ACECORE TECHNOLOGIES

ZOE X4

SPECIFICATION SHEET

Section 01
Product Description

DESCRIPTION

The Zoe is a lightweight, multipurpose Remotely Operated Aerial Vehicle for commercial use. Its compact, foldable frame, supporting four rotors, is designed to meet the versatile demands for the creative and industrial market. Although it sports four rotors the system is still powerful enough to lift payloads up to 5 kg due to the low frame weight and custom designed brushless motors.

GENERAL FEATURES

Lightweight carbon fiber frame

Up to 47 minutes endurance

All weatherproof

Single or dual operator setup

500m/ 5KM/ 16KM range options

ADS-B ready transponder

AES256 encrypted radio link

Triple redundant autopilot

Section 02
Product Specifications

SPECIFICATIONS

WEIGHTS

Maximum gross for takeoff	10.5 kg/ 23.15 lbs
Maximum payload*	5 kg / 11 lbs
Minimum standard empty weight*	4.2 kg / 9.26 lbs

DRIVE

Energy type	Electrical
Number of motors	4
Motor type	Direct Drive 3-phase BLDC out runner
Operating voltage	Up to 50V
Motor max con tinuous Power	800 W
Idle speed	380 RPM/V
Number of ESCs	4
Max continuous current draw	55A

PROPELLER

Material	Carbon Fiber Reinforced Plastic (CFRP) / foamed core 3K Twill weave
Propeller setup	2 CW and 2 CCW propeller
Propeller type	21x6. 5-inch fixed propeller

PAYLOAD

Vibration isolation system	Quad damper system
Mounting options	Top and bottom mounting possible
Mounting system	Depending on user's preference
Battery rack	Top of centerpiece or below on quick release

*True maximum payload based on 3x 4.500mAh battery pack. With 2x 17.000mAh flight time will be longer, but maximum payload is compromised to 2.8kg.

Section 02
Product Specifications

AVIONICS

Flight controller	Cube / Auterion Skynode
Version	Orange
Operating temperatures	-40°C (-40°F) to + 85°C (185°F)

