

Manned drone



Project under development.

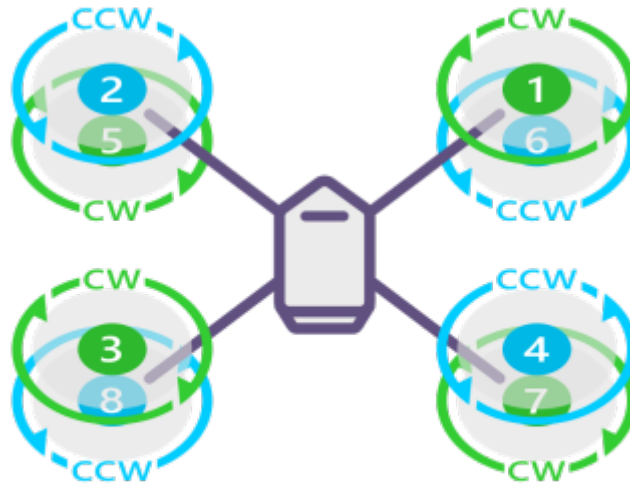
Project Description

[To be added]



Frame type

The cargo drone is based on the Octo Quad H frame. The diagram below shows the motor order for this type:

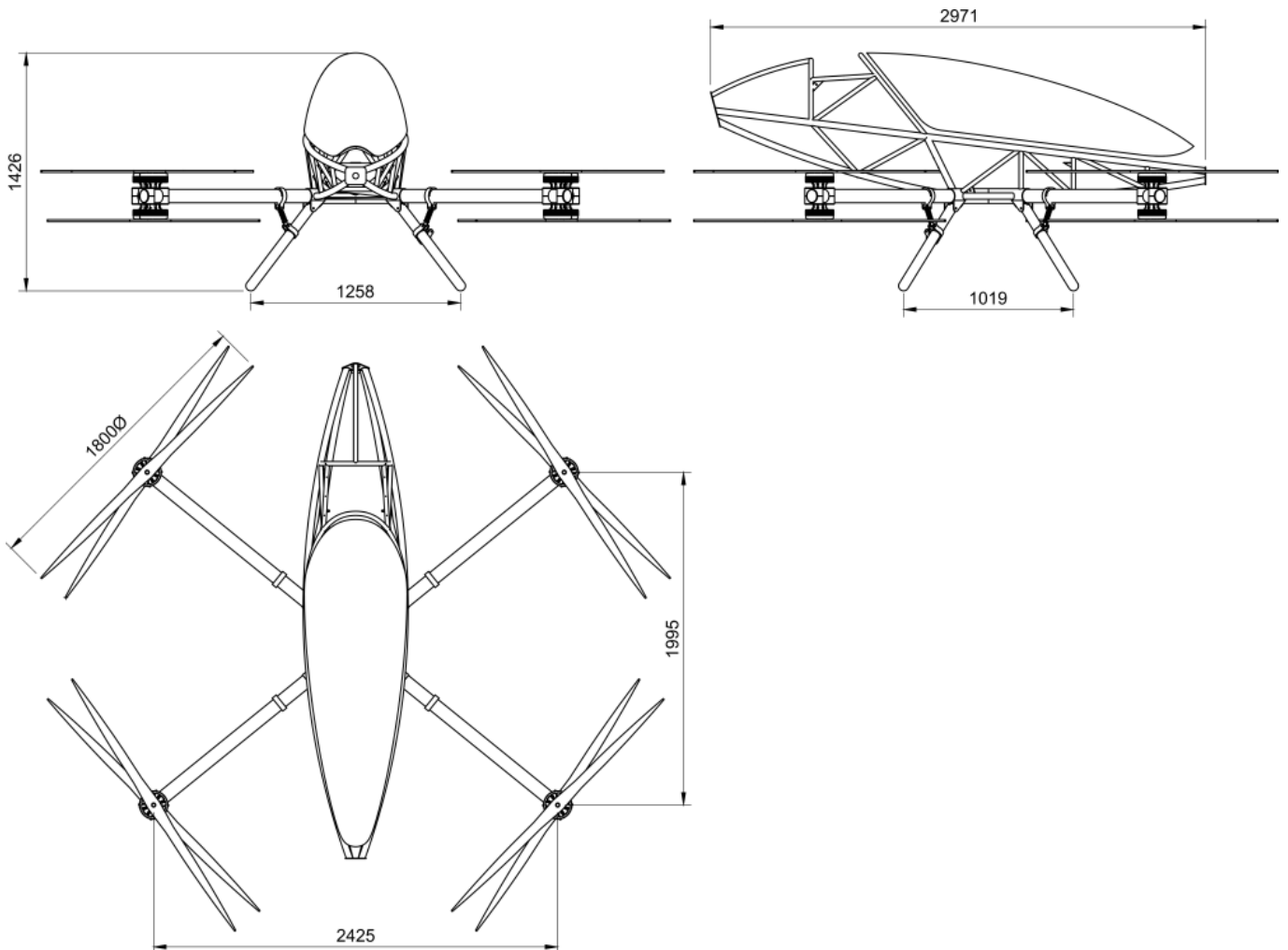


OCTO QUAD H

Source: <https://ardupilot.org/copter/docs/connect-escs-and-motors.html#motor-order-diagrams>

