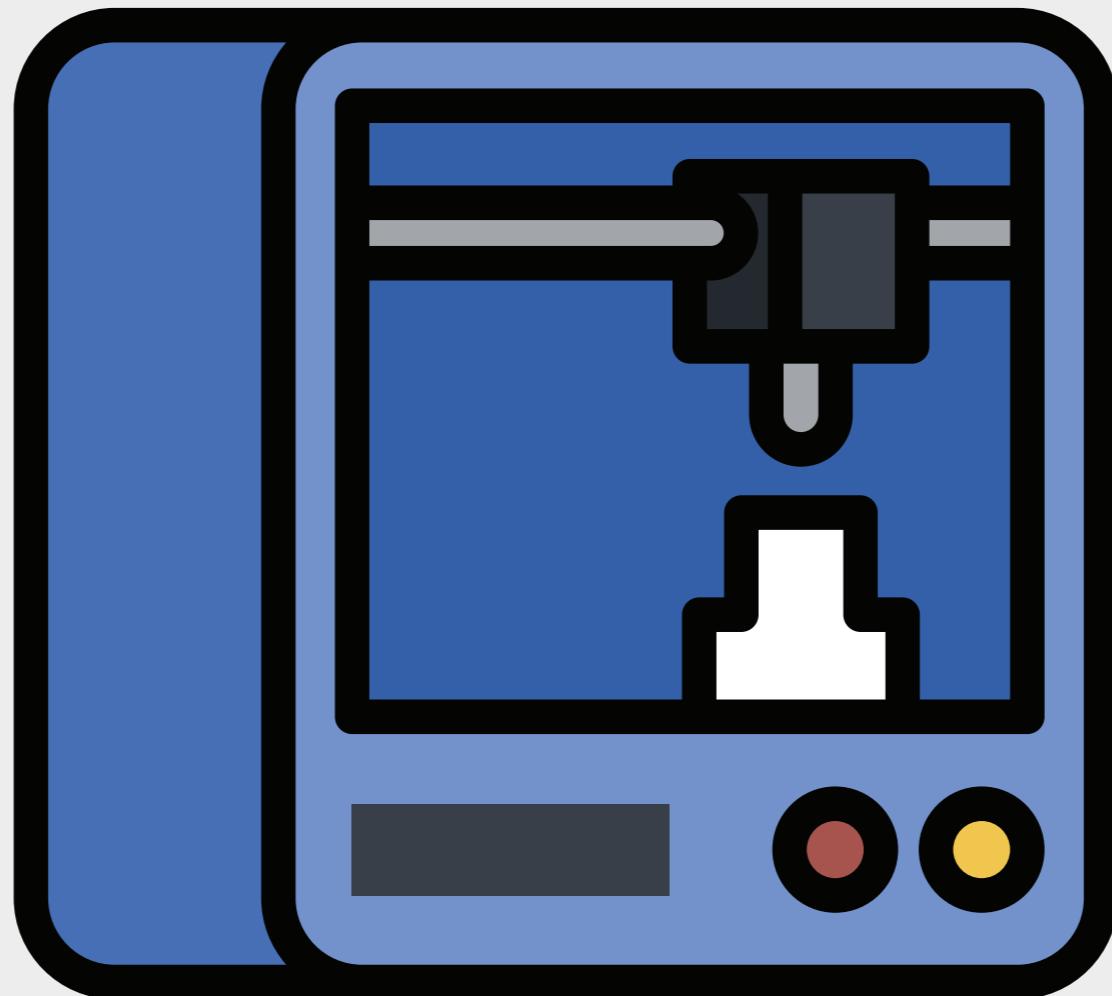


Q1 mini

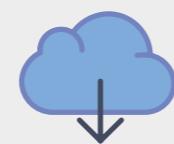
An Open Source Quadruped Robot



Prepare Parts



Downloads & Store

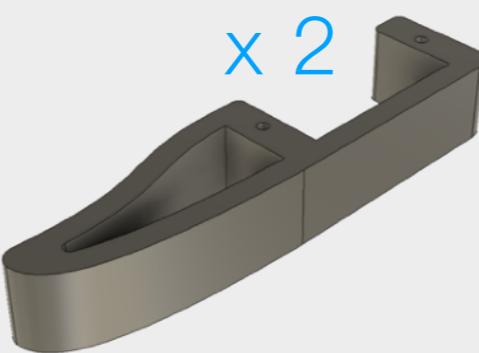
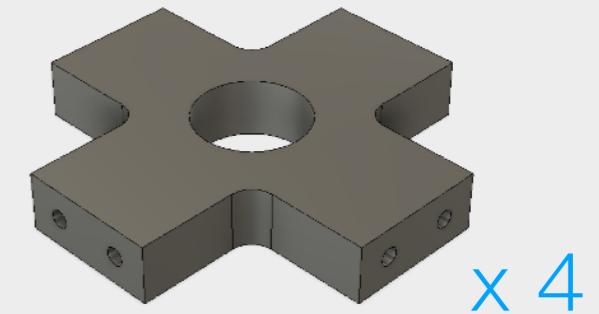
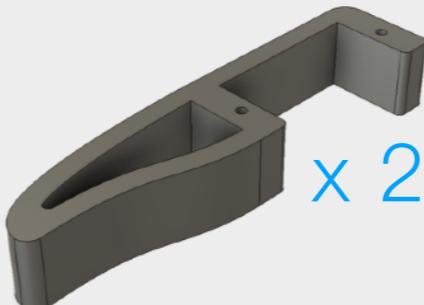
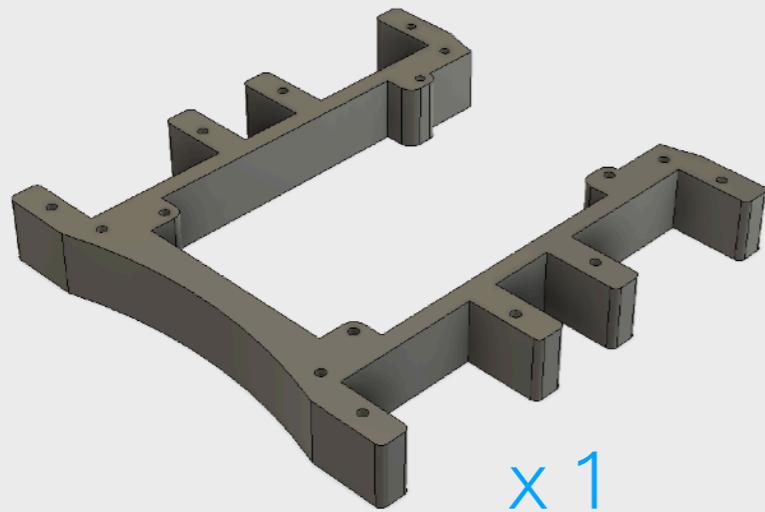
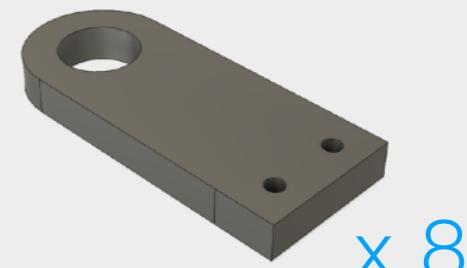
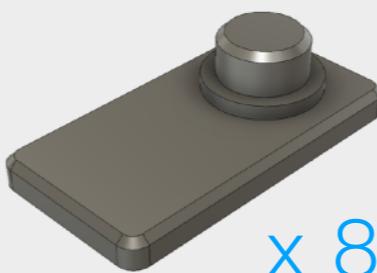
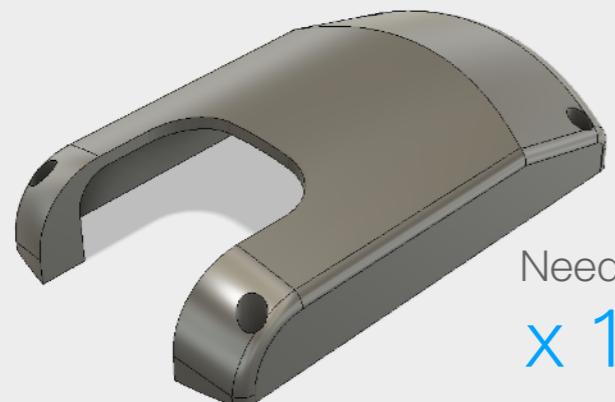
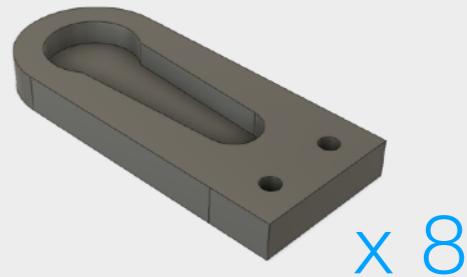
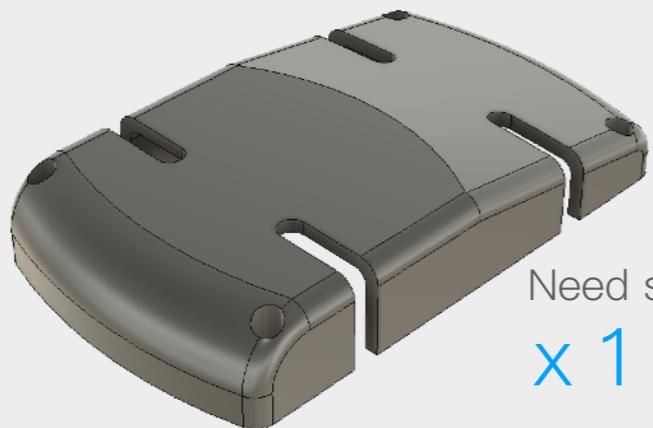