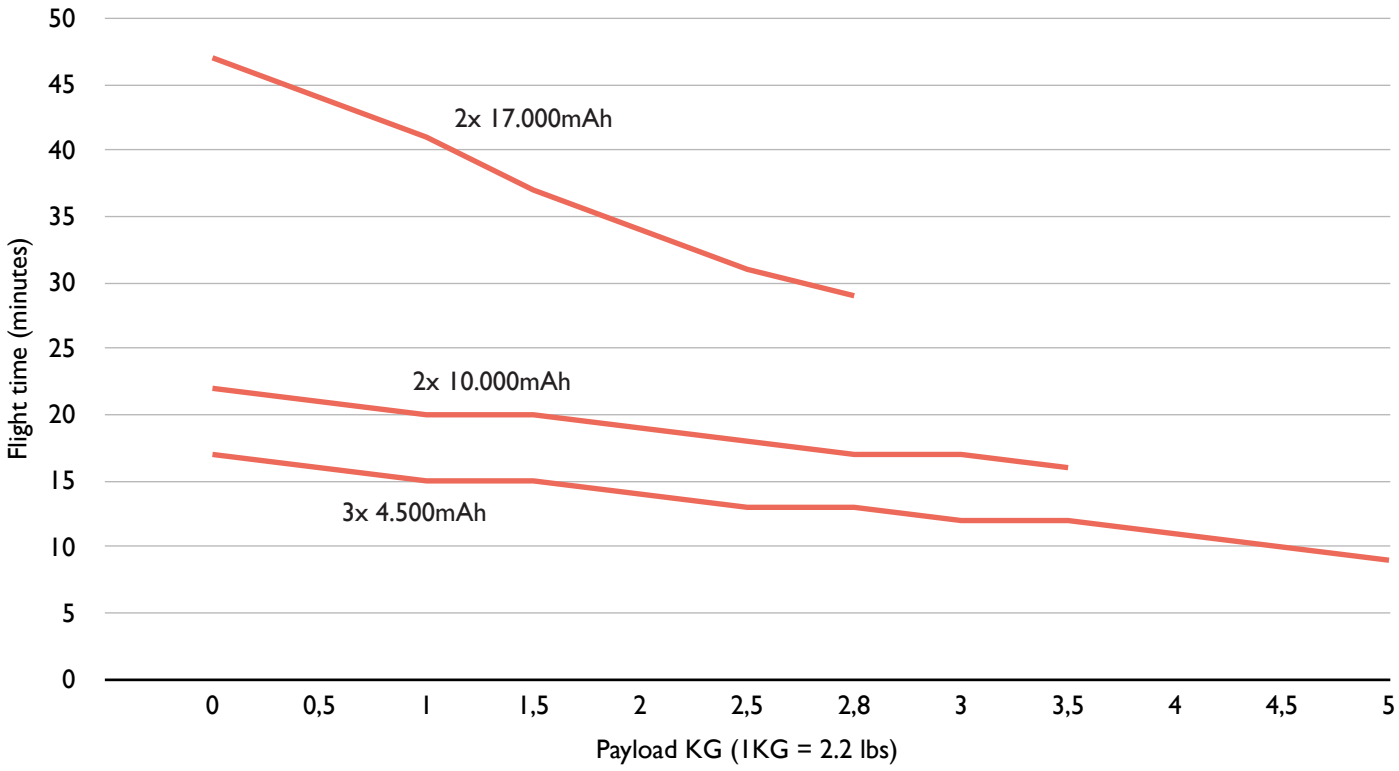
FLIGHT BATTERY

Energy type	Electrical
Battery	Lithium Polymer
Recommended make and models	Tattu 4500mAh, 10000mAh, 17000mAh,
Nominal battery voltage	22.2 V/ 6S
Minimum battery quantity	2 battery packs parallel
Maximum battery voltage	25.2V
Minimum average battery voltage	21.0V

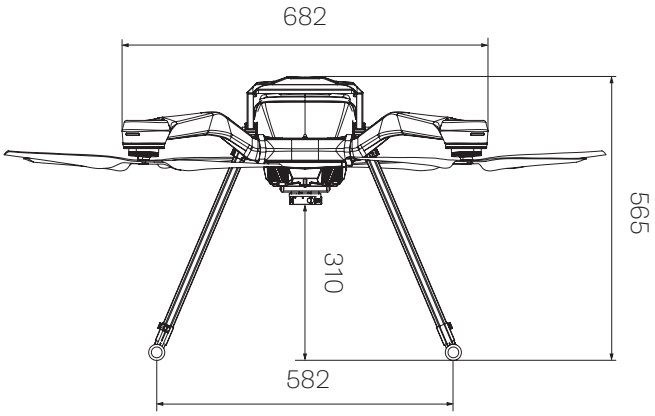
Section 03
Flight table

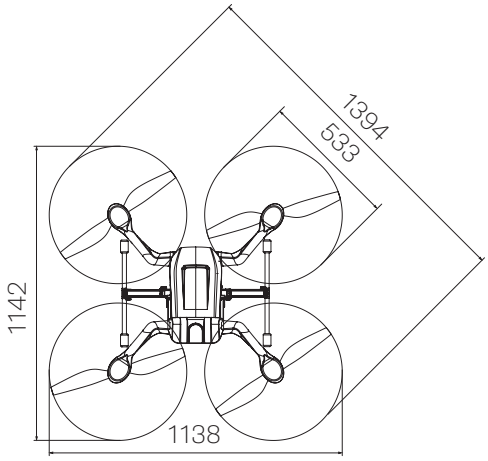
FLIGHT TIMES

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.



Section 04
Physical





DIMENSIONS

Frame dimensions	(lxwxh) 693x682x524 mm
Rotor to rotor diagonal	970 mm
Diameter with propellers	1310 mm
Height up to payload quick release	320 mm
Ground clearance top propeller	388 mm

WEATHER LIMITATIONS

Maximum operating temperature	+50°C
Minimum operating temperature	-15°C
Maximum flight endurance	47 min
Maximum wind speed	29 knots / 14.9 m/s continuous
Maximum wind gusts	33 knots
Maximum precipitation	Moderate rain conditions, although it is recommended to fly in dry conditions.
Maximum downfall	10 mm/h, 30mm/3h

Section 05
Flight limitations

FLIGHT LIMITATIONS

Maximum pitch/ roll angle	45 Degrees from horizontal
Maximum yaw rate	150 Degrees a second
Maximum flight speed	91km/h horizontal
Flight modes	GPS mode – Atti tude mode – Auto mode – Brake – Stabilize
Typical ascent	5m/s
Typical descent	4m/s
Hovering accuracy	Vertical 0.05m/ Horizontal 0.05m
RTL cruise speed	Variable from 3 m/s to 9 m/s