Model

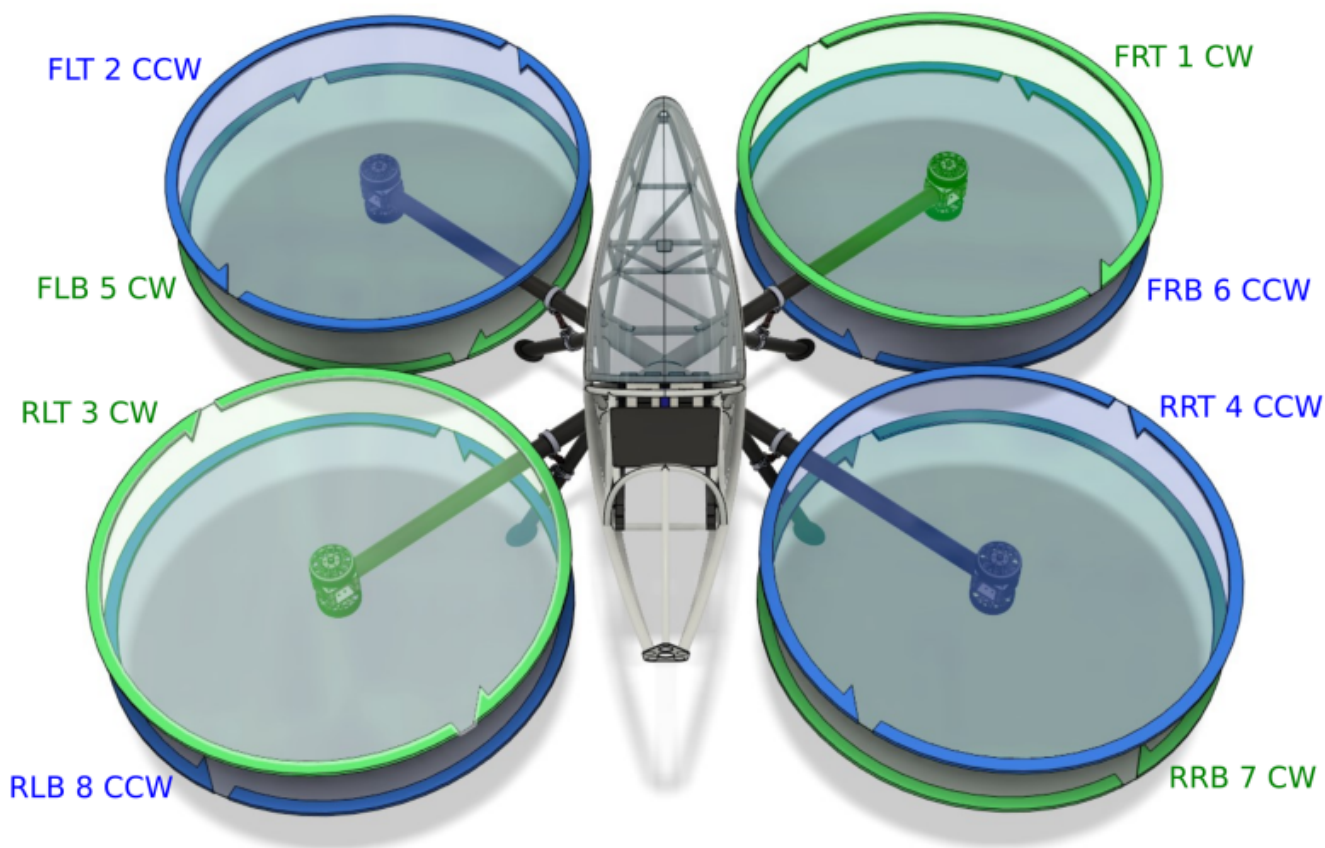
Dimensions



Note: dimensions in mm

Motor distribution

The image below shows the Cargo drone model with the motor order and labels:



- The first three digits in the labels indicate the position of the motor:
F / R - Front / Rear
R / L - Right / Left
T / B - Top / Bottom
- The number indicates which output pin from the flight controller should be connected to each motor ESC.

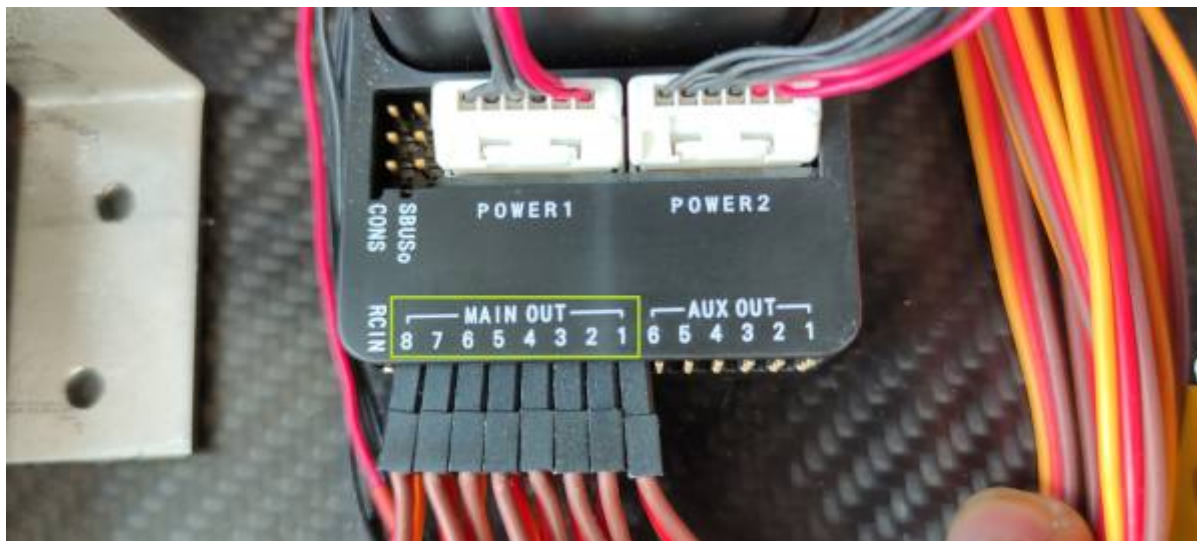


Image: Pixhawk output pins.