q1.jasonworkshop.com



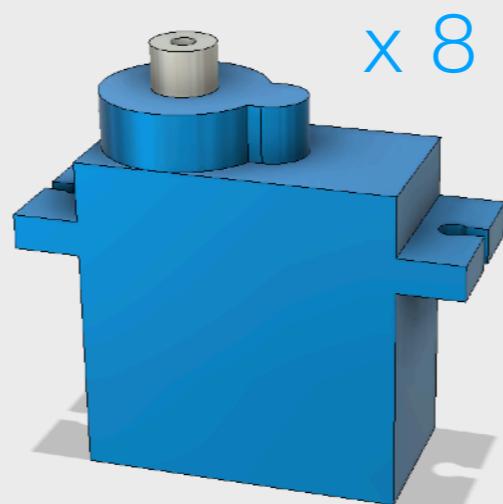
store.jasonworkshop.com

3D Print Parts



Other Parts

LinkIt 7697 + Robot Shield



M1.7 x 8mm Screw
x 60

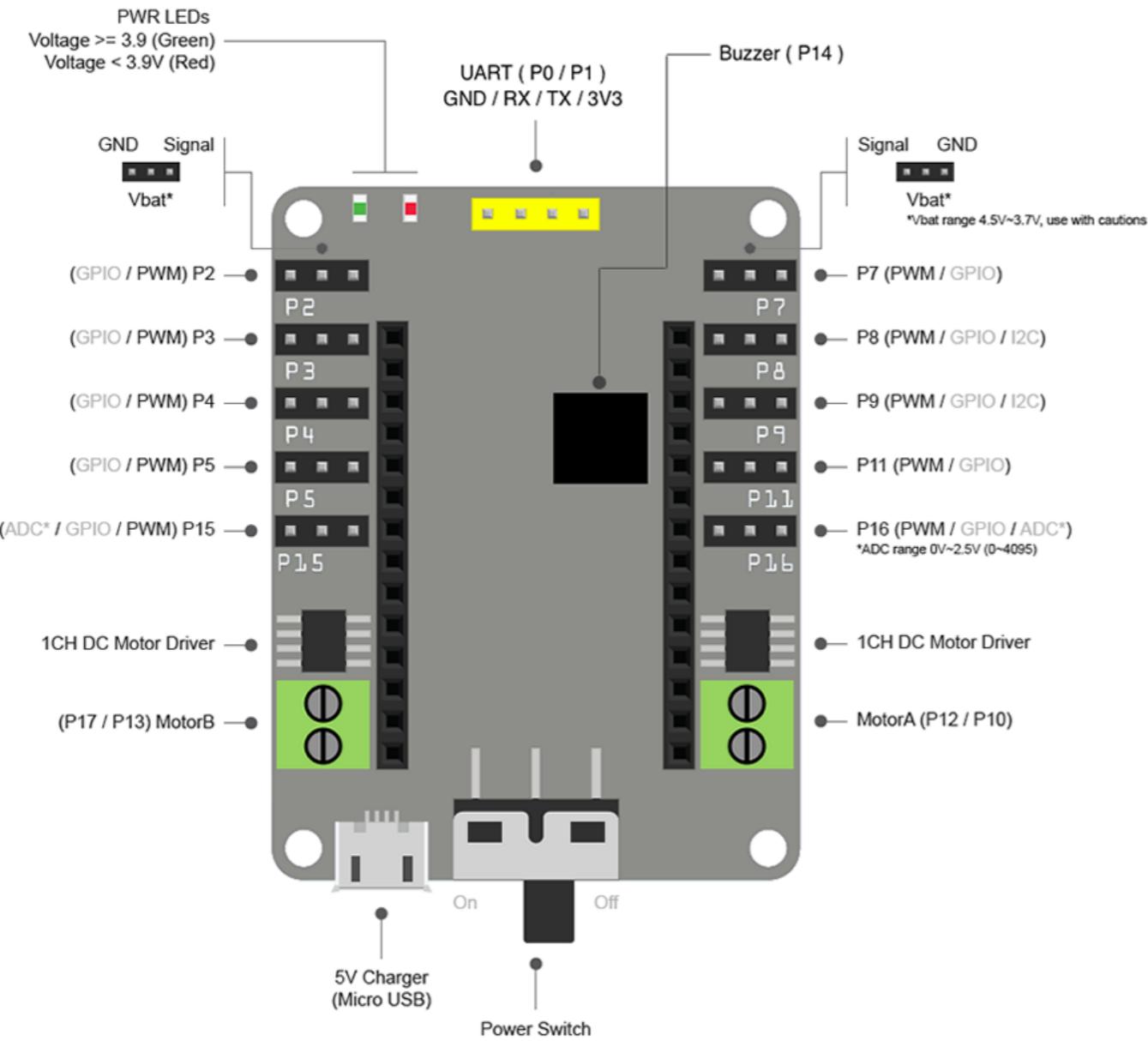


store.jasonworkshop.com

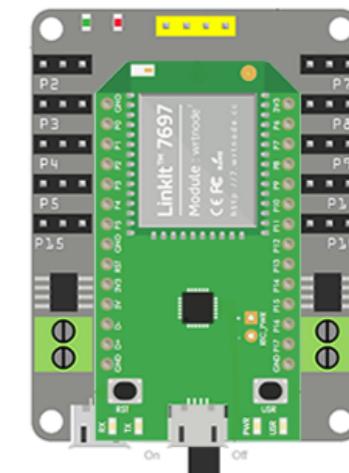
Robot Shield for LinkIt™ 7697



MEDIATEK
labs



store.jasonworkshop.com

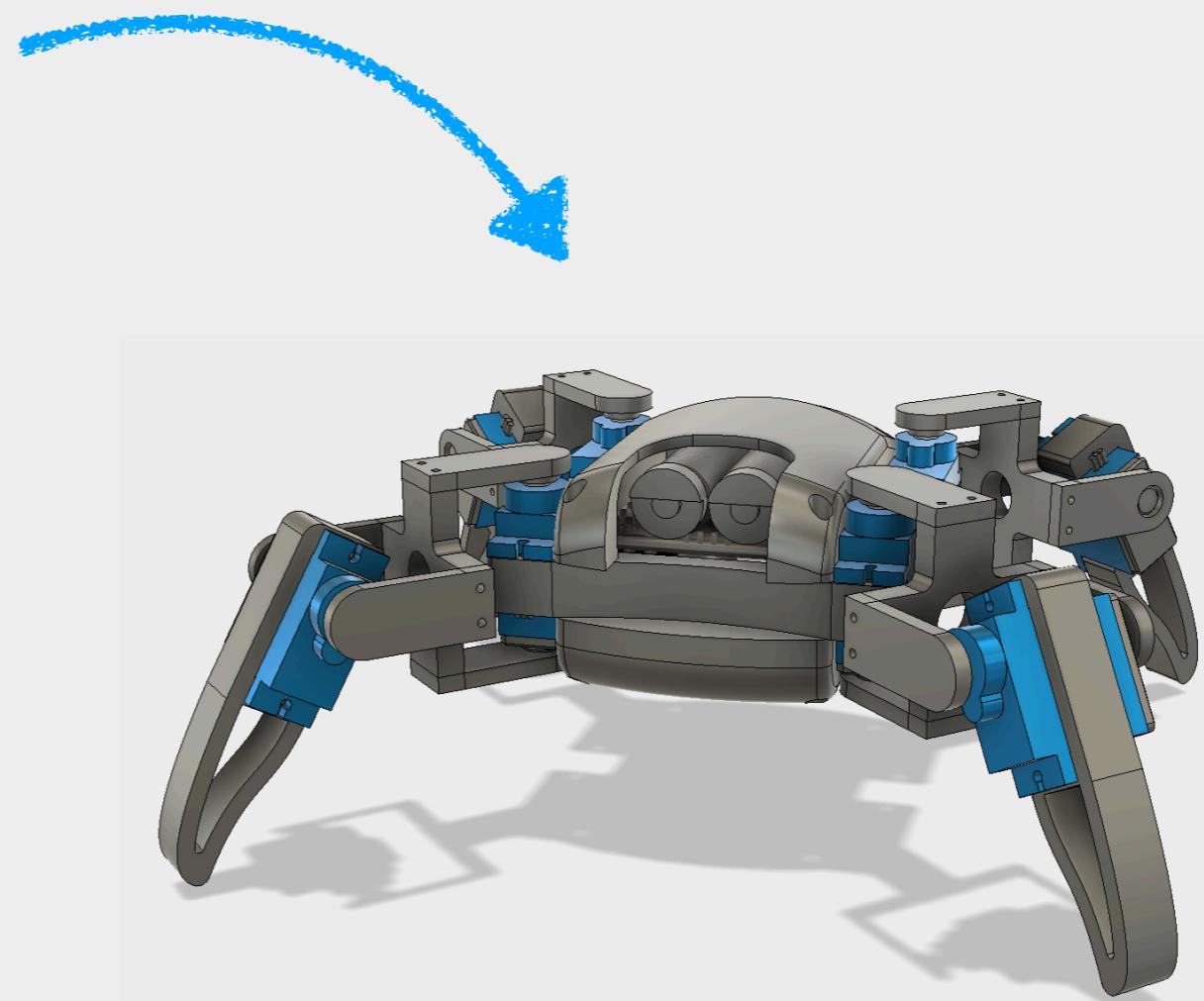


Backside

with LinkIt 7697

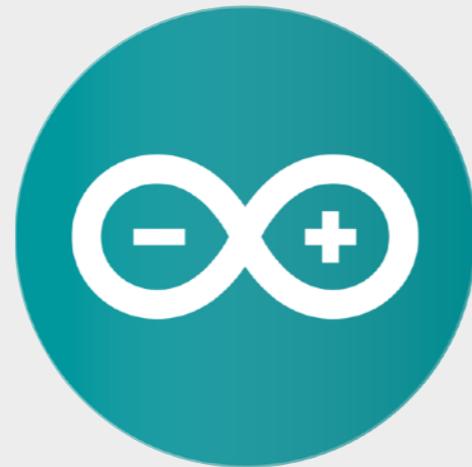
Install Firmware

01100
10110
11110



A01

Install Arduino IDE

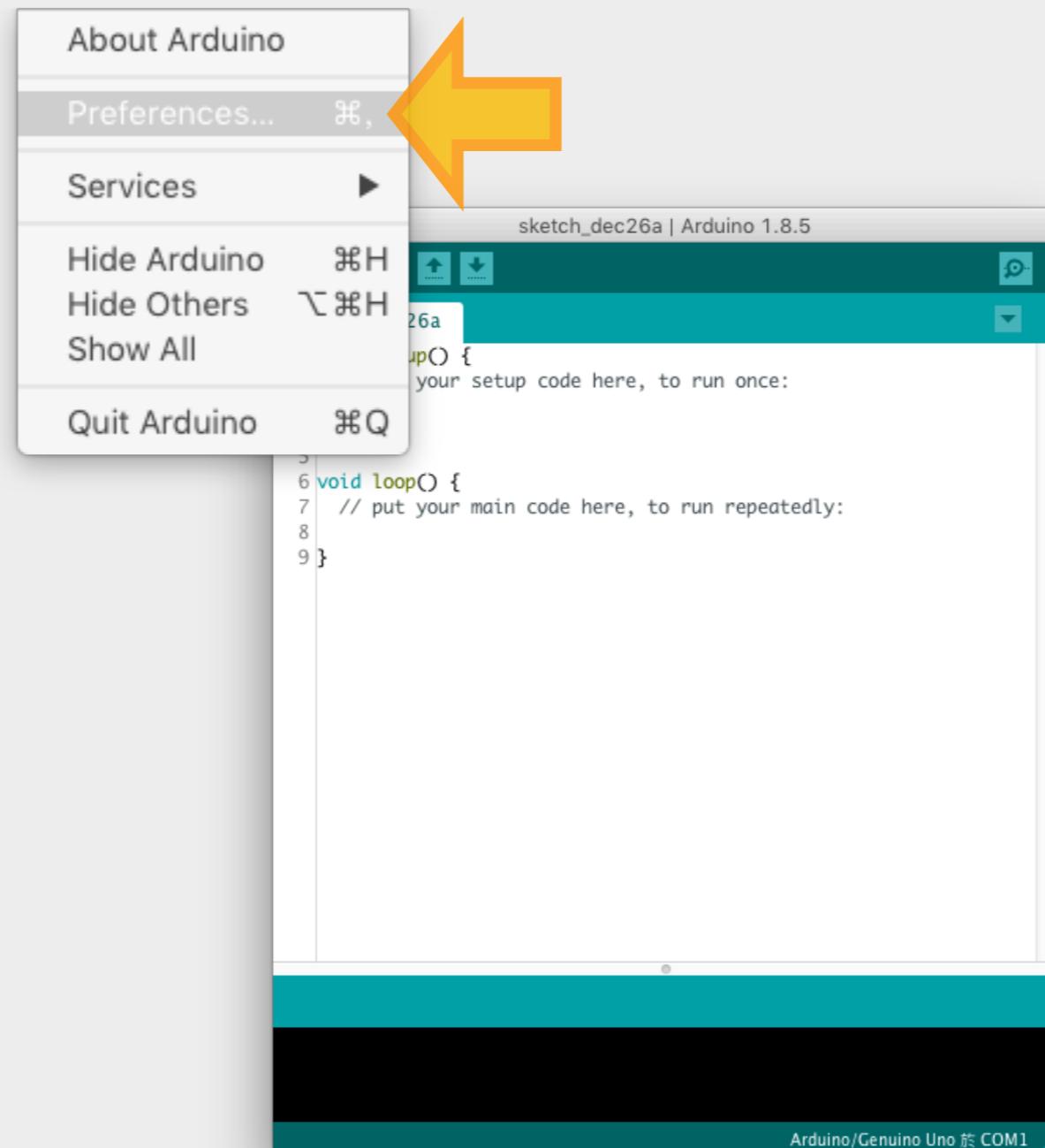


www.arduino.cc



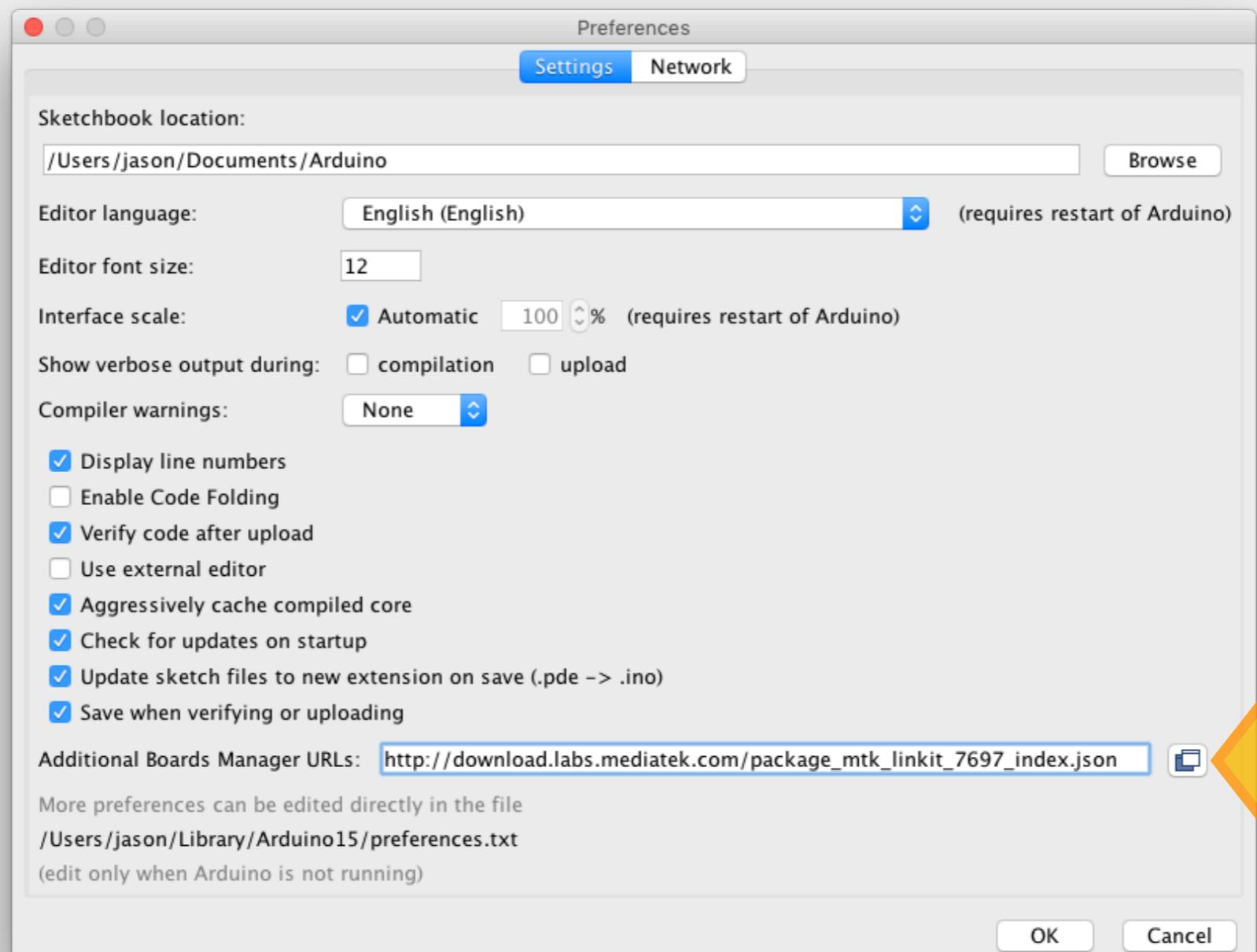
B01

Add LinkIt 7697 Broad to Arduino





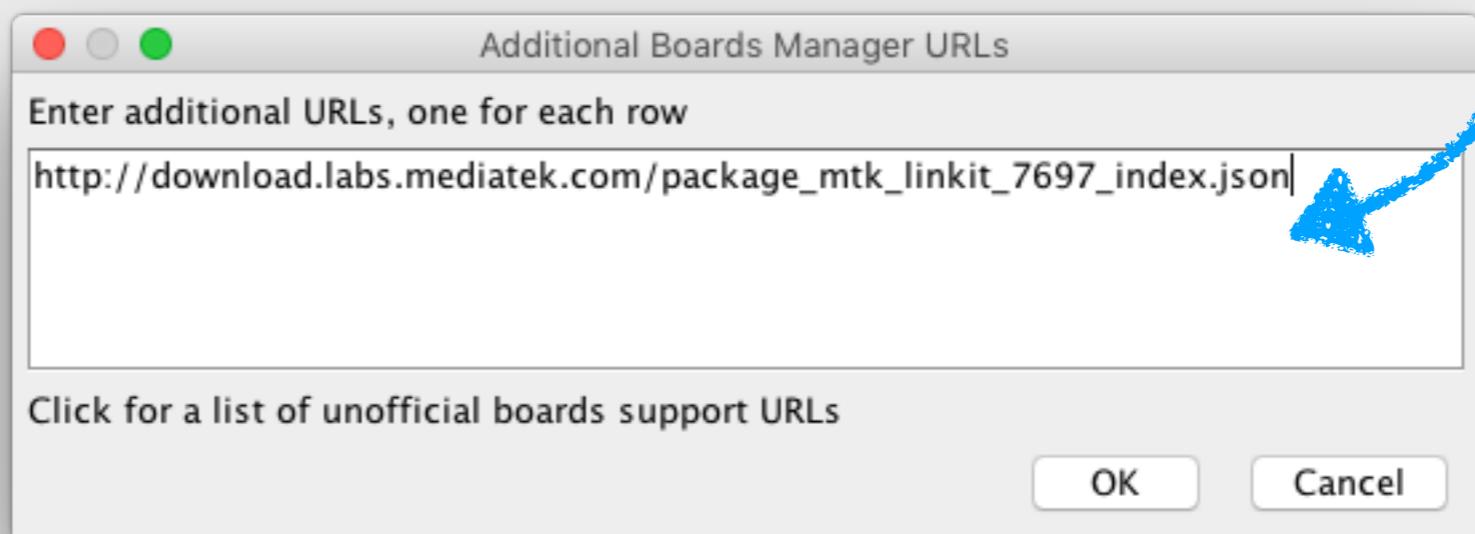
Add LinkIt 7697 Broad to Arduino



B03

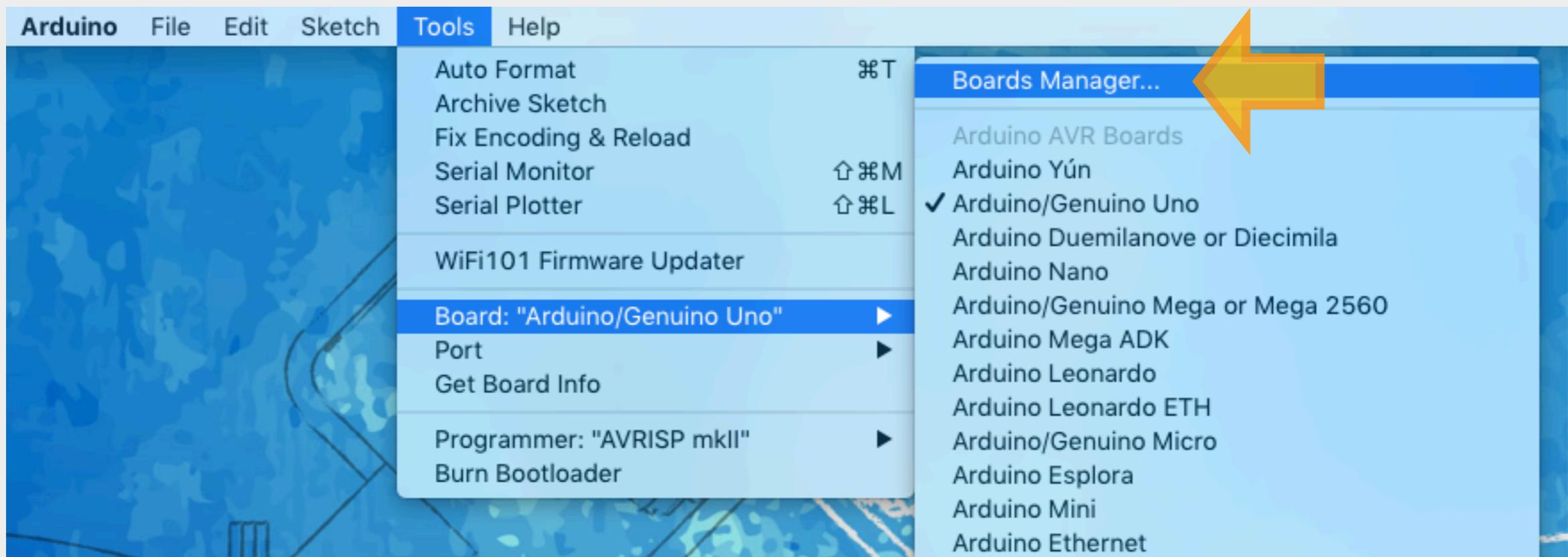
Add LinkIt 7697 Broad to Arduino

http://download.labs.mediatek.com/package_mtk_linkit_7697_index.json



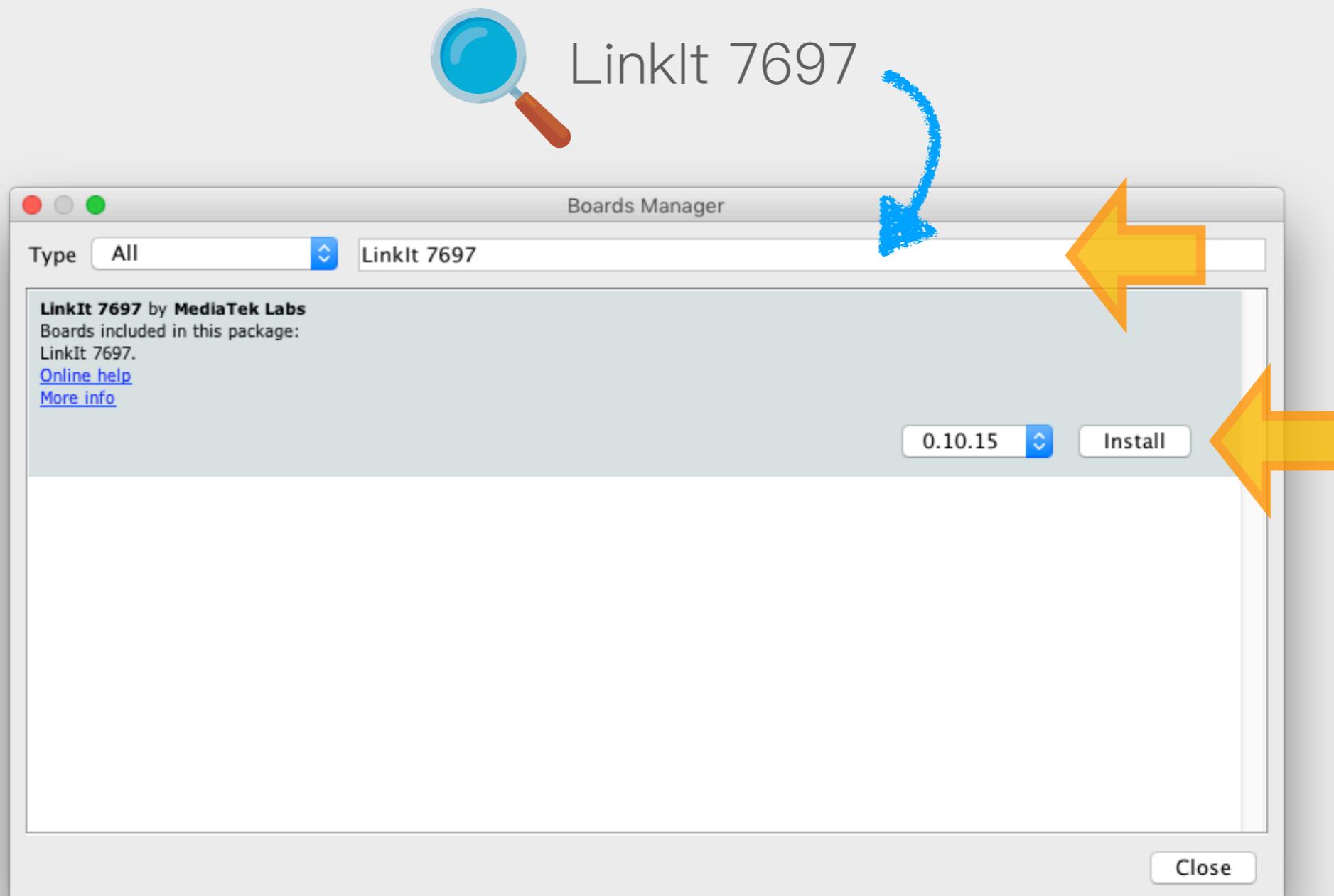
B04

Add LinkIt 7697 Broad to Arduino



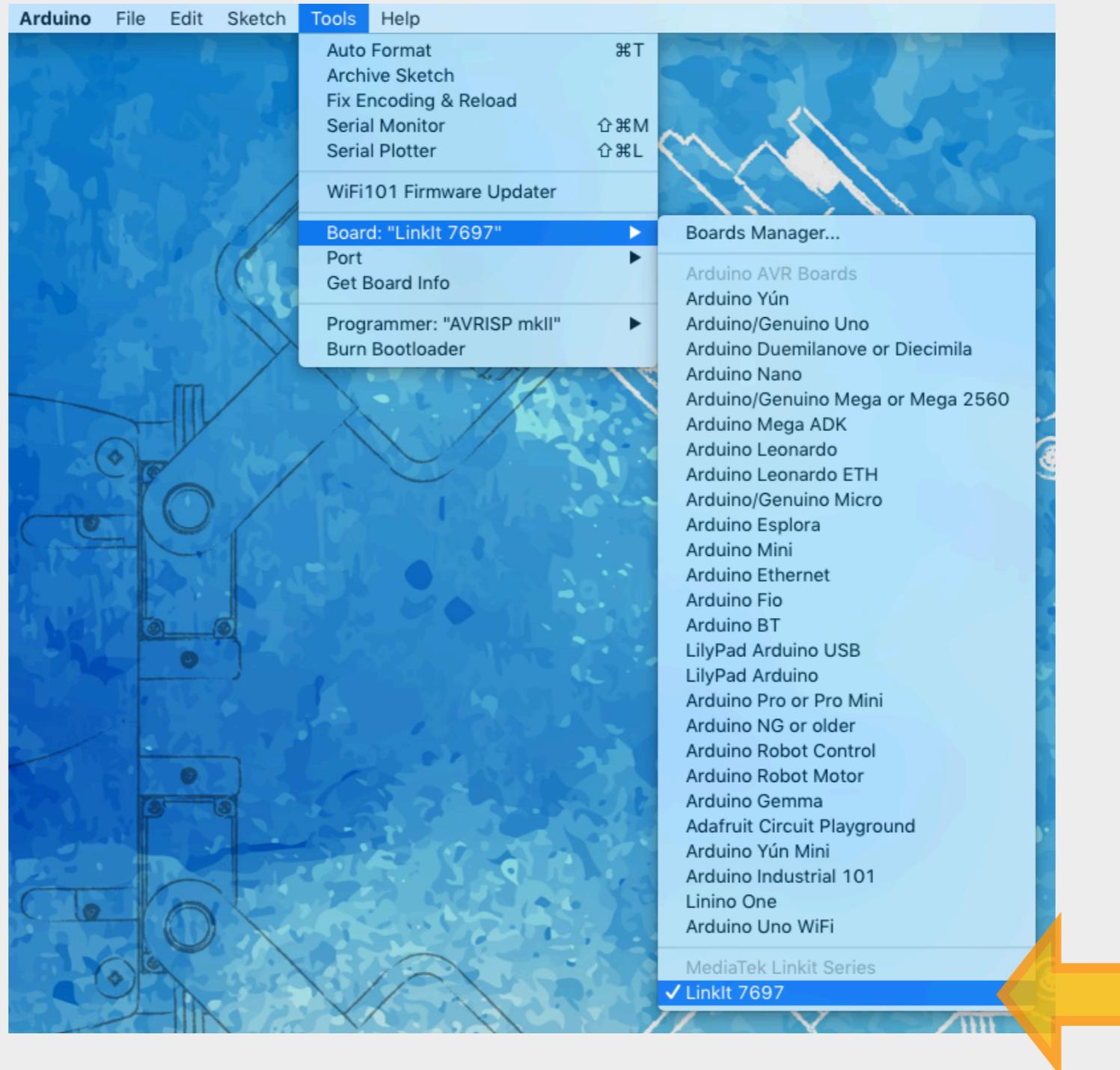
Add LinkIt 7697 Broad to Arduino

B05



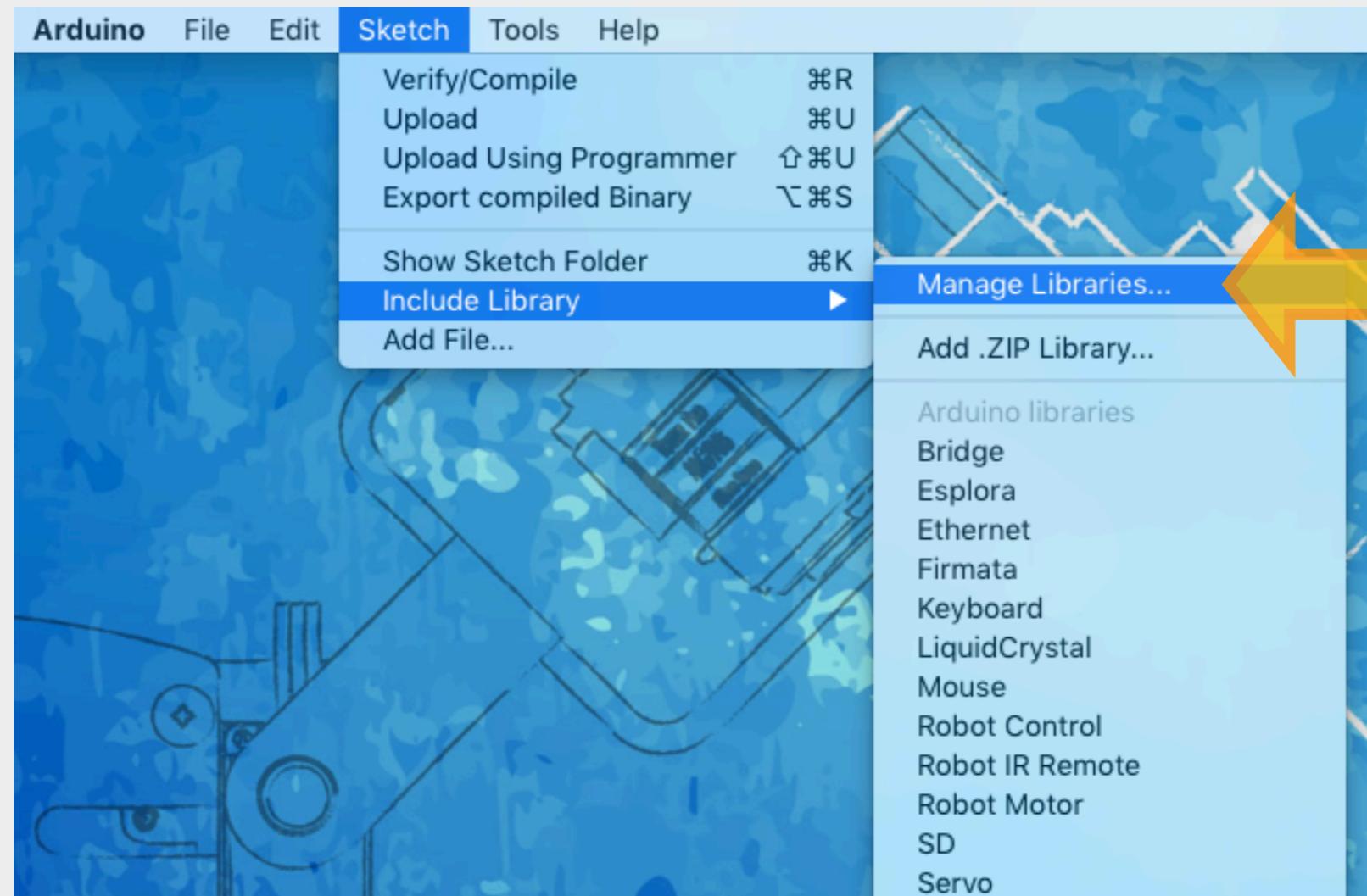
B06

Add LinkIt 7697 Broad to Arduino



C01

Include PWM Servo Driver Library



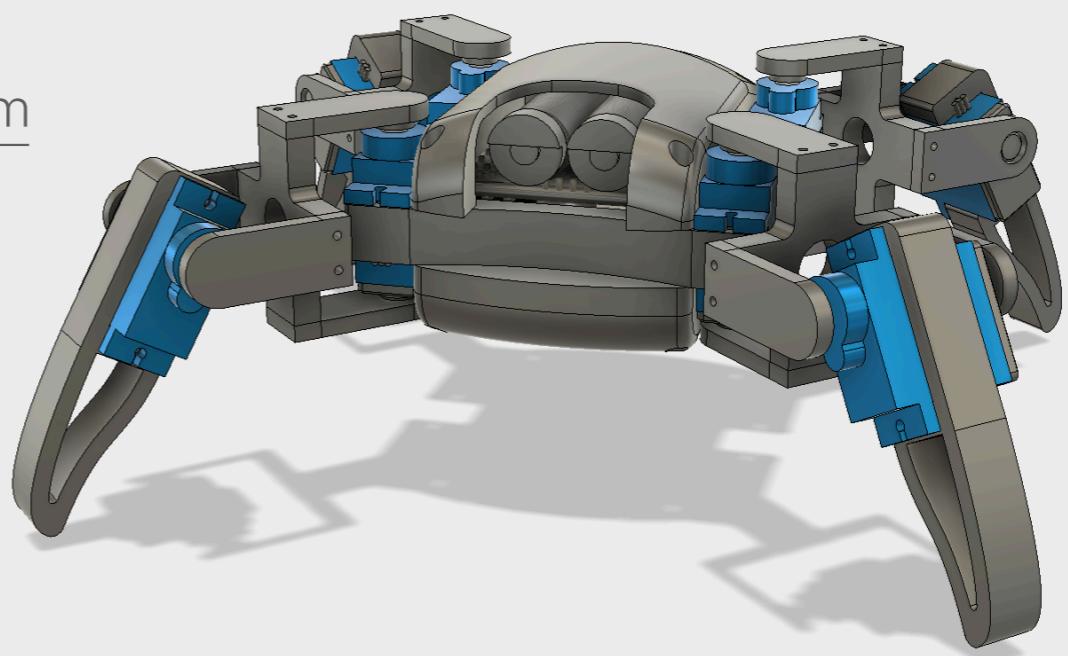


Include PWM Servo Driver Library





q1.jasonworkshop.com



D01

Upload firmware



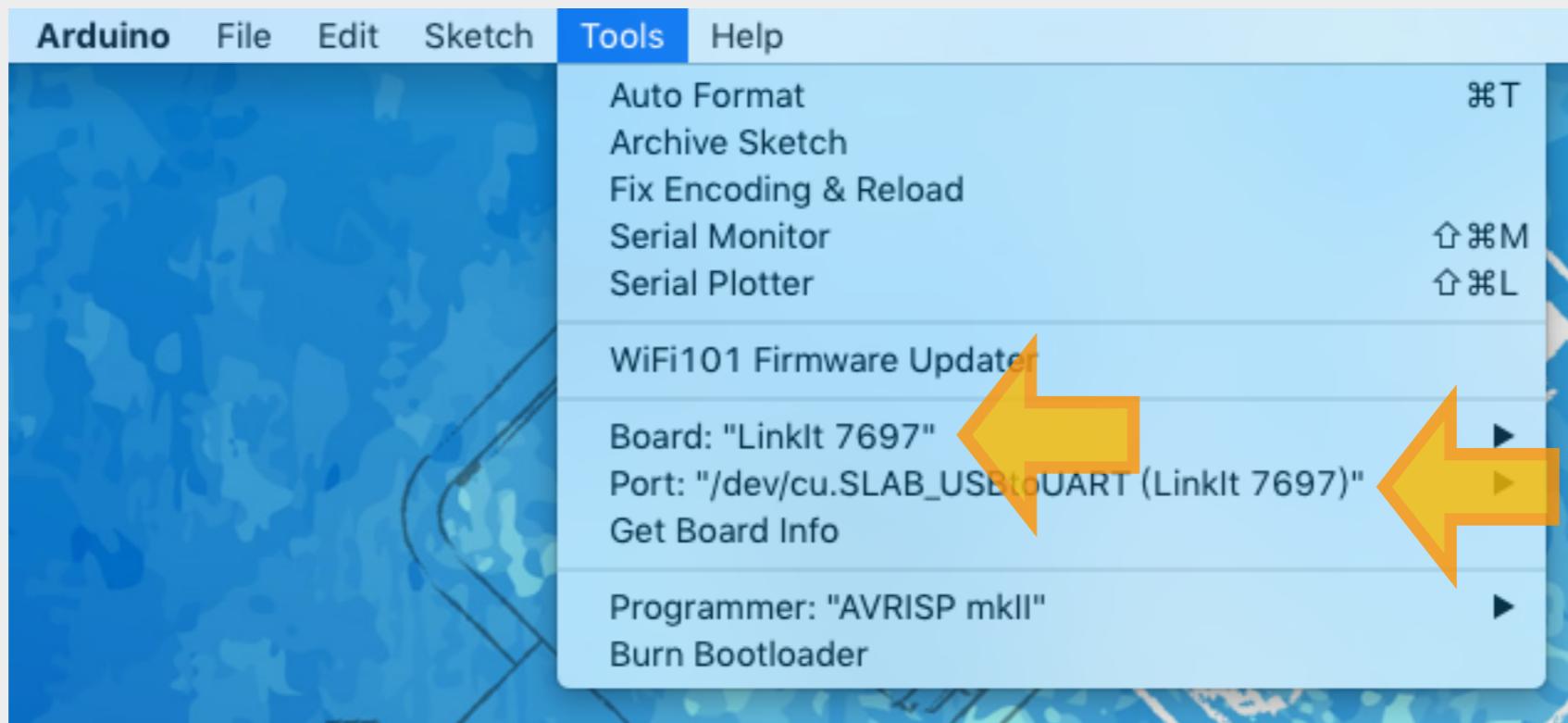
firmware.ino

The screenshot shows the Arduino IDE interface with the title bar "firmware | Arduino 1.8.5". The main window displays the Arduino sketch code for the Q1 mini 2.0 robot. The code includes comments providing details about the robot's design, version, and licensing information, such as Attribution-NonCommercial-ShareAlike 4.0 (CC-BY-NC-SA 4.0). The code also defines pin assignments for various pins (P02, P03, P05, P07, P08, P11, P16, P15) and includes #include statements for EEPROM.h, Servo.h, and LRemote.h. A progress bar at the bottom indicates the upload process is complete.

