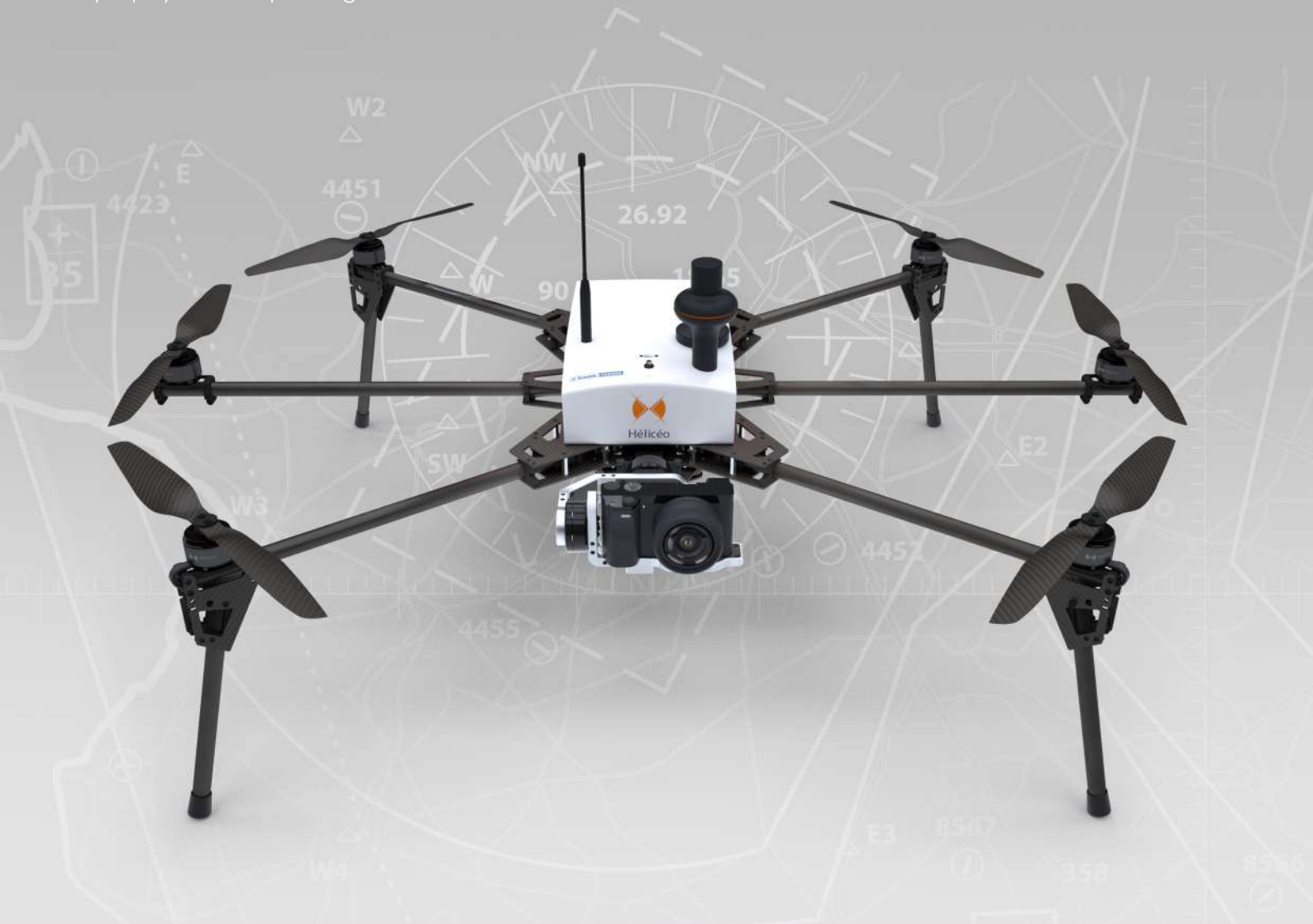
Datasheet

SuperFox^6

The autonomous multirotors for long-term photogrammetric missions

The SuperFox^6 is an autonomous and versatile multirotor granting full redundancy with carbon blades. With 43 minutes of endurance and a complete automation, the SuperFox^6 can carry out significant photogrammetric surveys and be used in many applications. The SuperFox^6 stands out thanks to its in-flight stability and its ability to carry a payload of up to 4kg.