- The last digits indicate the direction of rotation of the motor:
CW - ClockWise
CCW - CounterClockWise

Propellers

Helix H25F 1.80m
[H25F 1.80m R-LES-04-2](#)
[H25F 1.80m L-LES-04-2](#)



Motors

[RET 30](#)

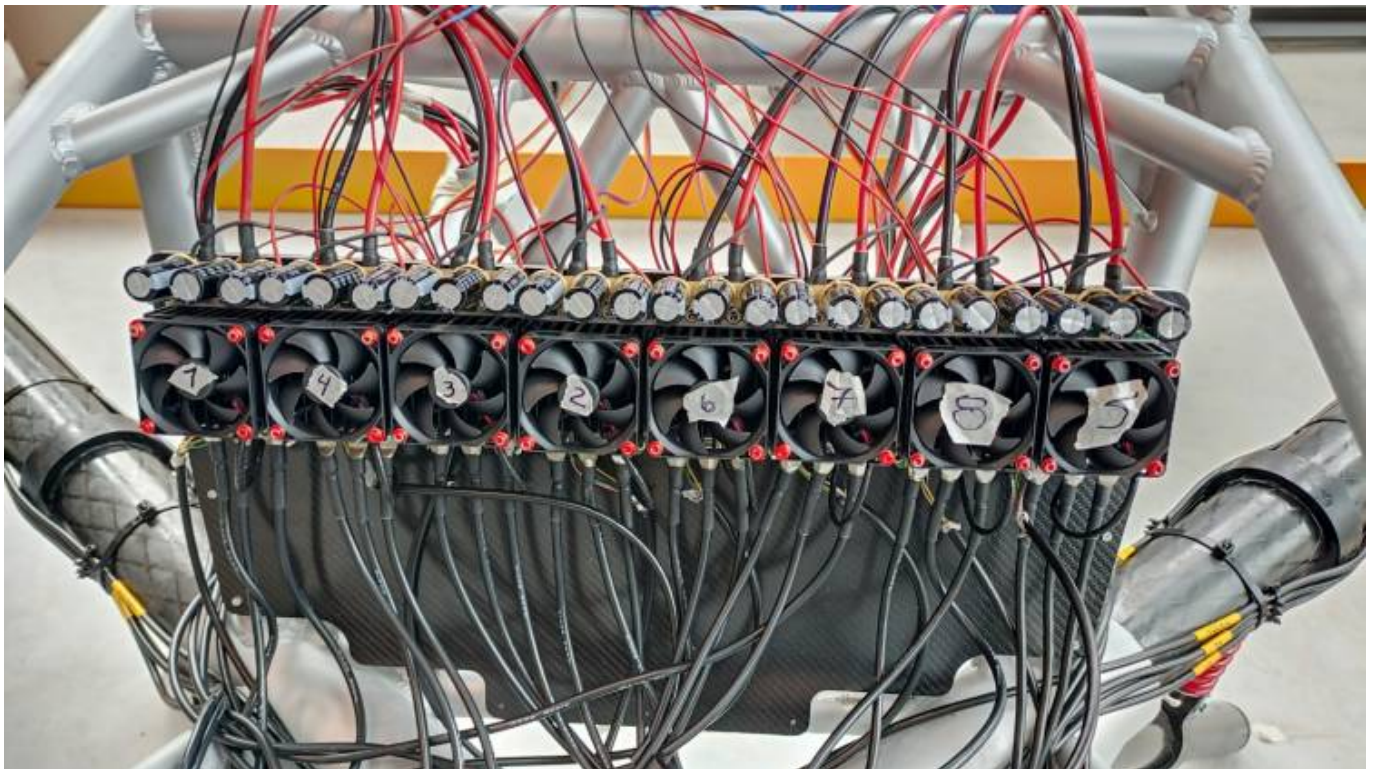
The motors were properly labeled.



Electronic Speed Controller (ESC)

[HBC 18063-3](#)

Labeled with the numbers for the flight controller pin connections.