```
1 // Q1 mini 2.0 - Simple Quadruped Robot (Designed by Jason Workshop)
2 //
3 // Firmware version 2.0.0
4 // Last Update: 28 Mar 2018
5 //
6 // Jason Workshop
7 // Website: http://jasonworkshop.com
8 // FB page: http://fb.com/jasonworkshop
9 //
10 // Related documents and software
11 // Website: http://q1.jasonworkshop.com
12 // FB page: http://fb.com/Q1.JasonWorkshop
13 //
14 // 3D parts
15 // Website: http://thingiverse.com/thing:2311678
16 //
17 // -----
18 //
19 // This Firmware licensed under the Attribution-NonCommercial-ShareAlike 4.0 (CC-BY-NC-SA 4.0)
20 //
21 // Attribution: You must give appropriate credit, provide a link to the license, and indicate if changes were made.
22 // You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
23 //
24 // ShareAlike: If you remix, transform, or build upon the material,
25 // you must distribute your contributions under the same license as the original.
26 //
27 // License Deed
28 // http://creativecommons.org/licenses/by-sa/4.0/
29 //
30 // -----
31 //
32 // -----
33 // | 5 |           | 1 |
34 // | P07 |           | P02 |
35 // -----
36 // | 6 | | 2 |
37 // | P08 | | P03 |
38 // -----
39 // | 7 | | 3 |
40 // | P11 | | P05 |
41 // -----
42 // | 8 |           | 4 |
43 // | P16 |           | P15 |
44 // -----          (Top View)
45 //
46
47 #include <EEPROM.h>
48 #include <Servo.h>
49 #include <LRemote.h>
50
51 // -----
52
```

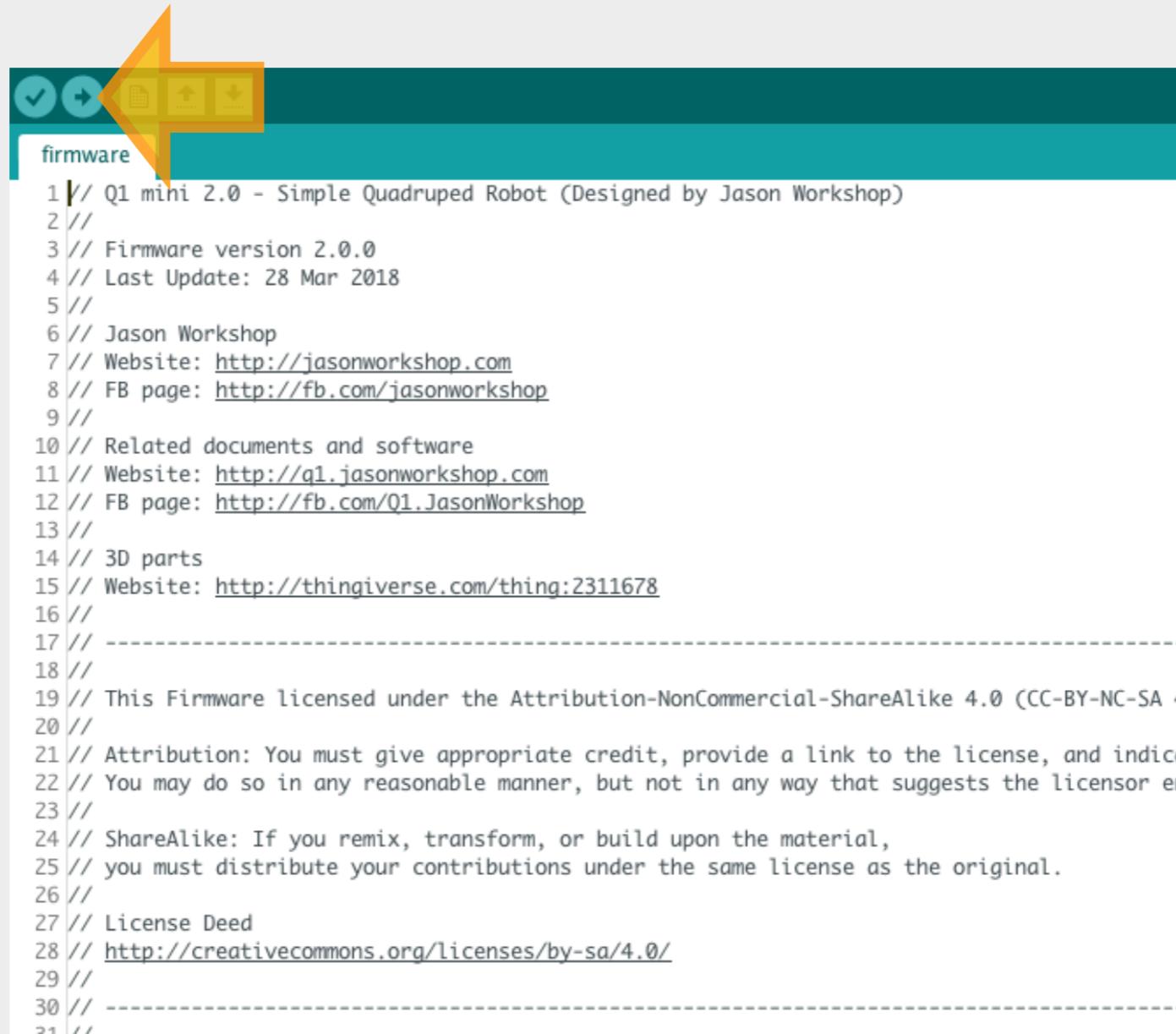
D02

Upload firmware



D03

Upload firmware



D04

Upload firmware



Done uploading.

```
Sketch uses 576952 bytes (28%) of program storage space. Maximum is 2019328 bytes.  
Global variables use 174452 bytes (48%) of dynamic memory, leaving 185996 bytes for local variables.  
Start uploading the download agent
```

Waiting for DA output...

DA uploaded, start uploading user binary...

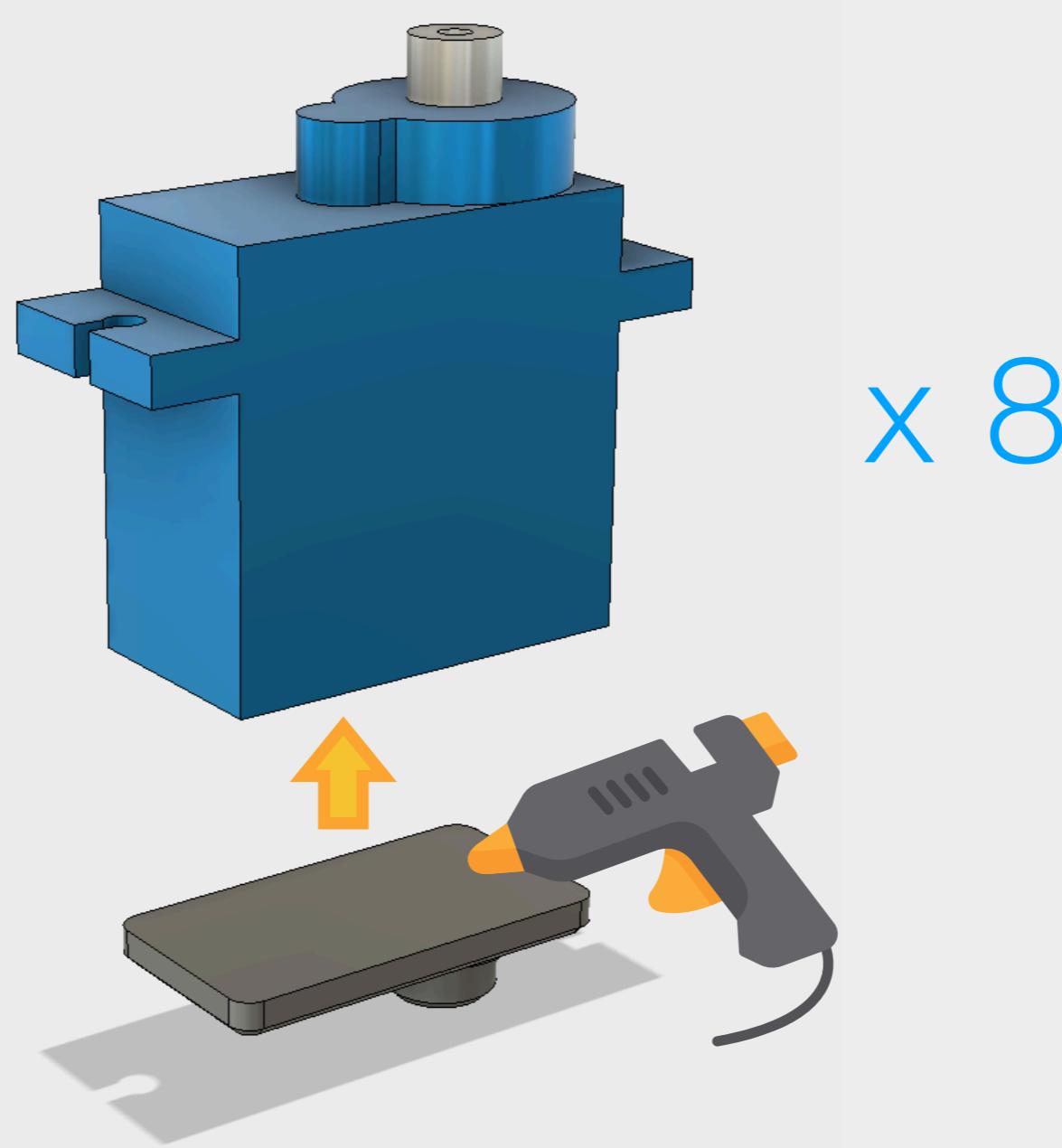
Wi-Fi Firmware version check ok.

The board reboots now.