Versatile & Productive

- Up to 43min endurance
- Up to 4Kg payload
- Up to 50ha scanning area
- Wind resistant 50Km/h

Many applications

- Surveying & Mapping, Inspection, Videography
- Bridges, vegetation, buildings, construction, as built...
- 3D modeling, Volume, Data georeferencing…
- RGB, IR, multispectral, LIDAR payload options

Direct Georeferencing

- RTK/PPK modes with DroneBox RTK
- 0,03 m X-Y; 0,05 m Z accuracy
- No need for ground control points

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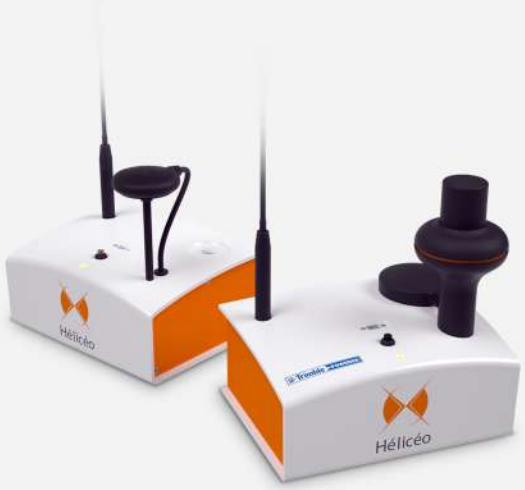
SuperFox6

Powered by DroneBox

DroneBox incorporates the navigation function with GNSS and inertial sensors, the communication modules hosting the powerful firmware for all critical functions such as navigation management, sensors and communication management.

DroneBox is the "plug & play" precision navigation and measurement device usable across the Heliceo product range. Moving a single DroneBox around allows to optimize the investment performing data acquisition with multiple vehicles and sensors.

SuperFox6 is equipped with DroneBox RTK for centimeter GNSS positioning allowing direct georeferencing without need for ground control points (GCP).



Features	DroneBox Slim	DroneBox RTK
Hardware		
◦ Material	Composite & ABS	Composite & ABS
◦ Dimensions	130 x 170 x 270 (mm)	130 x 170 x 270 (mm)
◦ Weight	0,550 Kg	0,667 Kg
◦ Temperature range	-10 °C to +60°C	-10 °C to +60°C
Navigation		
◦ Satellites	Single band L1 GPS Navigation	Dual band L1/L2 GPS/Glonass
◦ RTK	No	Yes
◦ PPK	No	Yes
◦ Precision	1 to 3 m	0,03 m X-Y; 0,05 m Z
◦ IMU	MEMS 3D Attitude 1 °	MEMS 3D Attitude 1 °
Firmware		
◦ Flight management	Autopiloting, navigation, flight plan change, ..	Autopiloting, navigation, flight plan change, ..
◦ Communication management	GNSS board, camera, inertial components, time synchronization and others.	Positions, photos, time, inertial data and others.
◦ Data logging	On-board autopilot, Telemetry, GNSS, ..	On-board autopilot, Telemetry, GNSS, ...

Features

Key features

- High autonomy and high accuracy of images on wider area
- 6 rotors redundant flight control and propulsion
- Centimeter grade GSD Imagery resolution
- GCP free RTK accuracy with DroneBox RTK
- Versatile choice of payloads and sensors
- Very short set-up time

Operation

Type	Multirotor / 6 carbon blades
Setting up and start	Less than 3 minutes
Take-off & landing	Full Automatic (or manual)
Flight management	Full Automatic (or manual)
Endurance	43 min (1)
Cruise speed	30 km/h (18 mph)
Maximum speed	50 km/h (31 mph)
Maximum altitude	5000 m (16 404 ft)
Radio link range	Up to 2 km (1.25 mi)
Crossing distance	Up to 10 km (6.2 mi)
Wind resistance	50 km/h (31 mph)
Temperature range	-10 °C to +45°C

Hardware & Communication

Material	Carbon sttructure Aluminium gimbal
Dimensions	1,120 m x 1,400 m x 0,530 m
Motors	6 brushless motors
Weight	
◦ Without payload	6.0 kg
◦ Max Take-off (MTOW)	10.0 kg
◦ Max Payload (battery included)	4.0 kg
Batteries	Lithium Polymer
Parachute (option)	Pyrotechnic (1.0s)
Radios	
◦ Remote control	2.4 GHz and others (please ask)
◦ Telemetry	433-868-915 Mhz and others (please ask)
◦ Vidéo (FPV) option	5.8 Ghz and others (please ask)
Mission modes	Manual ; Stabilize ; Auto ; Loiter ; Alt Hold ; RTL

Data collection & Software

Sensors	Sony Alpha 6000 24Mpxl and others (please ask)
Typical scanning area	Up to 50 ha (123 acres)
Software	
◦ Mission planning	HASK - Planner
◦ GNSS Processing	POSPac MMS and HASK Geoprocessor
◦ Image processing (option)	Pix4DMapper Pro or MicMac ou autres
Output data	Image files, log data Densified cloud 3D data *(LAS, LAZ, PLY, XYZ)* 3D textured mesh *(FBX, OBJ, DXF, PLY, 3D PDF)* Orthophotos *(GEOTIFF)*, Digital Terrain Model DSM & DTM *(XYZ, LAS, LAZ)* Contour lines *(SHP, PDF, DXF)*

(1) Without payload

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