Flight controller

[Hex Cube Black Flight Controller](#)

Battery, Electronics, and Power Distribution Cables

[To be added]

Tests

Test 1

Date: 09.sept.2021

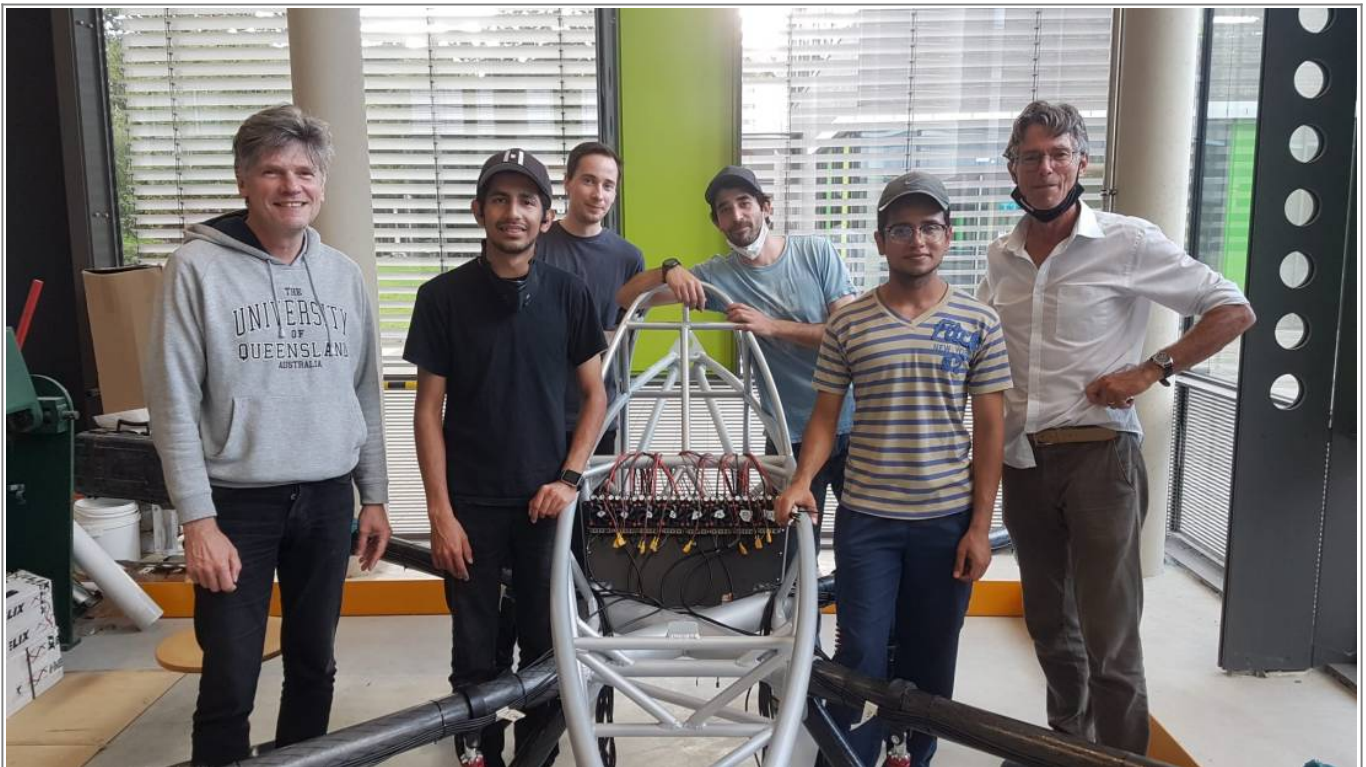
Place: FabLab HSRW Kamp-Lintfort, Germany

Carried out by: Jefferson Sandoval and Harley Lara

[CargoDrone-Test1](#)

Video: Testing ESC + motors reaction and direction of rotation

The Team



From left to right: Rolf Becker, Harley Lara, Henrik Schoofs, Stefan Schmitz, Jefferson Sandoval, Winfried Rijssenbeek

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