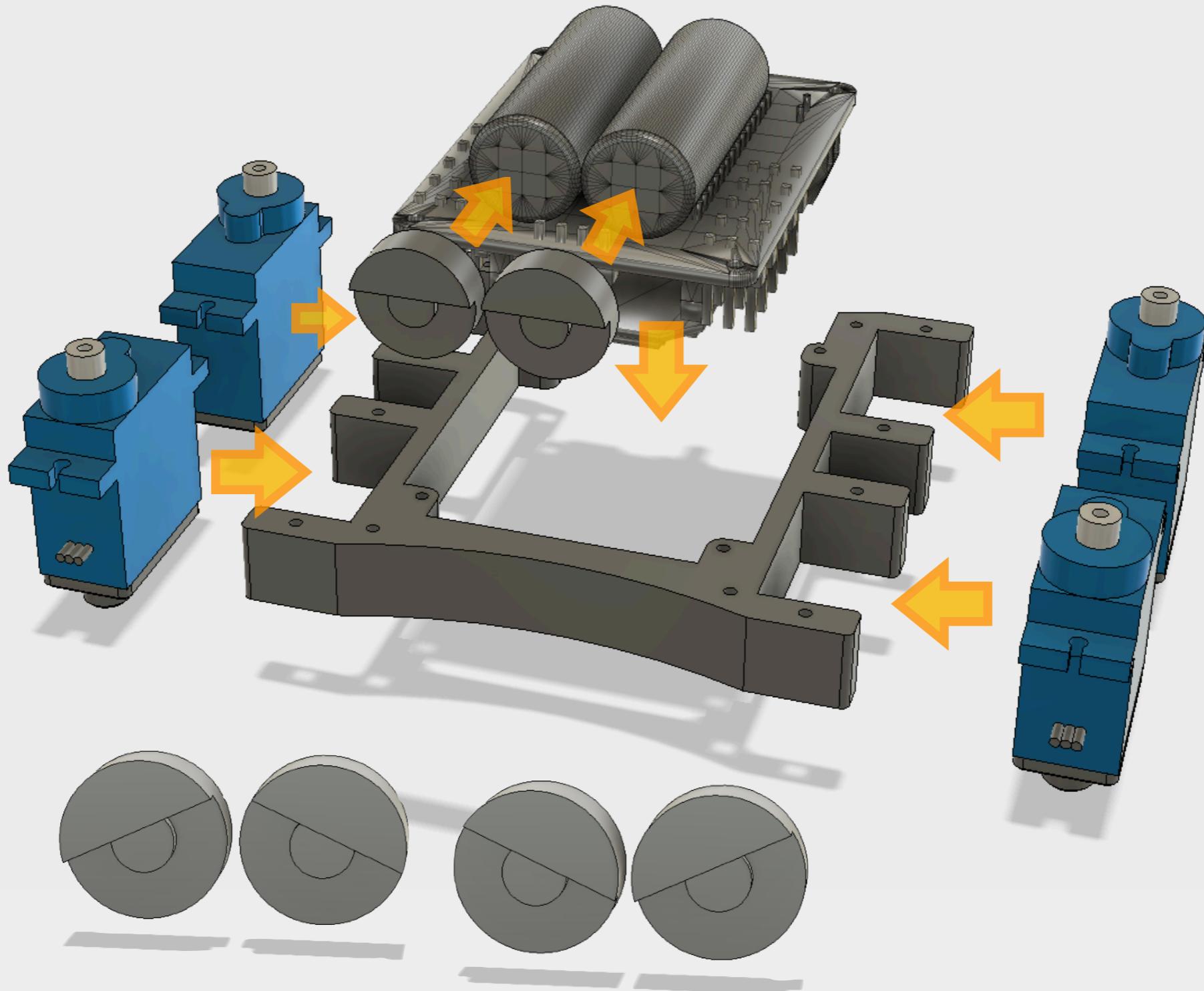
Assemble



E01



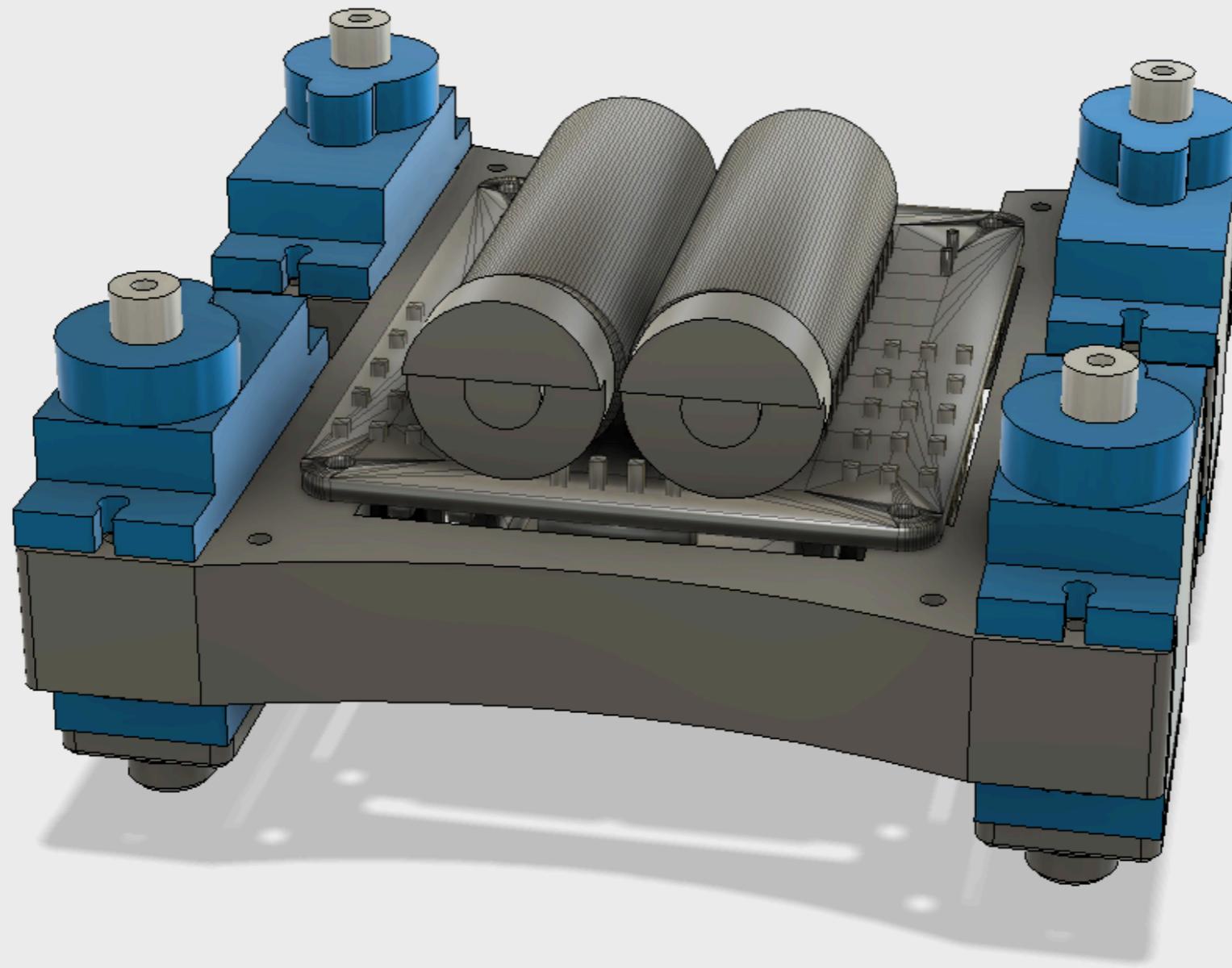
E02



E03

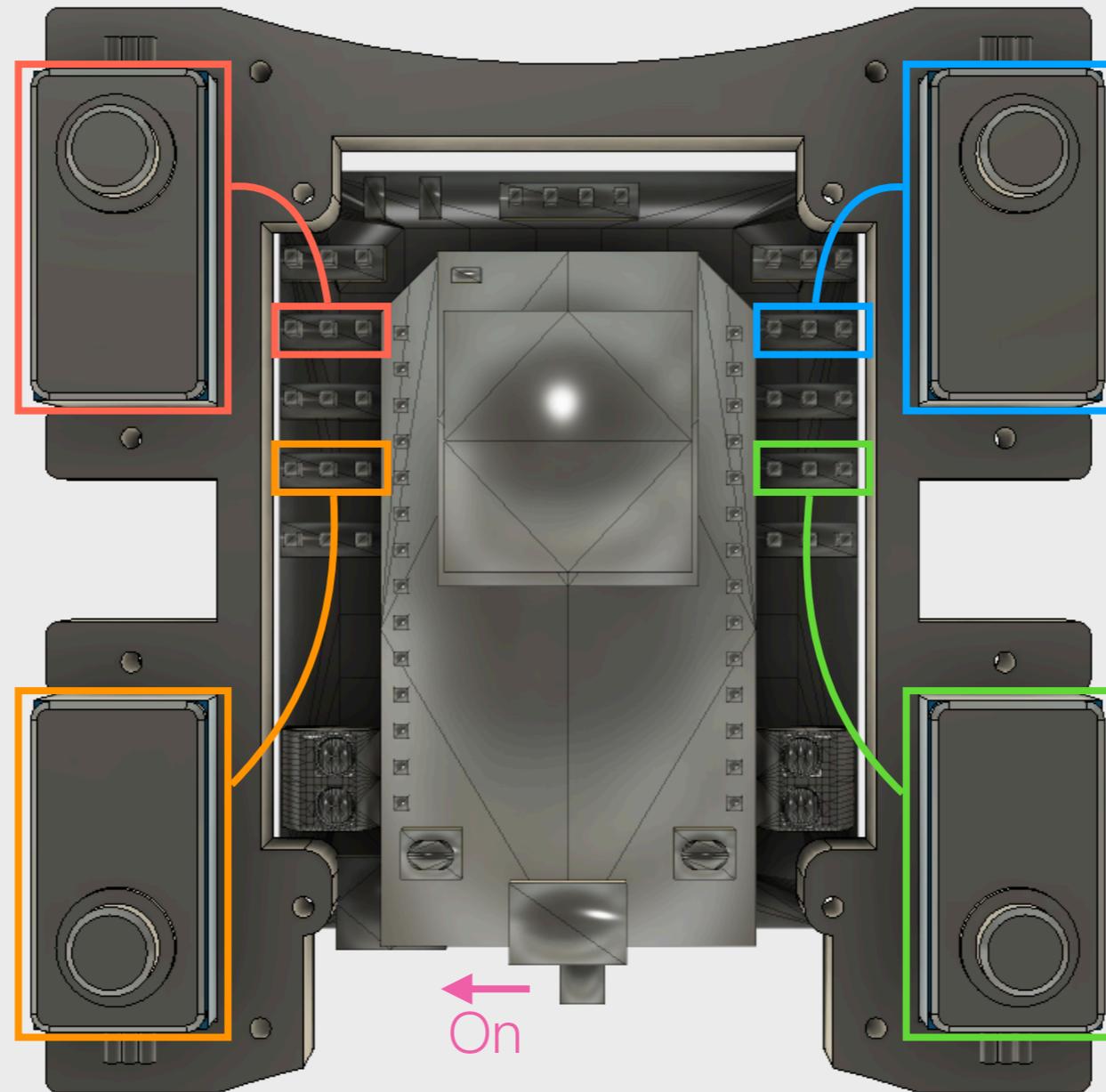


M1.7 x 8mm Screw
x 12

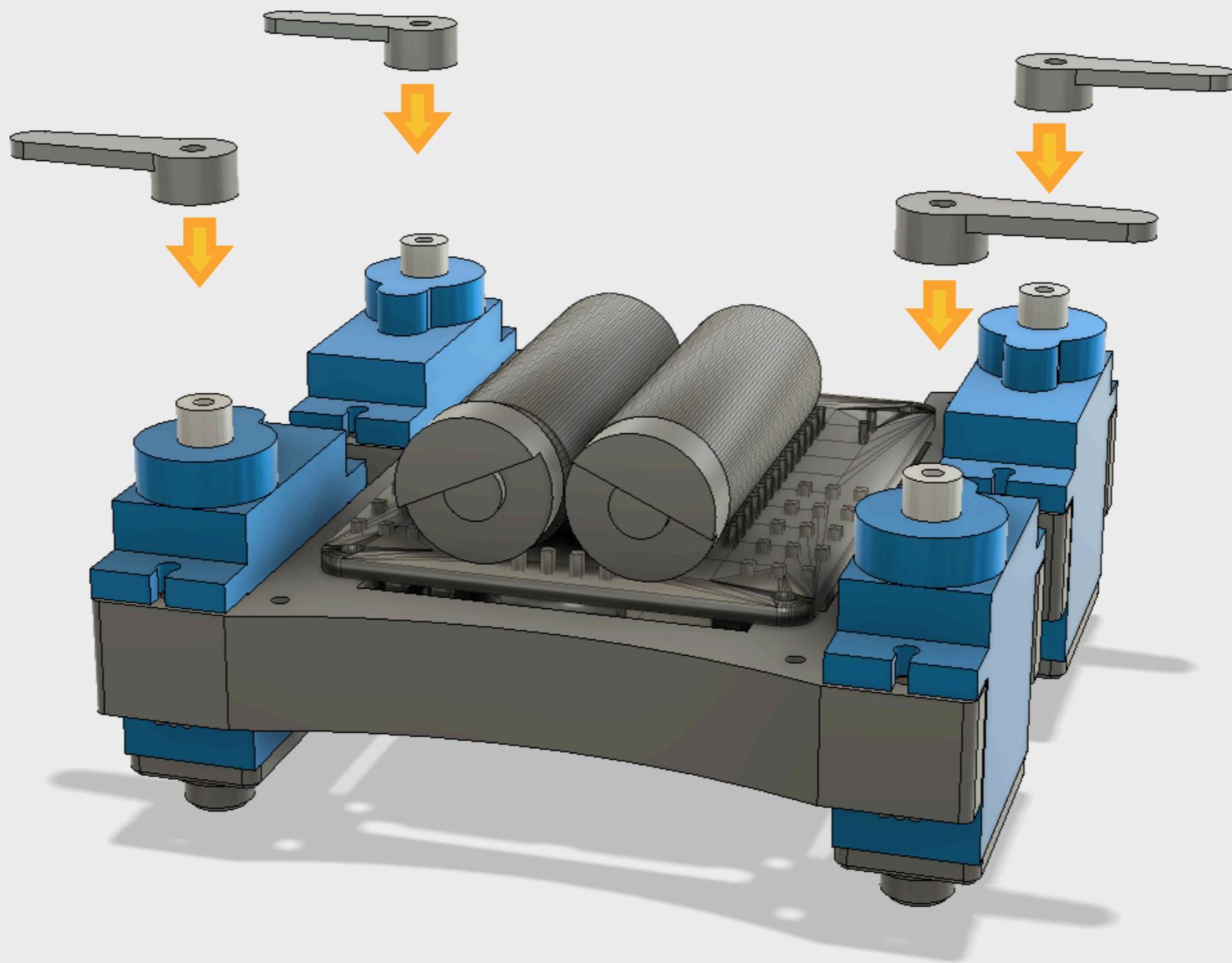


E04

Connect and turn on

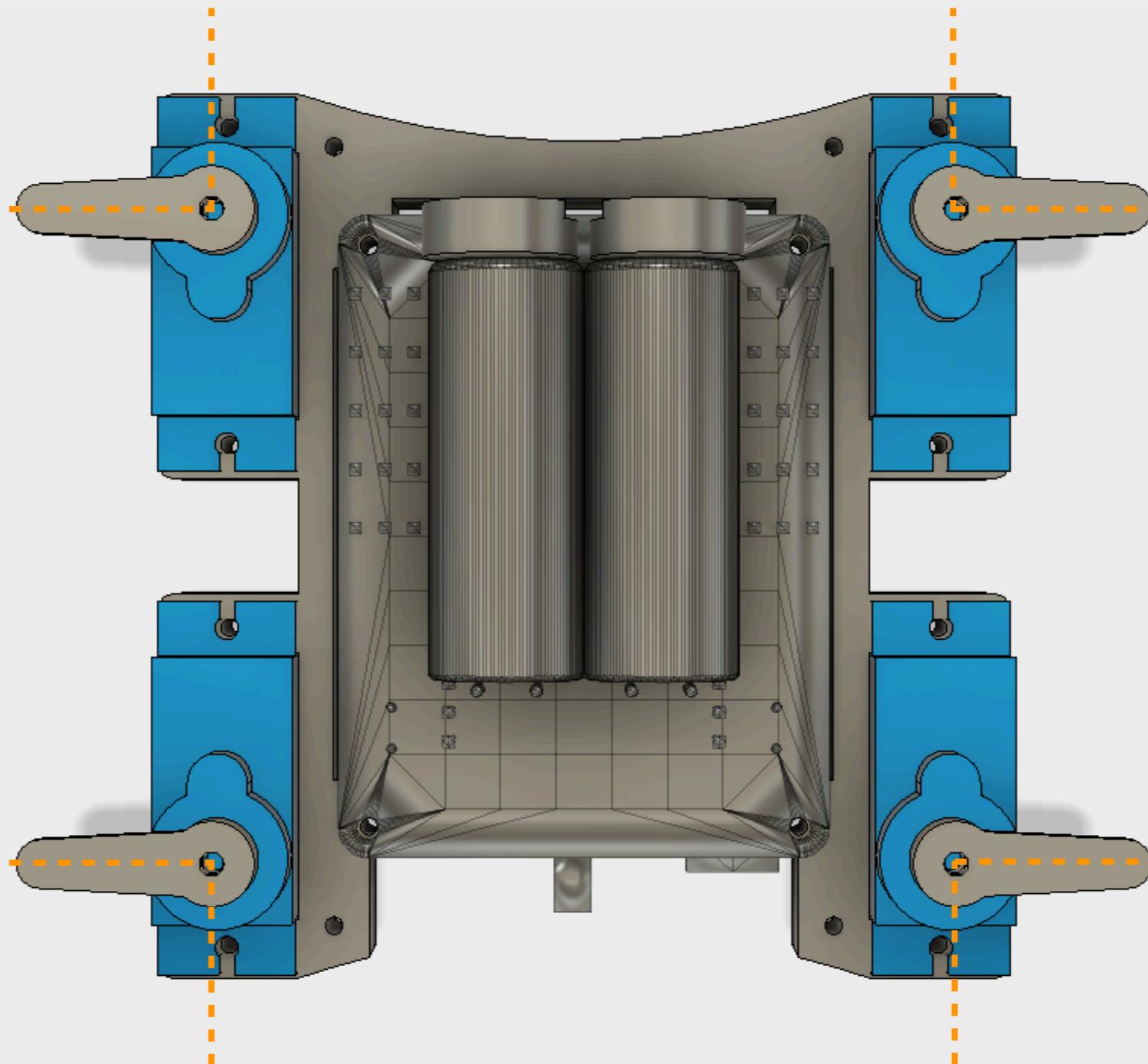


E05

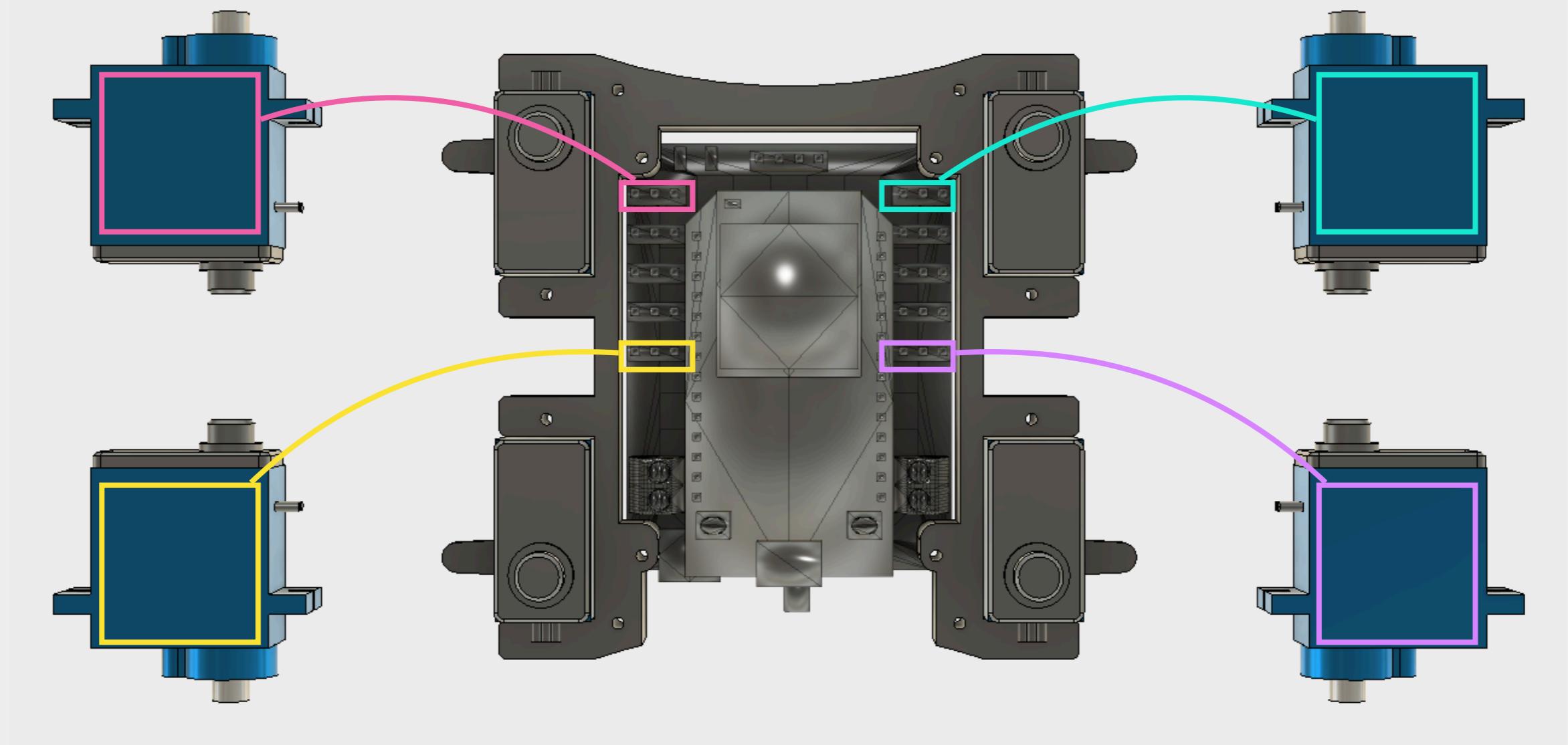


E06

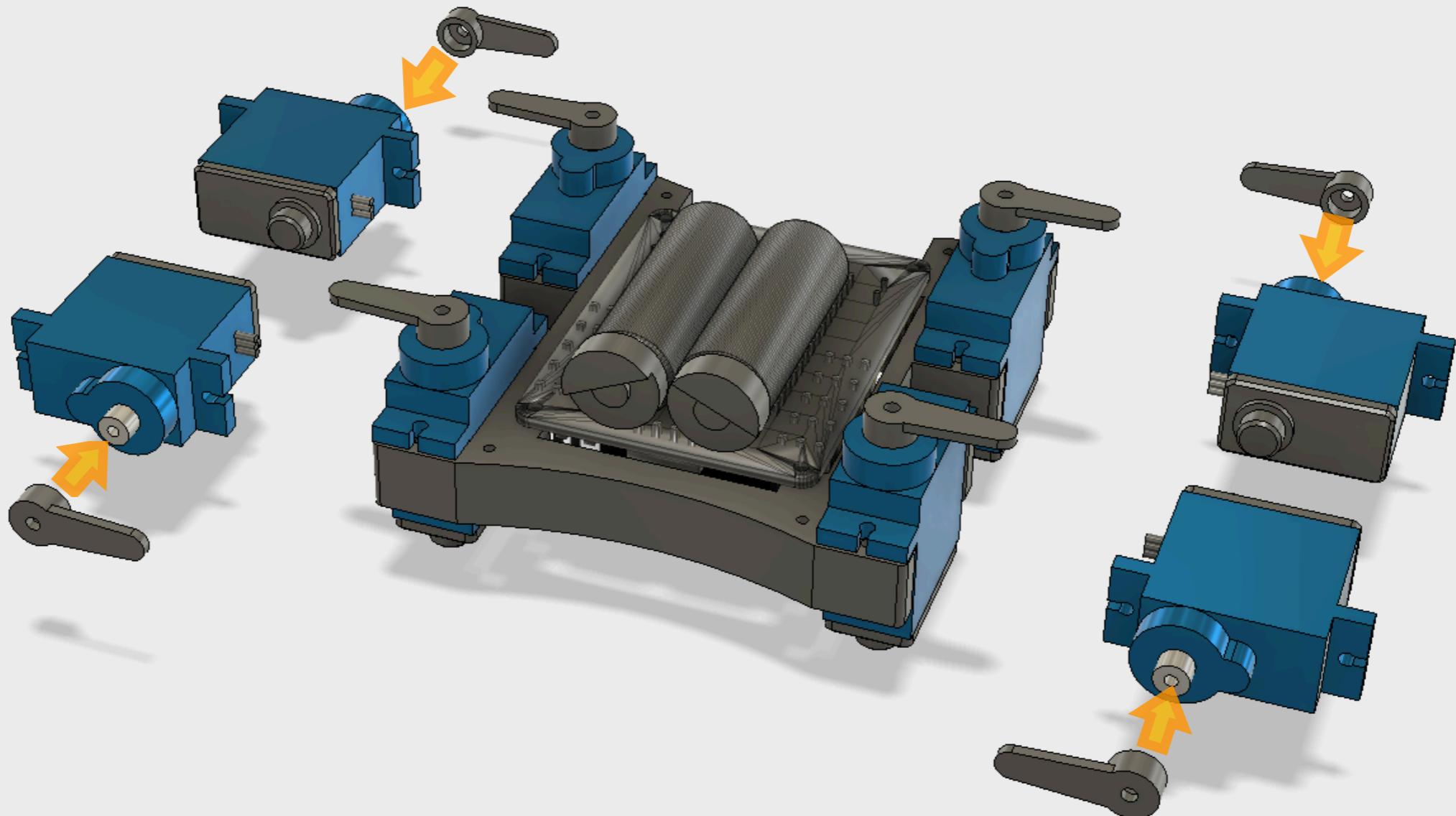
As far as possible at right angle



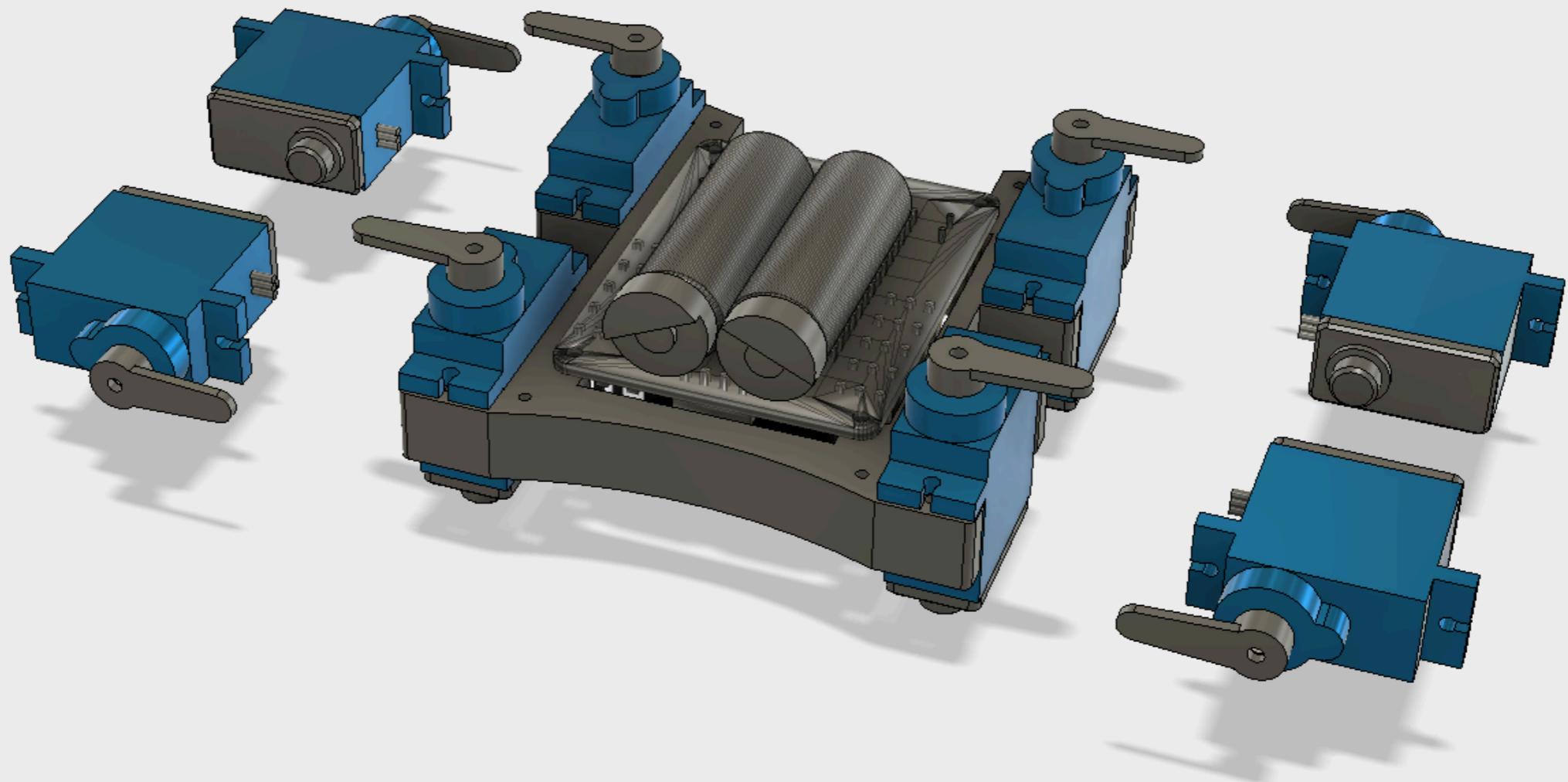
