

Manned drone



Project under development.

Project Description



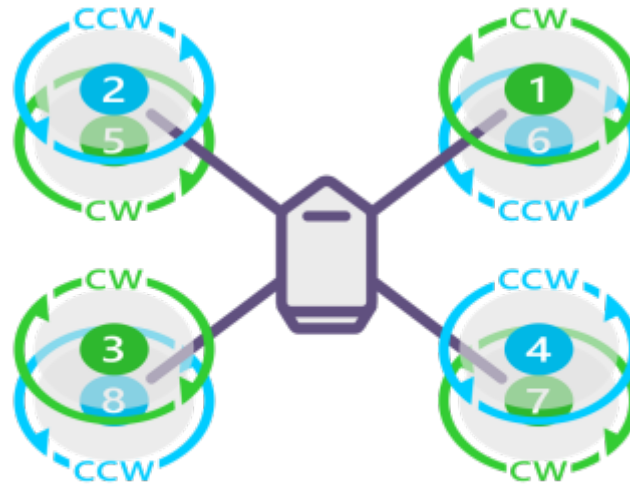
To be added



Frame

Design

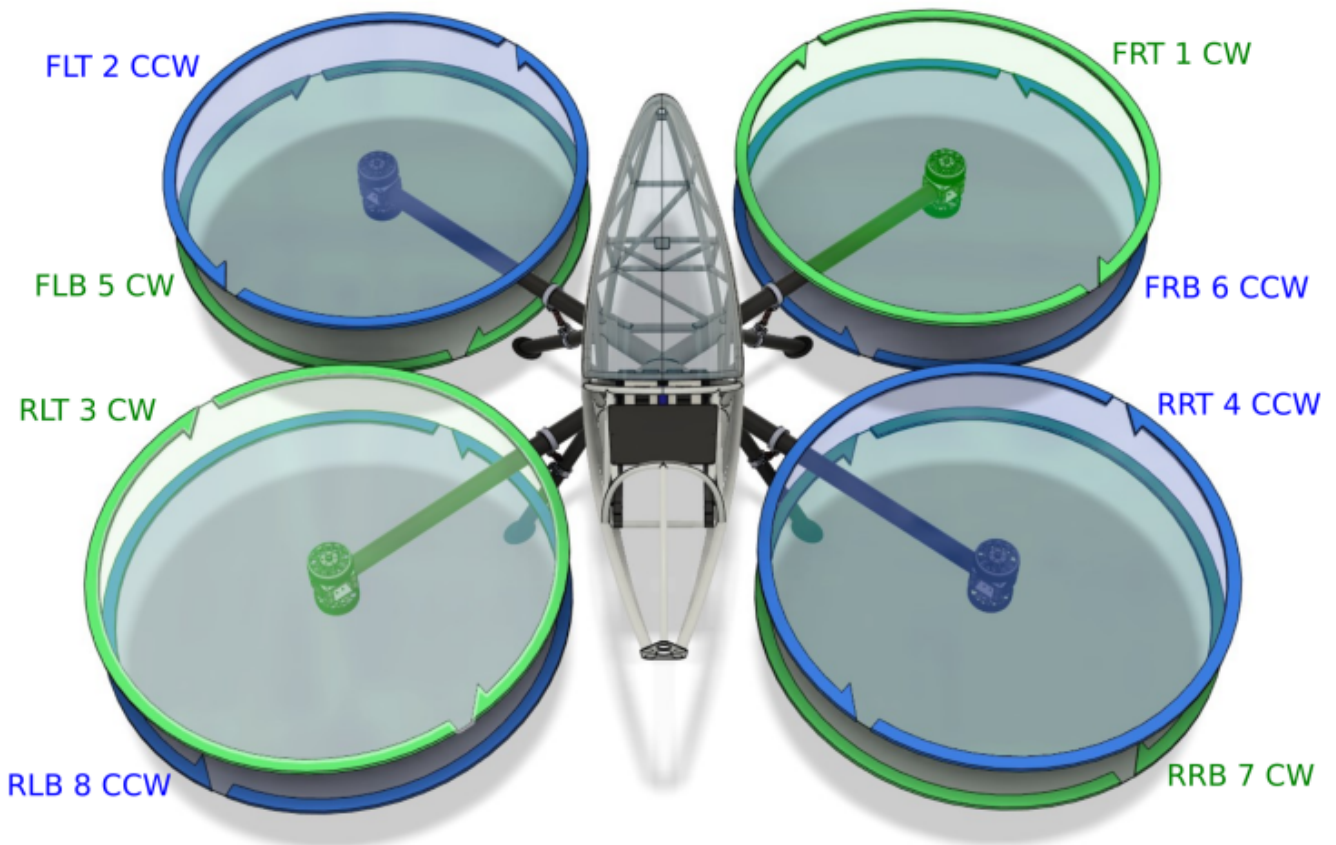
The diagram below shows the motor order for a frame type Octo Quad H:



OCTO QUAD H

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

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 motors:

- 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.



