ACECORE


# ZOE SPECIFICATIONS AND OPERATING LIMITS
# MARCH 2018

ACECORE TECHNOLOGIES

# SPECIFICATIONS

## DIMENSIONS

| | |
|---|---|
| Frame dimensions | (lxwxh) 700x700x495mm<br>700x300x270mm (folded) |
| Diameter with propellers | 1310 mm |
| Height up to payload quick release | 355 mm |

## POWERPLANT

| | |
|---|---|
| Number of motors | 4 |
| Motor type | Direct Drive 3-phase BLDC outrunner |
| Operating voltage | Up to 50V |
| Motor max continuous Power | 800 W |
| Idle speed | 380 RPM/V |
| | |
| Electronic Speed Controller(ESC) | |
| Max continuous current draw | 50A |
| Input voltage | 6-35V |

## PROPELLER

| | |
|---|---|
| Material | Carbon Fiber Reinforced Plastic (CFRP) with foamed core |
| Propeller setup | 2 CW and 2 CCW props |
| Propeller type | 18 x 16.5 inch foldable propeller |

## POWER SOURCE

| | |
|---|---|
| Battery | Lithium Polymer |
| Recommended make and models | Gens Ace 4400mAh and higher Tattu 4500mAh up to Tattu 16000mAh |
| Nominal battery voltage | 22.2 V / 6S |
| Maximum battery size (2 packs) | 210 x 150 x 65mm |
| Minimum battery quantity | 2 battery packs parallel |
| Battery connectors | 2x XT90* |
| Min discharge rate | 150A / 300A burst |

** Upon request the battery connectors can be customized*

## WEIGHTS

| | |
|---|---|
| Maximum Gross for takeoff | 11.95 kg/ 26.35 lbs |
| Maximum useful load | 8.06 kg/ 17.77 lbs |
| Maximum payload | 6.5 kg/ 14.33 lbs |
| Minimum standard empty weight | 3.89 kg/ 8.58 lbs |

## FLIGHT CONTROLLER

Model name: Pixhawk 2.1 *

Key points

- Built-in IMU heating system, allowing flights at extreme temperature. (below ice point)
- Robust DF17 interface connectors, enhance drop and shock resistance
- Airframes: VTOL, Plane, Multicopter, Traditional Helicopter, Rover, Boat, Sub, General Robotics

Pixhawk 2 cube

Isolated and Dampened IMU:

- Seperated IMU and FMU system, effectively reducing interference to sensors.
- Foam effectively filter high frequency vibration, reducing noise to IMU measurements.

Triple Redundant IMU system:

- 3x Accelerometer
- 3x Gyroscope
- 3x Magnetometer
- 3x Barometer

Modular Flight Controller:

- Modular cube design for simplicity. All inputs/outputs in one single DF17 connector so user may use different carrier board for specific application or design and make their own carrier board with ease.

Pixhawk 2 carrier board

- ADC port
- Dedicated Spektrum RX port
- I2C port
- S.Bus in and out, PPM in
- 8 dedicated opto capable PWM out
- 2 CAN port
- 2 Telemetry port

- 2 power port
- 8 GPIO that can also be used for PWM

** The FC can be upgraded with suitable expansions like the Here+ RTK GNSS Kit for Pixhawk 2 for example*

## LIGHTING AND INDICATION

| | |
|---|---|
| Orientation lights | 3-Watt LED |
| Orientation light color (front) | Cold White* |
| Orientation light color (back) | Red* |

** Upon request the orientation lights can be customized*

## PILOT RADIO COMMUNICATION

| | |
|---|---|
| Make and model | Futaba FMT-02 |
| Radio frequency | 2,4GHz |
| Channels | 12 proportional, 2 switched |
| Battery | 6V 1800mAh NiMH battery pack |
| Functions | |

- Compatible with FASSTest, FASST and S-FHSS protocols
- FASSTest telemetry compatible with Futaba telemetry sensors (sold separately)
- Free user-updatable software
- 30-model memory
- 10-character user naming
- 10-character model naming
- Airplane, helicopter and glider programming
- Large, 1.75 x 3 in backlit LCD screen with 128 x 64 resolution
- SensorTouch programming
- Compatible with secure digital memory cards for external storage of model setups and software updates (32MB-2GB or HC (High-Capacity) 4GB-32GB)
- Left and right assignable slider switches
- Two assignable rotary knobs
- Six assignable three-position switches
- One assignable momentary two-position switch
- One assignable two-position switch