E07



E08

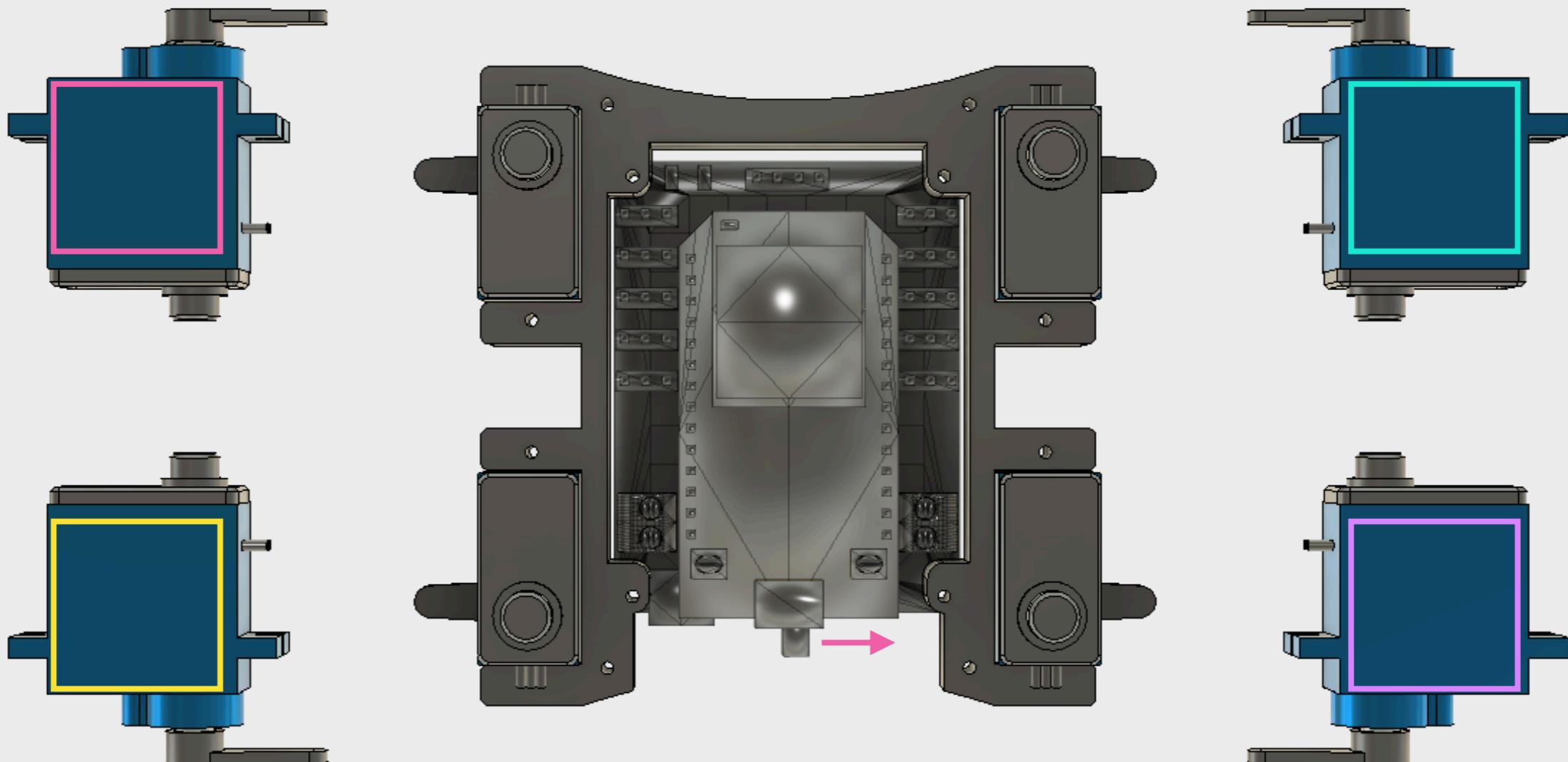


E09

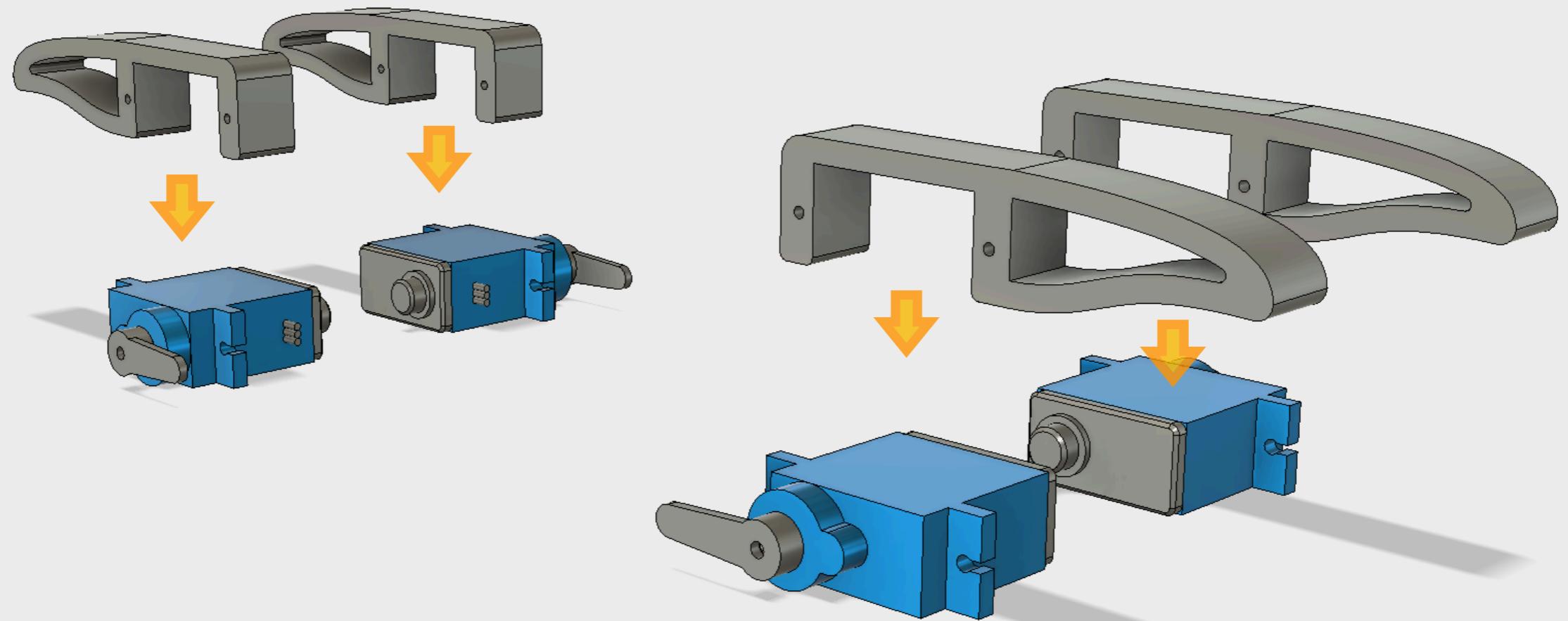


Turn off and disconnect

E10



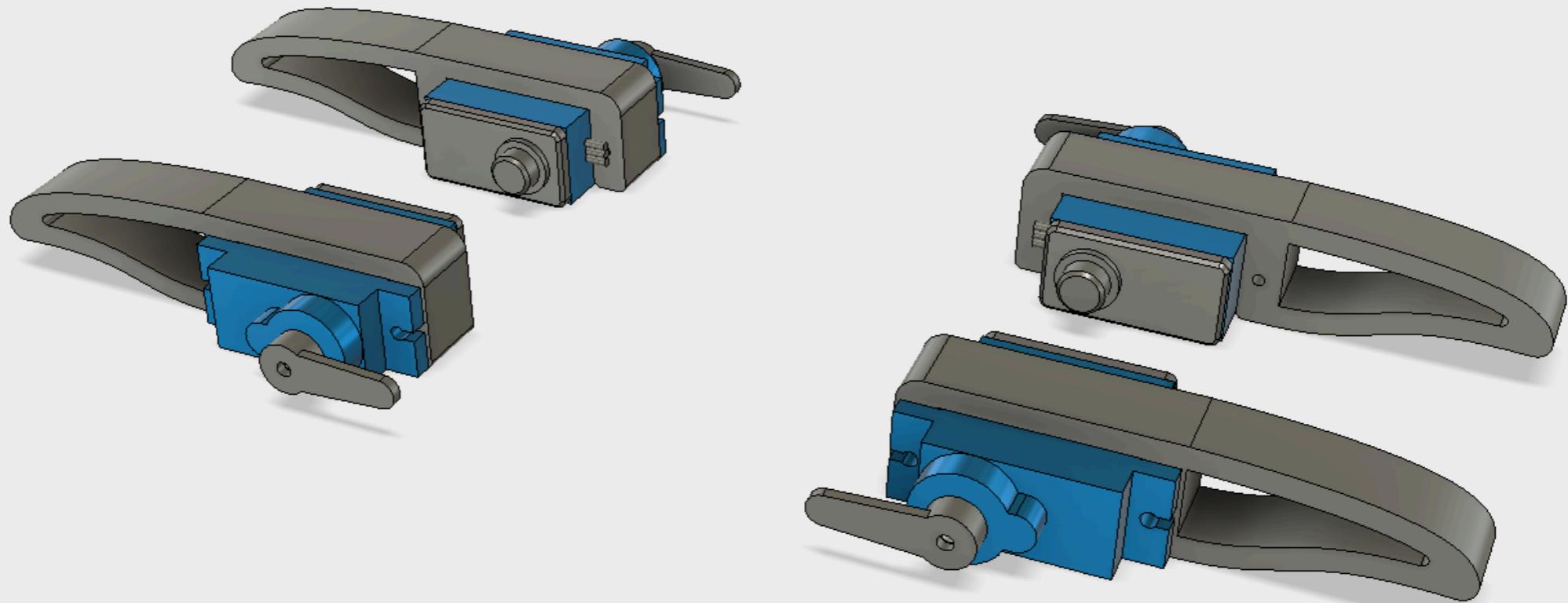
E11



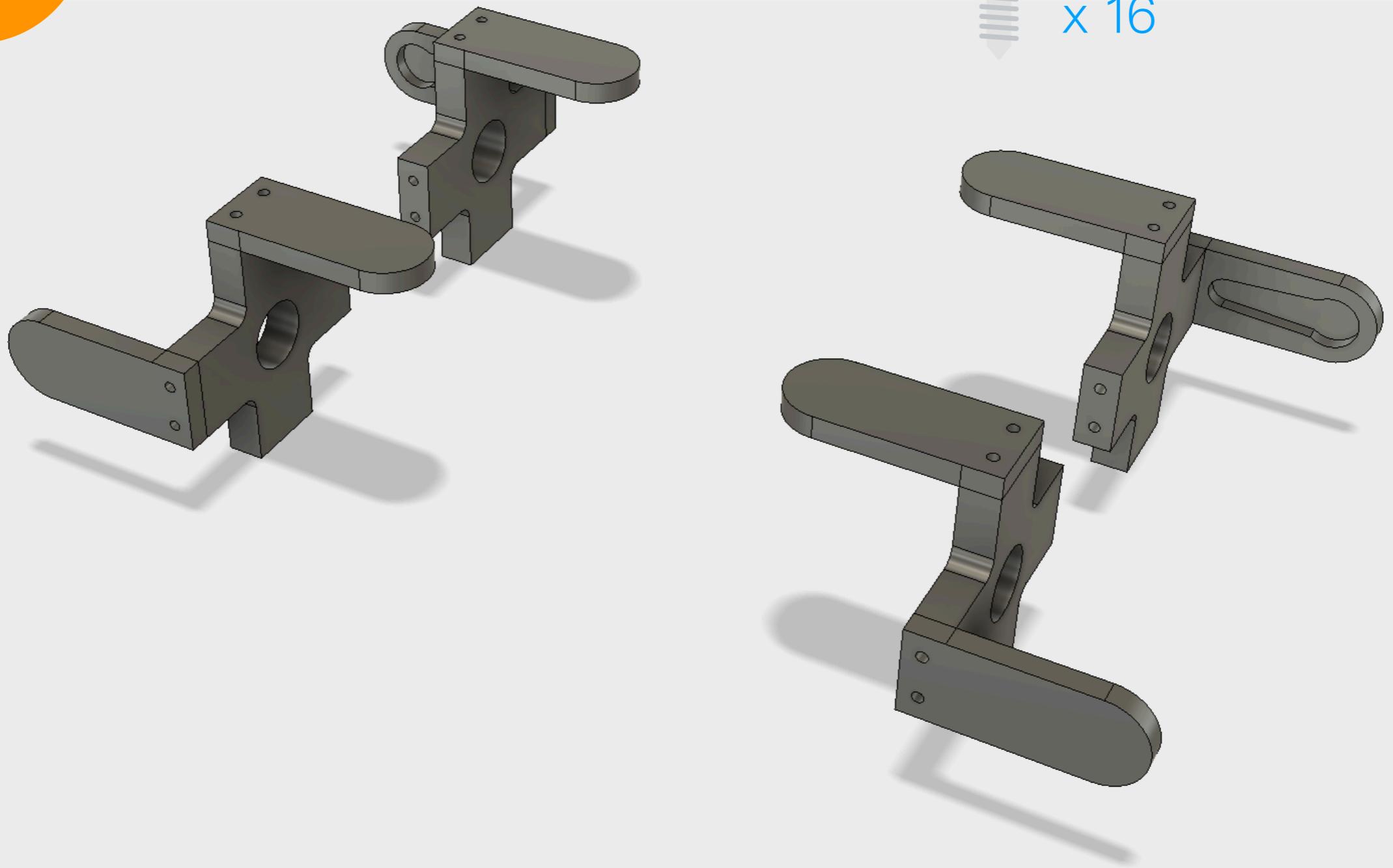
E12



M1.7 x 8mm Screw
x 8

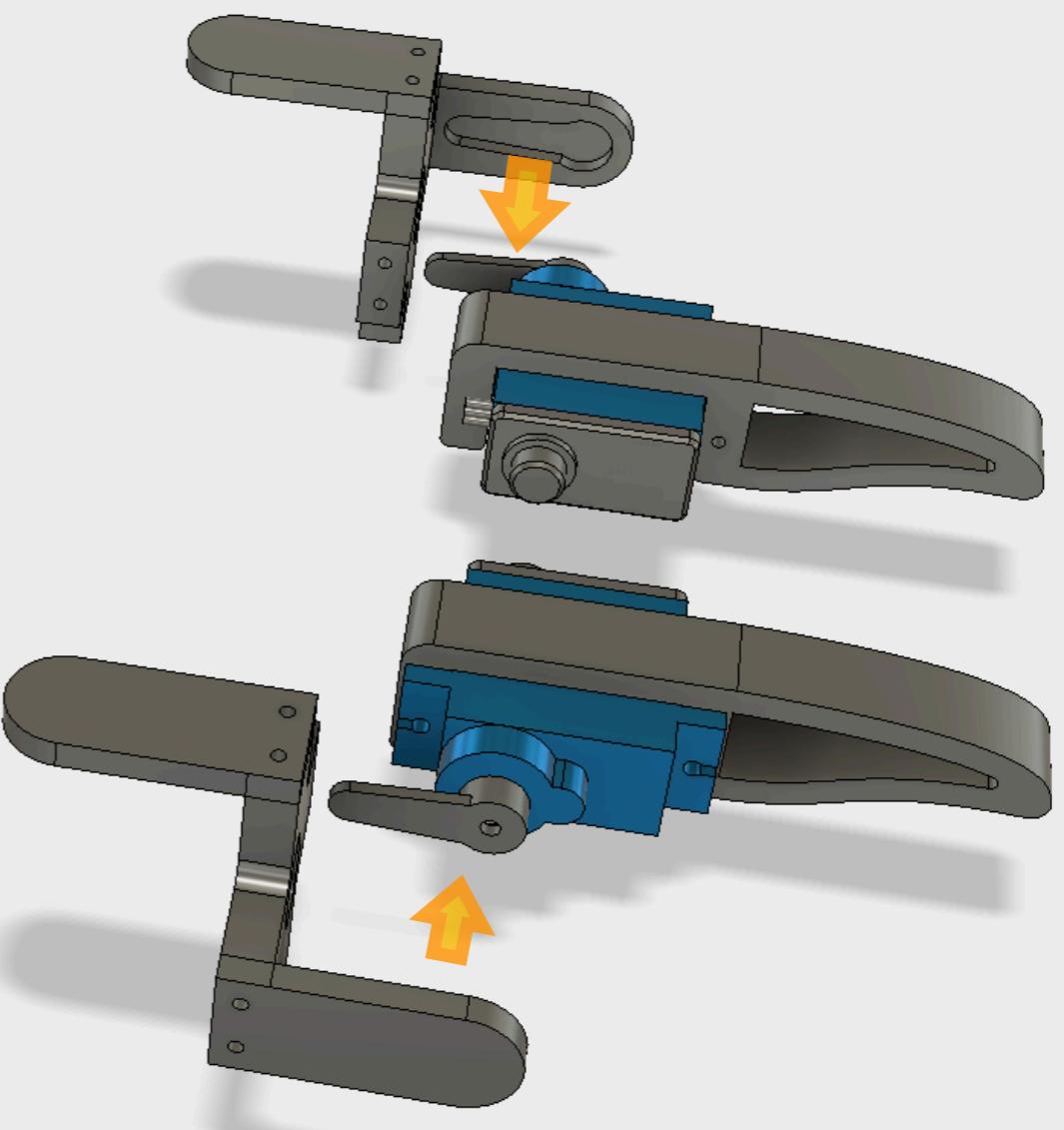
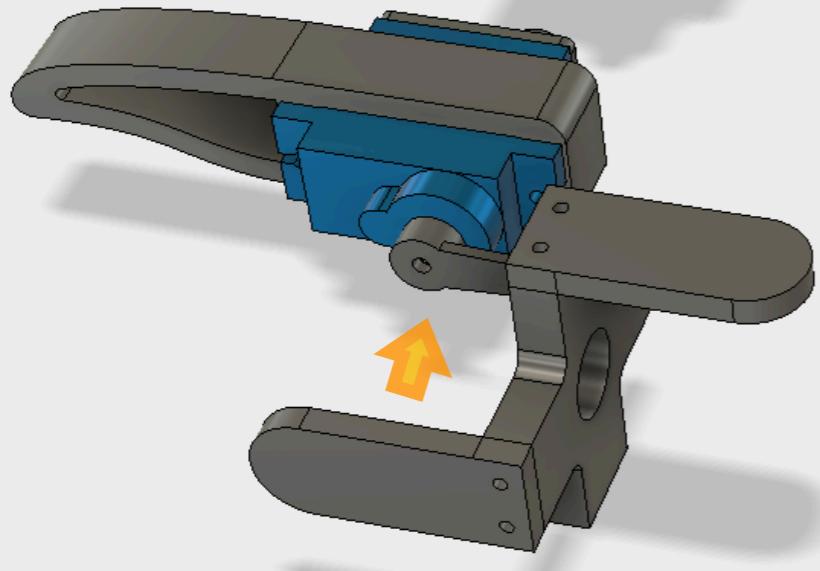
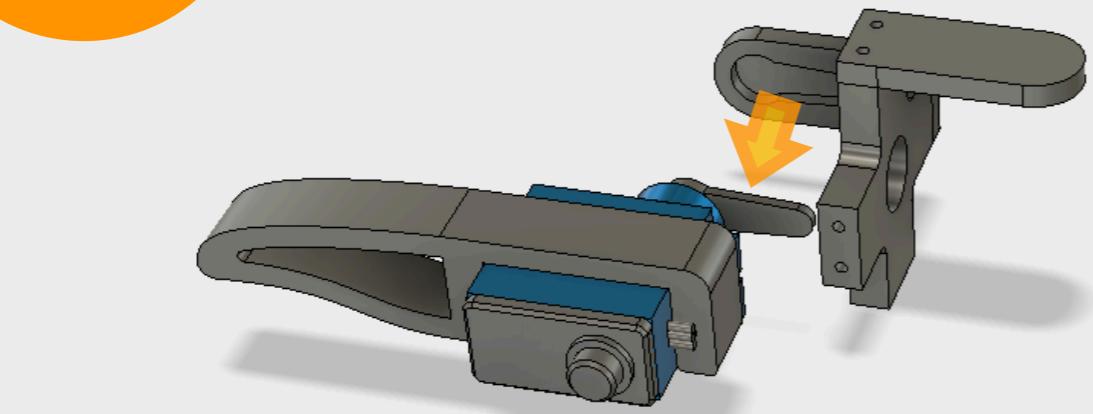


E13

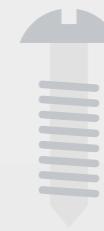
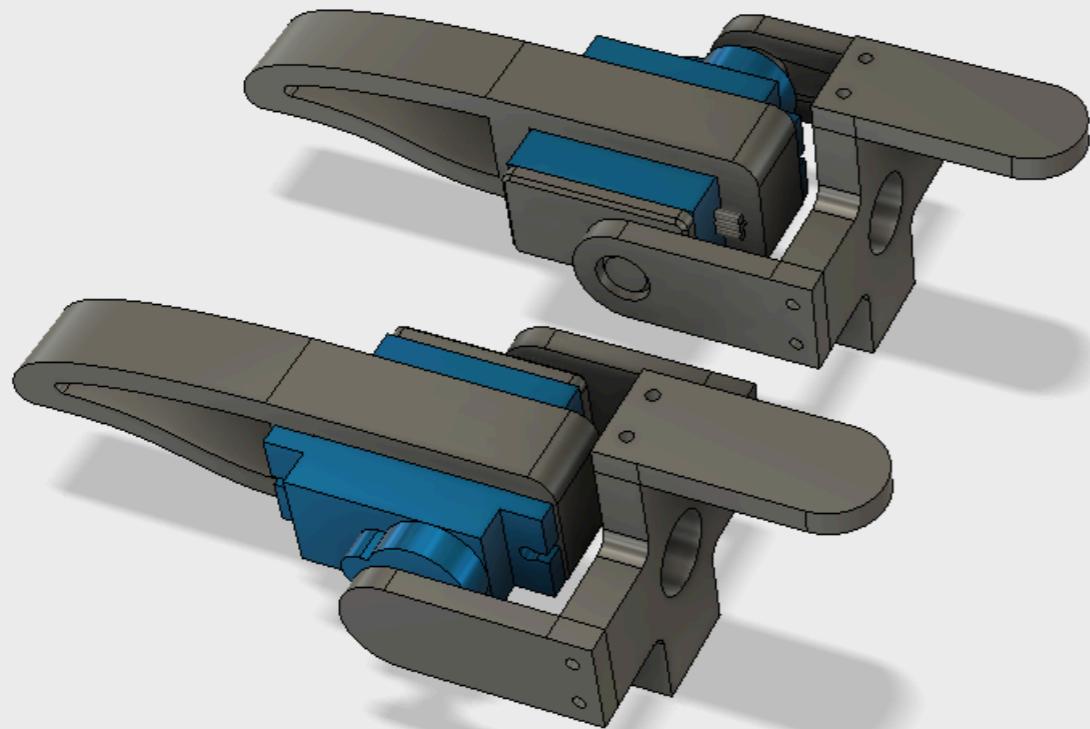