Image: Pixhawk output pins. Source: <https://ardupilot.org/copter/docs/connect-escs-and-motors.html#>

The last digits indicate the direction of rotation of the motors:
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](#)

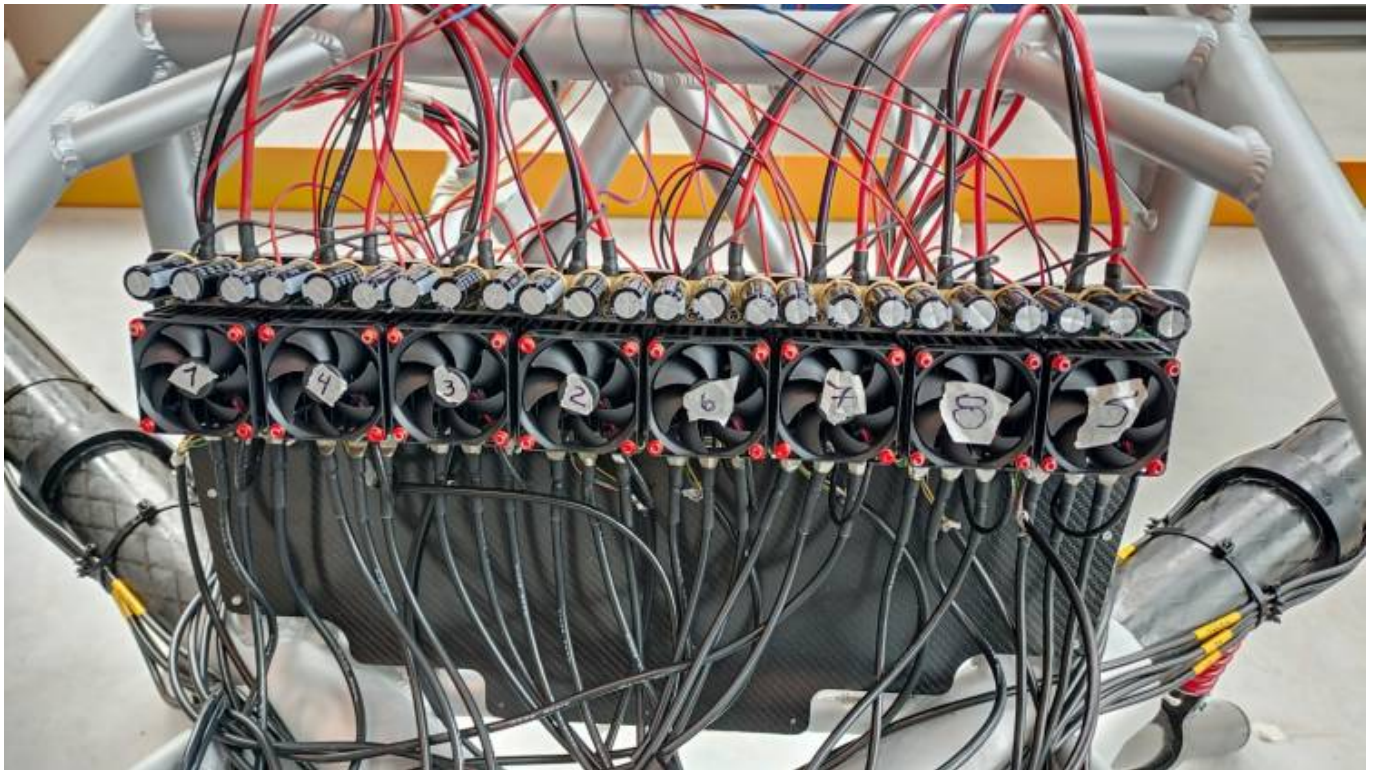
The motors were properly labeled.



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

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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