- Comfortable rubber grips on the sides and back
- Wide top switch spacing
- Adjustable stick tension
- Dual ball bearing gimbals
- 4 vibration warning types
- Home/Exit; User Menu/Servo Monitor buttons
- Audio earphone jack (for telemetry alarms)
- User stick calibration
- Trainer system
- Servo speed adjust
- 5 programmable mixes
- V-tail, Ailvator, winglet, motor mixing
- Trim mix
- Logic switch (condition switch only)
- Internal programmer for S.Bus servos
- User menu
- Servo monitor (neutral and moving tests)
- 2 count up/countdown timers
- Integral timer
- Model timer
- Quick model select

## ISOLATION SYSTEM

| | |
|---|---|
| Vibration isolation system | Rubber damper system |
| Damping variation | Variable through type of dampers |

## PAYLOAD MOUNTING

| | |
|---|---|
| Mounting locations | Top and bottom mounting possibility |
| Mounting system | Gremsy circular quick release |
| Battery rack | Top of centerpiece or below on quick release |

## CAMERA STABILIZER

| | |
|---|---|
| Recommended make and model | Gremsy T1, T3, H3 and H7 |

## CERTIFICATION

CE approved

# LIMITATIONS

These limitations are advisory in nature and do not extend or restrict limitations provided by Governing Aviation Authorities.

## OPERATIONAL LIMITATIONS

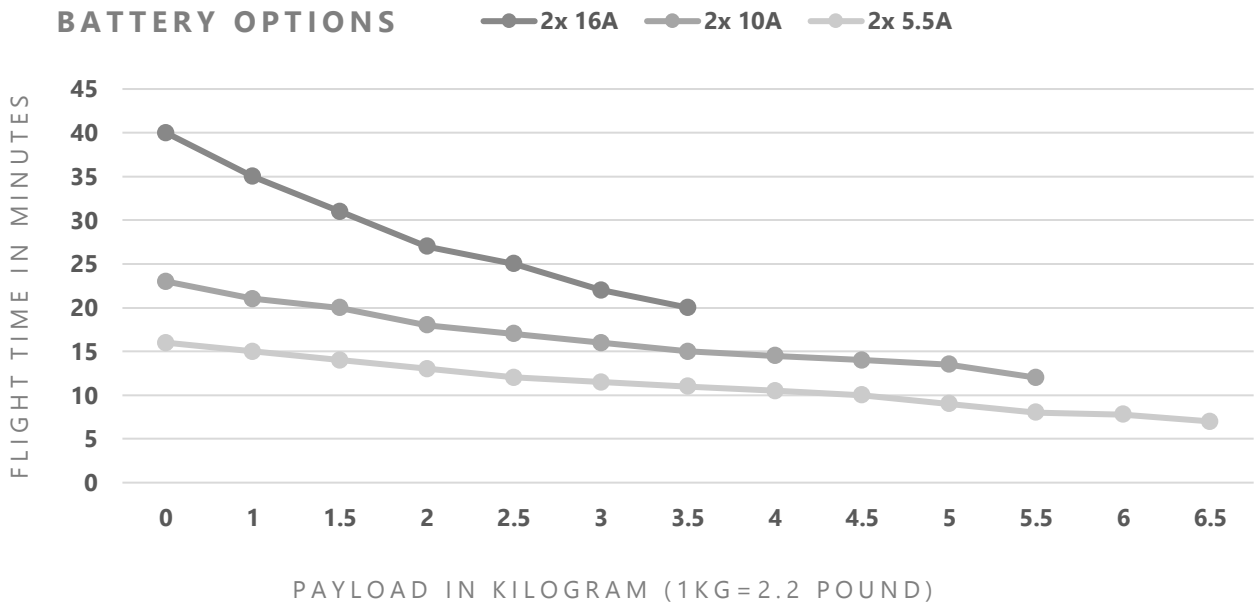
| | |
|---|---|
| Temperature operation range | -10°C to 45°C (14°F to 113°F) |
| Maximum wind conditions | 35 knots (18 m/s) |
| IP rating | IP43 |

## POWERPLANT LIMITATIONS

| | |
|---|---|
| Maximum battery voltage | 26.1V |
| Minimum average battery voltage | 21.3V |

# FLIGHT TIMES

These flight times are representations of the typical flight time in normal conditions and are depending on several factors. The conditions in which these flight times have been tested are at 20°C ambient temperature, a nominal wind speed of 8 knots while hovering at a height of 5 meters above ground. The ZOE is put back on the ground with 10 percent battery capacity left.

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