M1.7 x 8mm Screw
x 16

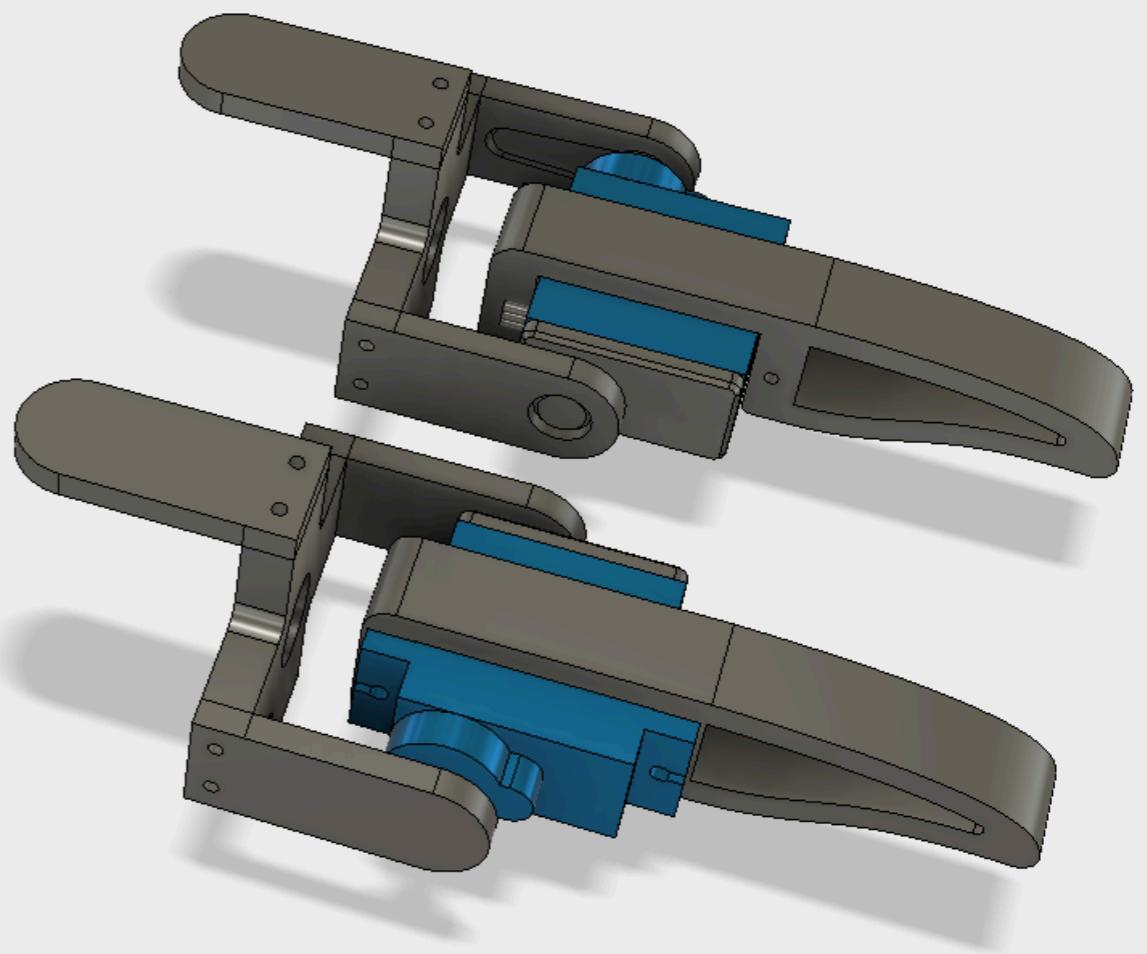
E14



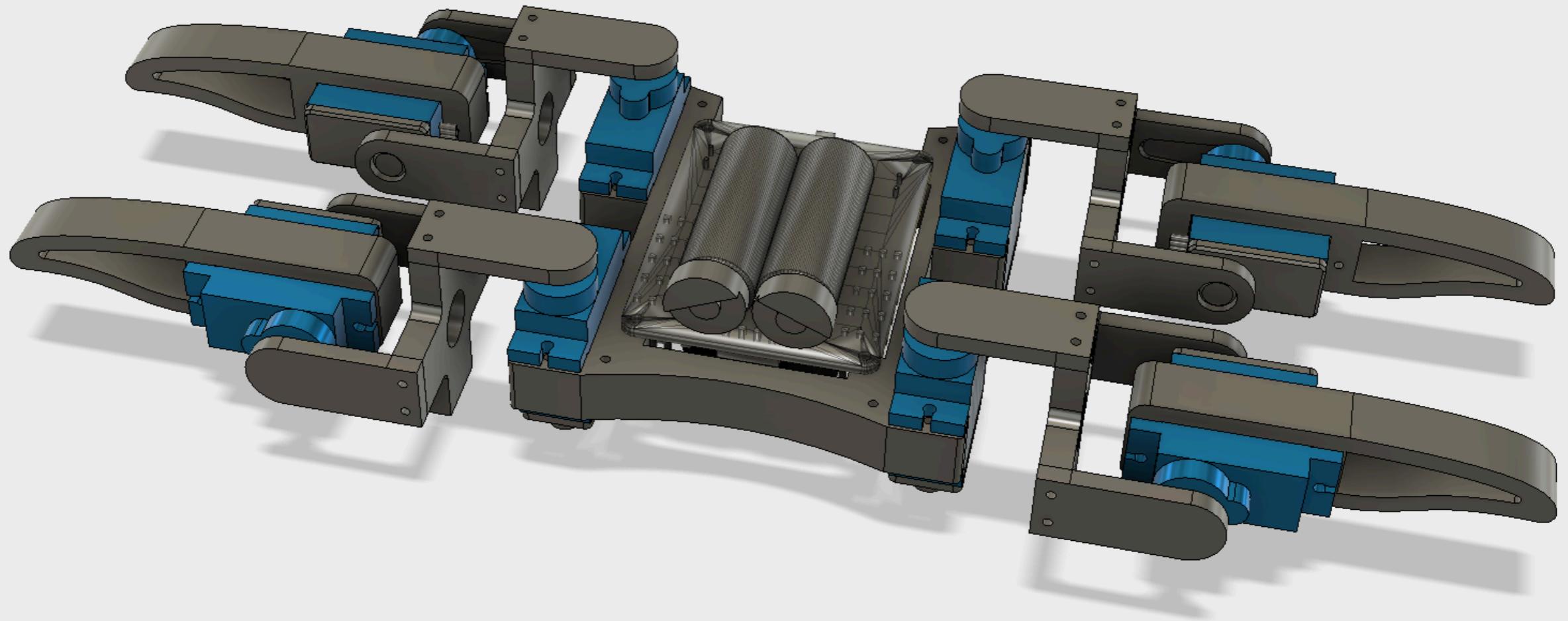
E15



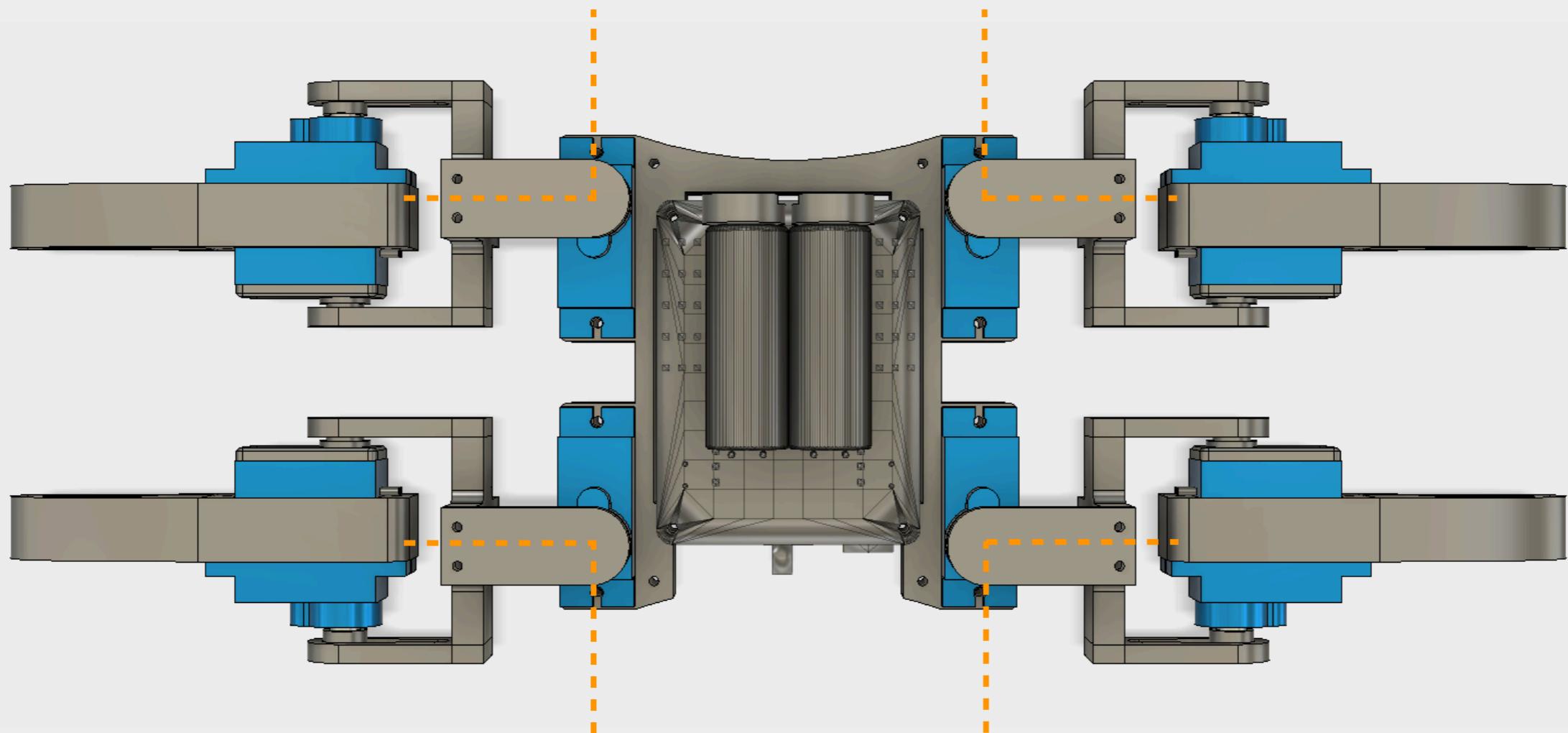
M1.7 x 8mm Screw
x 8



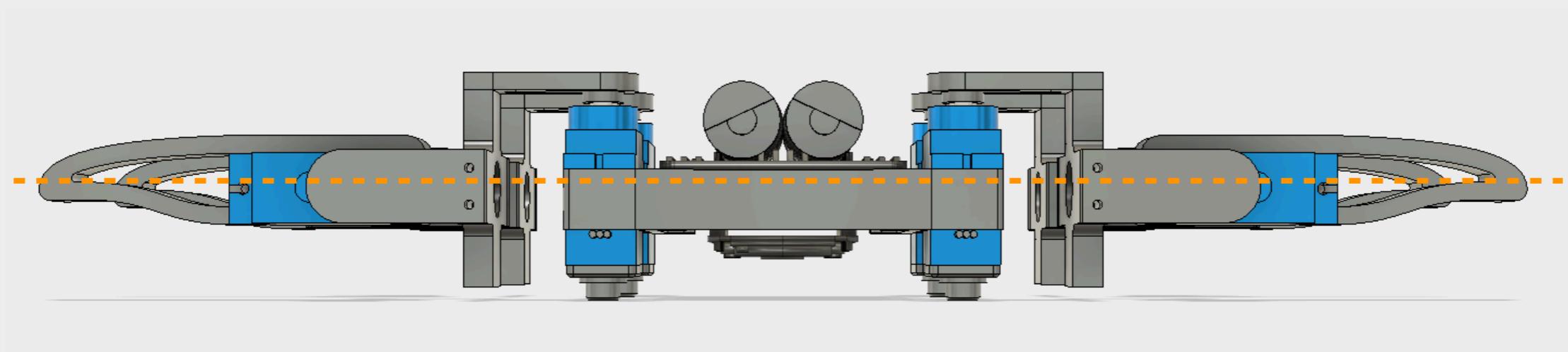
E16



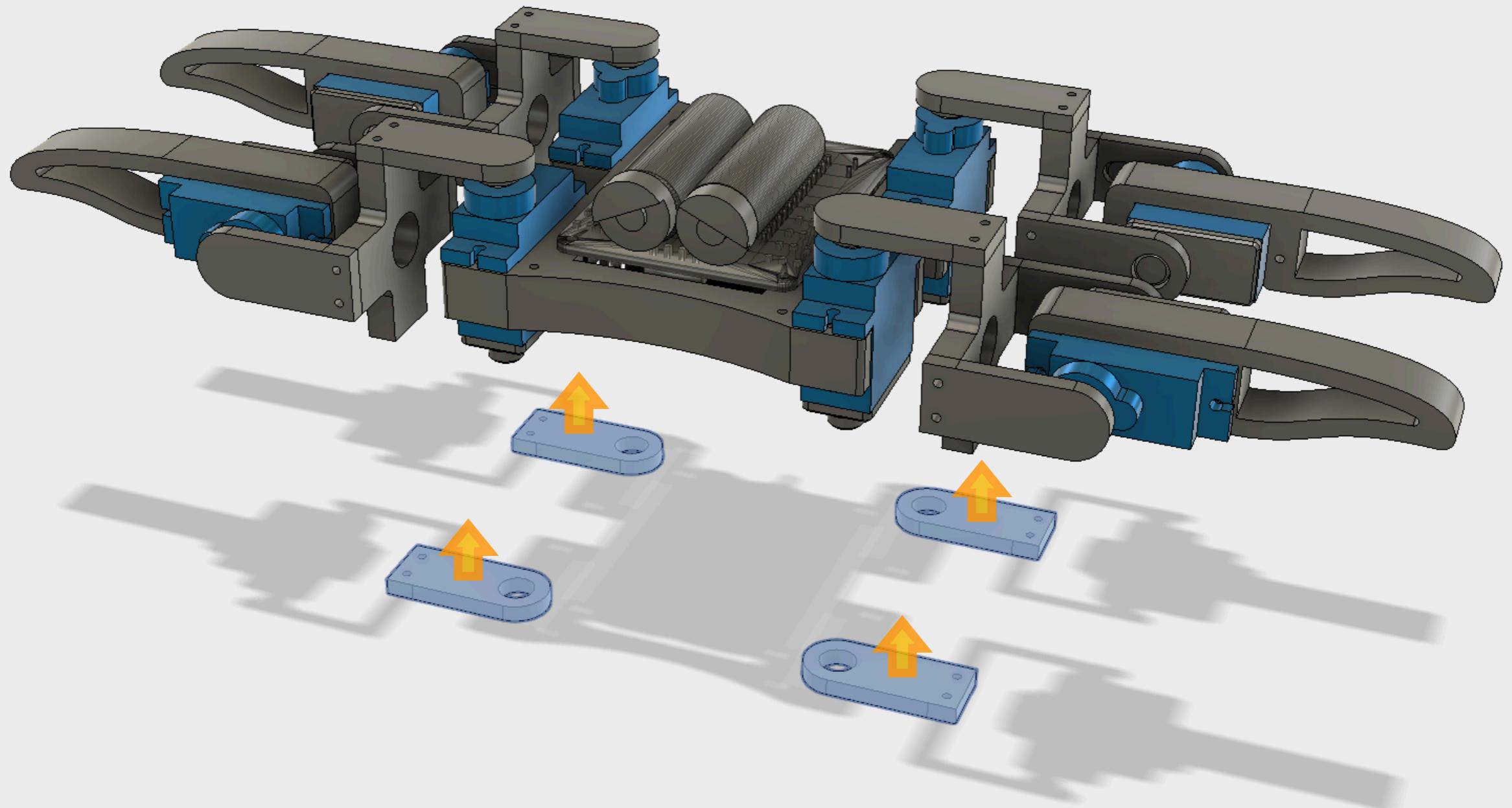
E17



E18



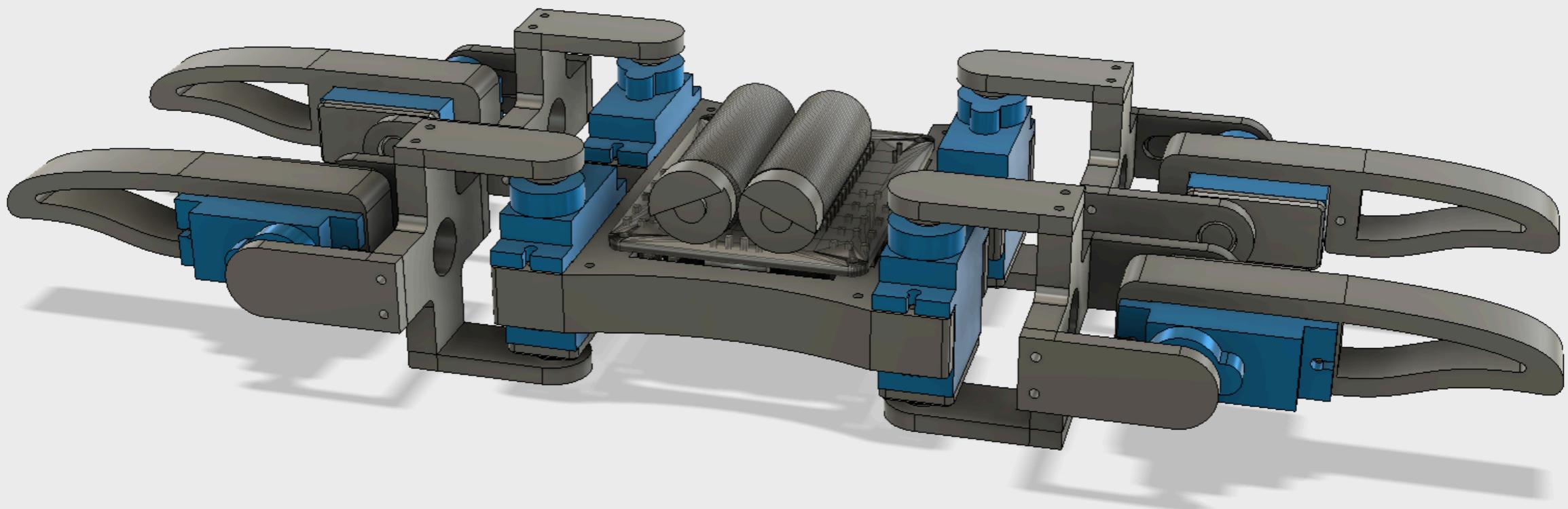
E19



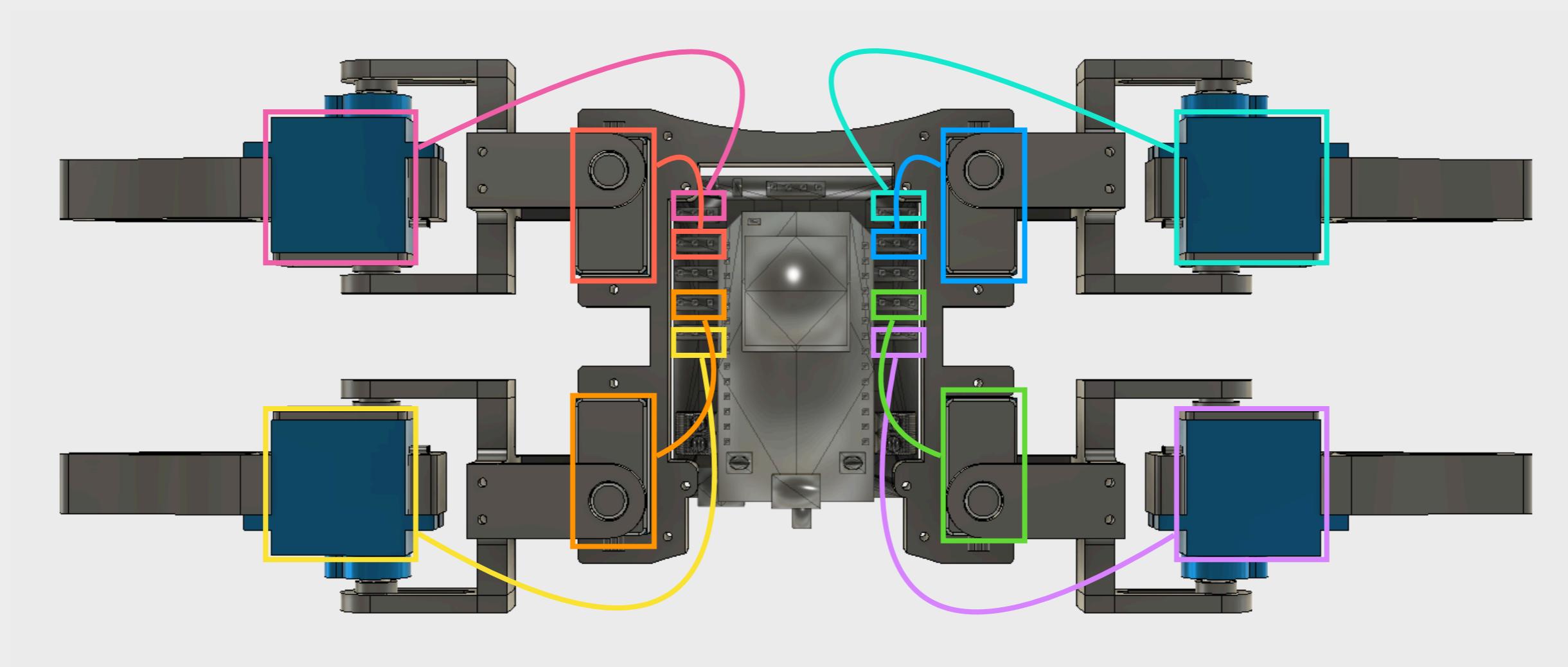
E20



M1.7 x 8mm Screw
x 8

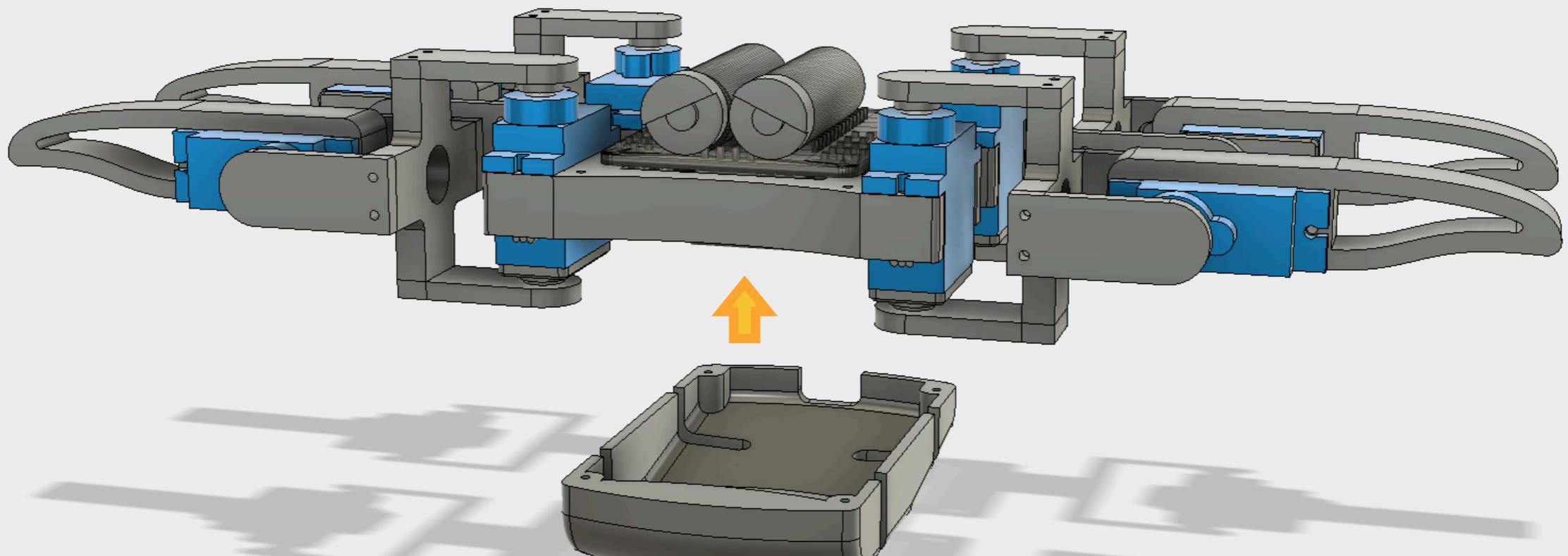


E21

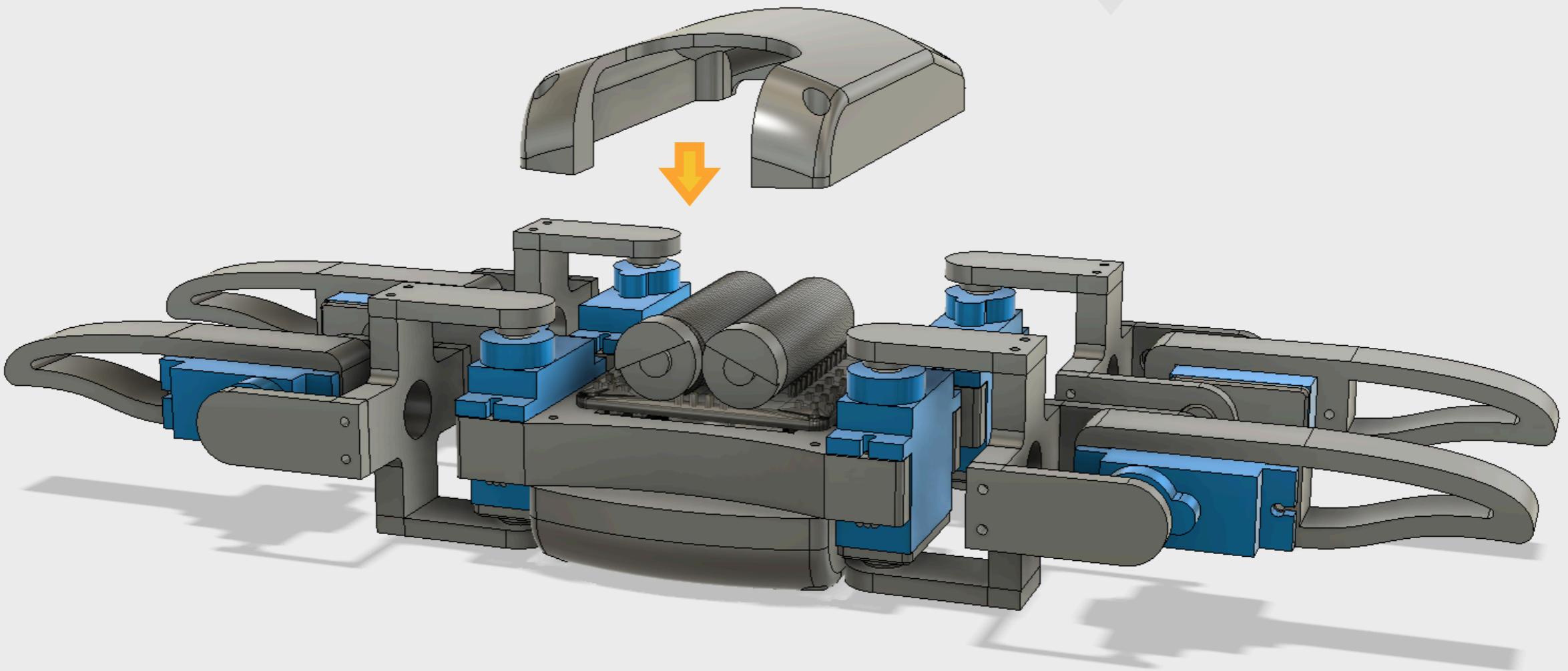


E22

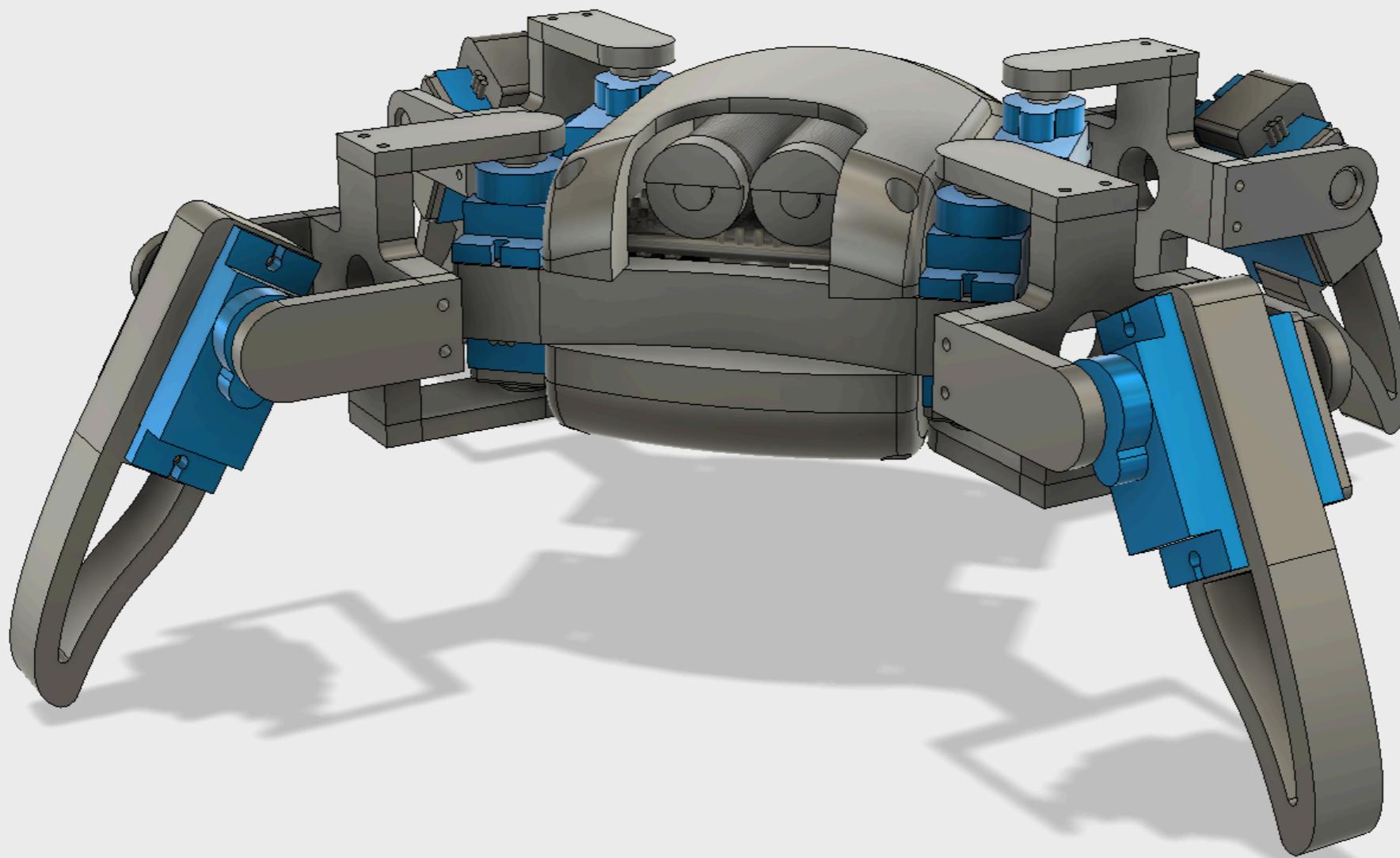
M1.7 x 8mm Screw
x 4



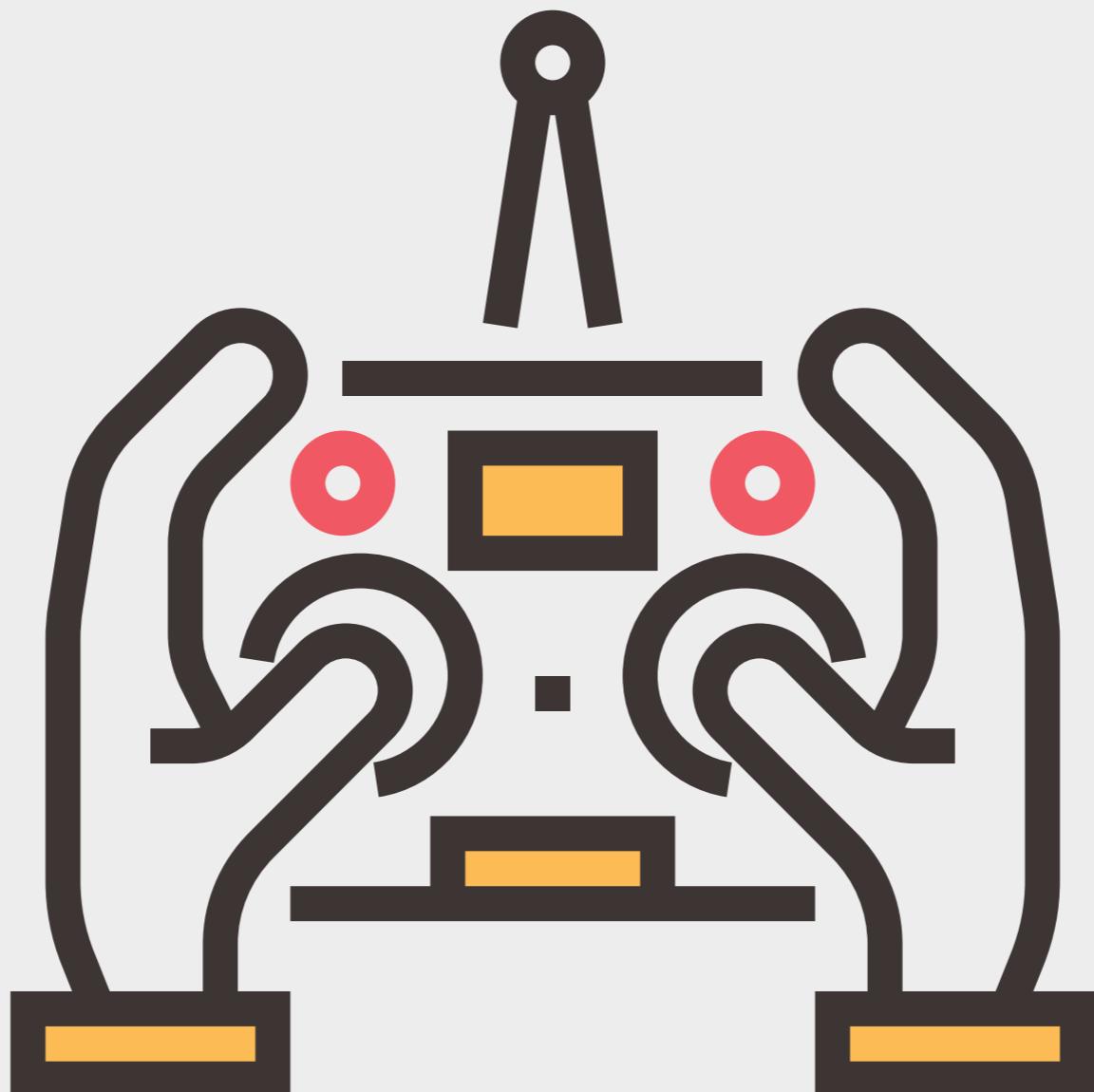
E23



E24

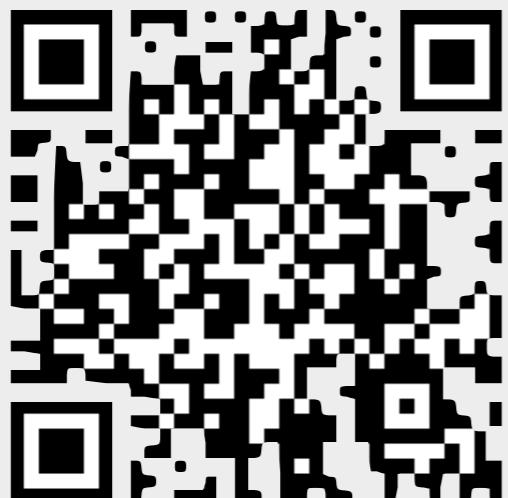
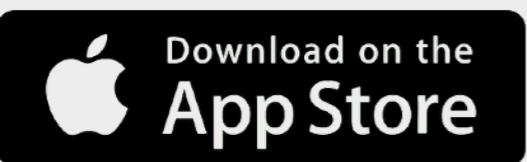


Control



Install LinkIt Remote Apps

F01

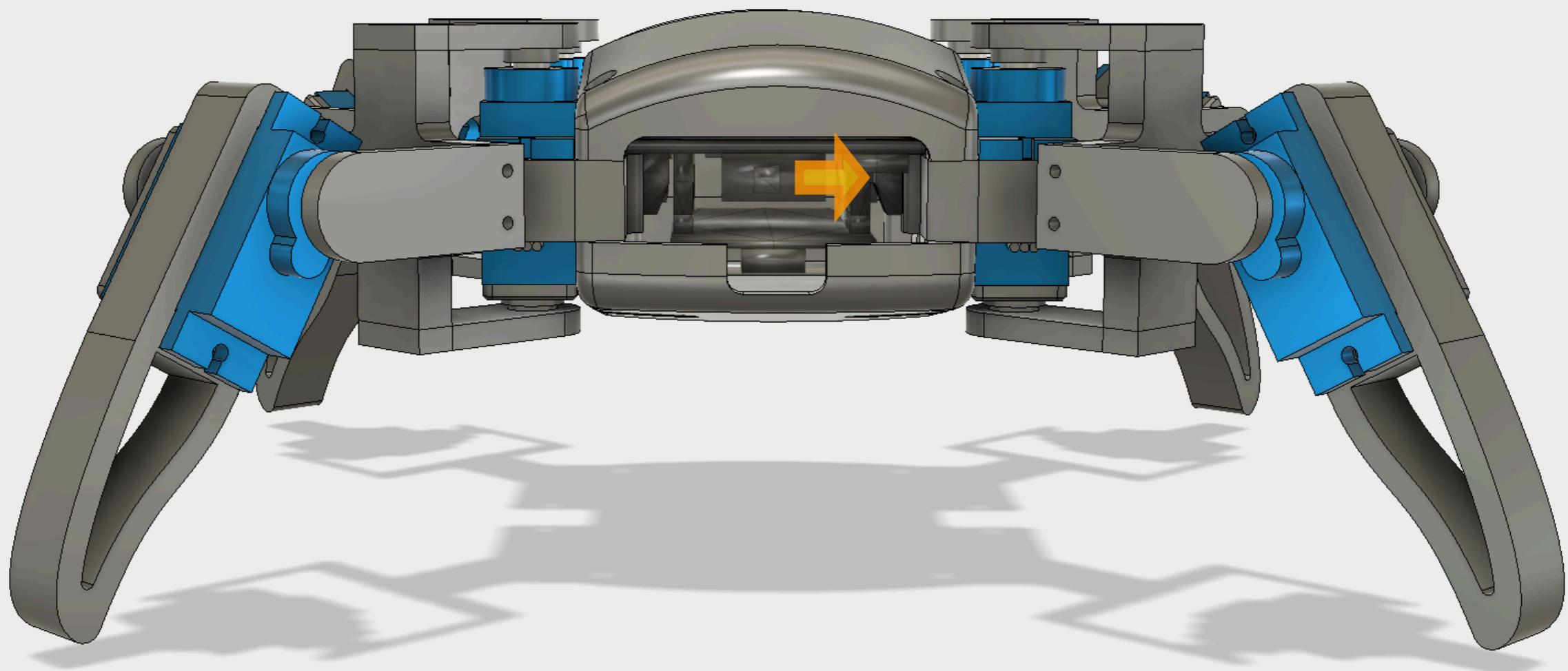


<https://itunes.apple.com/us/app/linkit-remote/id1276900625>

<https://play.google.com/store/apps/details?id=com.mediatek.labs.linkitremote>

Turn on Q1 mini

F02



Run LinkIt Remote Apps

F03



The image shows two screenshots of the LinkIt Remote app. The left screenshot displays a list of devices, with 'Q1 mini' selected. A large orange arrow points from the right side of this screen towards the second screenshot. The right screenshot shows a grid of control buttons for the 'Q1 mini' device. The buttons are color-coded: green for 'Turn Left', 'Forward', and 'Turn Right'; blue for 'Left', 'Backward', and 'Right'; pink for 'Standby'; orange for 'Say Hi!', 'Push Up', 'Lie', 'Fighting', 'Sleep', 'Dancing 1', 'Dancing 2', and 'Dancing 3'. Below this grid are four rows of calibration controls, each consisting of a blue slider with a white circular trackball, a label (P07, P02, P08, P03, P11, P05, P16, P15), a value (45 or 135), and plus/minus buttons. At the bottom are 'Zero' and 'Clr Cal' buttons.

F04

Let Play!



Action



Motion Editor



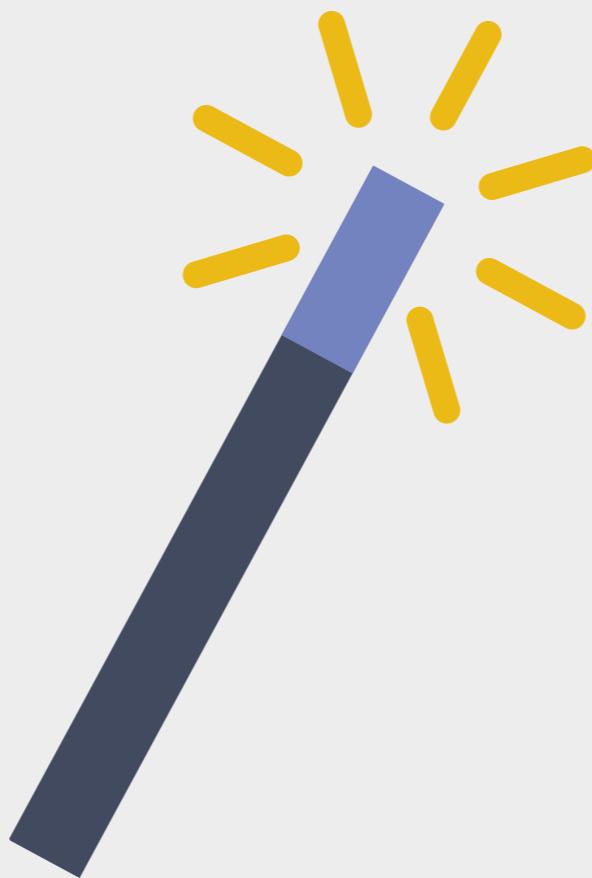
Servo Calibration

Zero Position
(For Assembly)

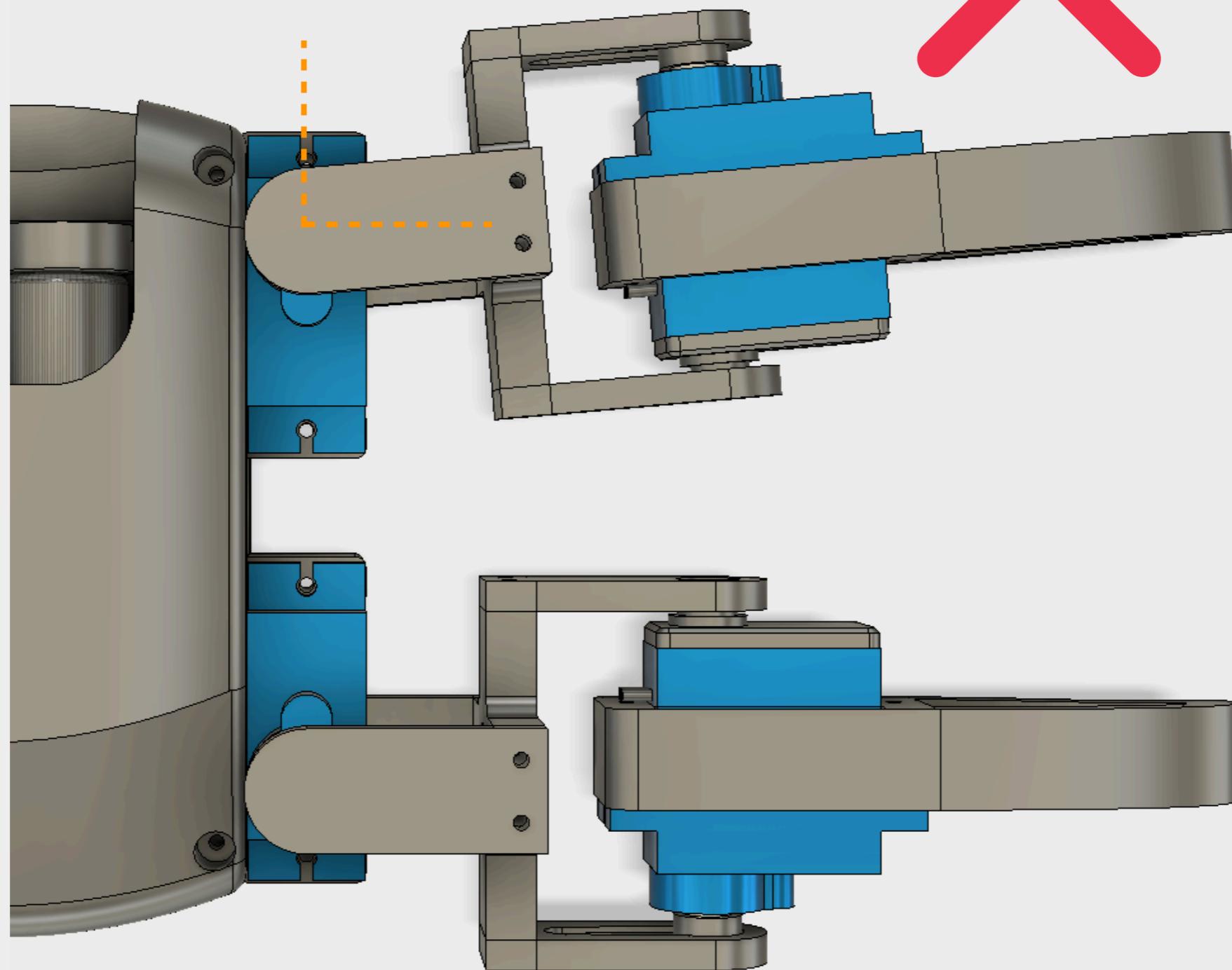


Clear Calibration
(Use with caution)

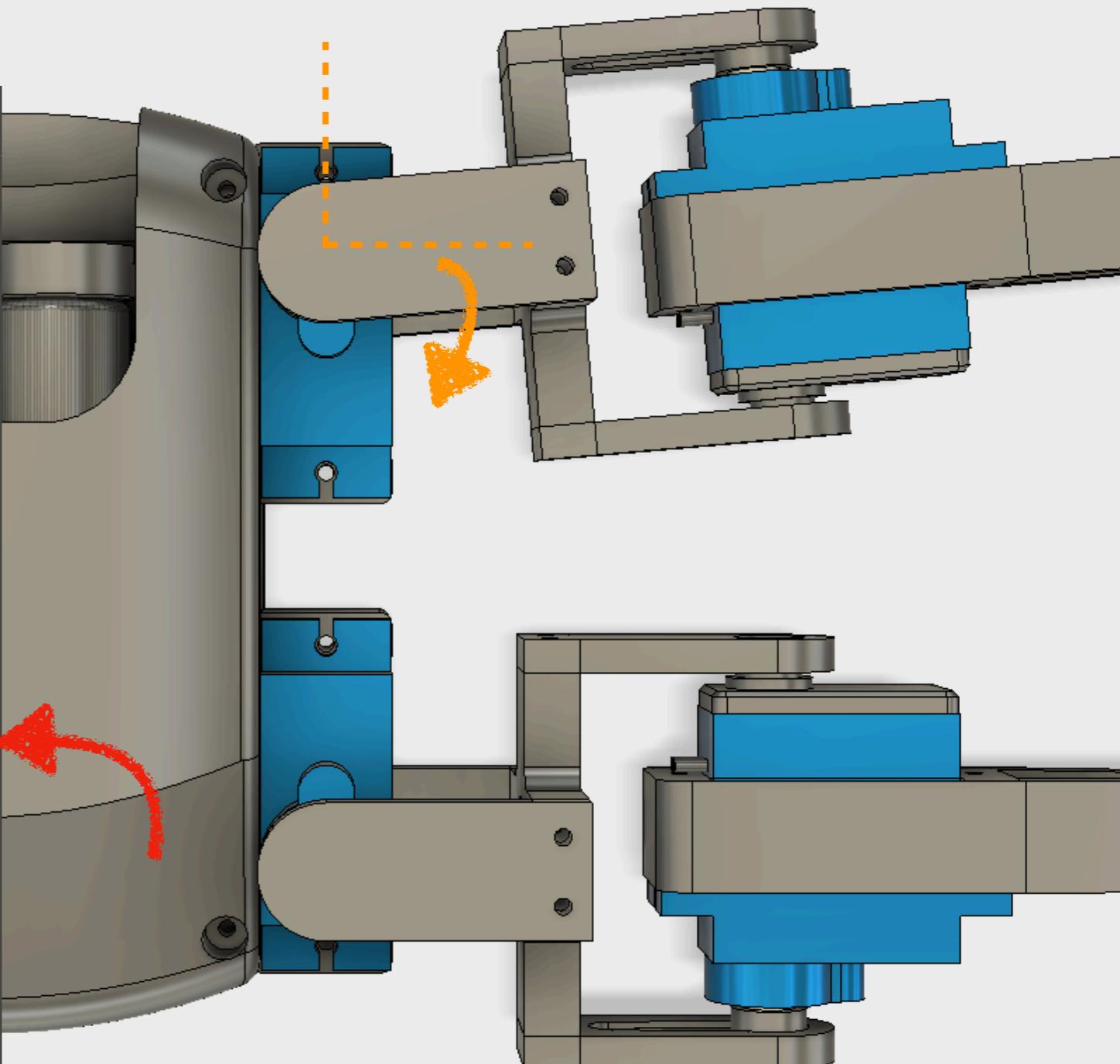
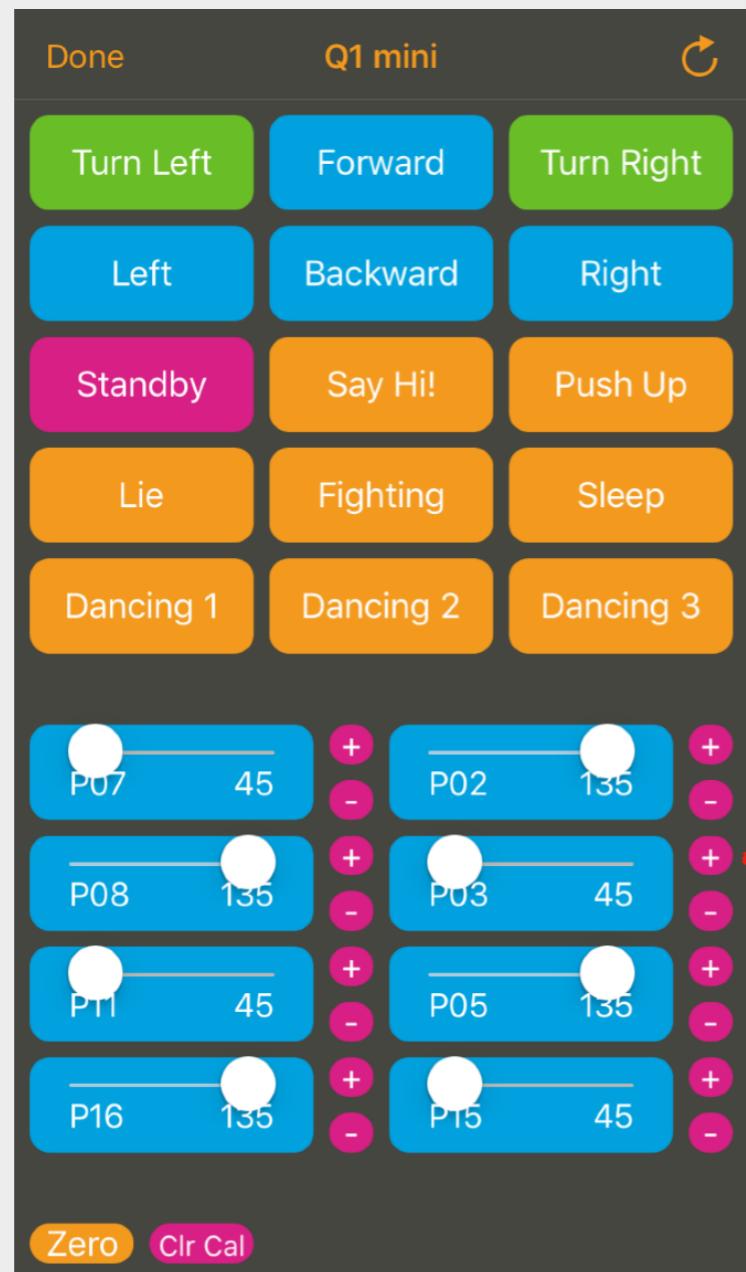
Calibration



G01



G02



G03



firmware.ino

Enable or disable Calibration Button

```
30 // -----
31 //
32 // -----
33 // | 5 |           | 1 |
34 // | P07 |           | P02 |
35 // -----
36 //     | 6 | | 2 |
37 //     | P08 | | P03 |
38 // -----
39 //     | 7 | | 3 |
40 //     | P11 | | P05 |
41 // -----
42 // | 8 |           | 4 |
43 // | P16 |           | P15 |
44 // -----          (Top View)
45 //
46
47 #include <EEPROM.h>
48 #include <Servo.h>
49 #include <LRemote.h>
50
51 // -----
52
53 String robotName = "Q1 mini"; // Robot name
54
55 const int enableCalibration = true; // Enable calibration button
56
57 // -----
58
```



Change to true or false



<http://q1.jasonworkshop.com>



<http://www.jasonworkshop.com>



<http://www.facebook.com/jasonworkshop>

<http://www.facebook.com/Q1.JasonWorkshop>



<http://www.facebook.com/messages/t/jasonworkshop>