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THE HOVERHAWK HAS LANDED



HORIZON®
MEASURE RIGHT

MULTIROTOR by
service-drone.com

100% Made in Germany

A new generation complete Ready-to-Fly UAV in a complete package that enables users to survey terrains efficiently, safely, with high accuracy. Orthography of up to 1mm resolution and 3D models can be generated with ease with accompanying software. The HoverHawk is fully designed, assembled and tested in Germany.

PRIMARY APPLICATION

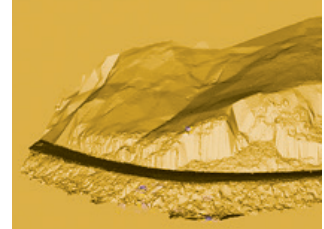
- Manual or fully automated aerial survey, mapping, and image capturing of various terrains, cities, landscapes, and structures. The images can be post processed to generate point clouds or 3D images efficiently post-flight with software like Pix4D.



Aerial mapping



Volume calculation



3D model generation

OTHER POSSIBLE APPLICATIONS*

- Disaster site monitoring, scanning, and rescue facilitation
- Aerial prowling and surveillance for security applications
- Traffic control and management
- Observation of wildlife and nature with minimal intrusion
- Aerial photo taking for sightseeing tours, events, and leisure
- Agriculture land survey and plot management
- Military surveillance applications
- General environmental surveillance

With the HoverHawk, the application possibilities are many, and not limited to the ones listed above.



Disaster site monitoring



Nature observation



Events



Agriculture

PRODUCT FEATURES AT A GLANCE

- Complete, Ready to Fly, and competitive package
- Generate georeferenced photos to build detailed orthophotos, digital elevation models, point clouds, 3D models etc
- Camera system and flight planning software included
- High stability flying in windspeeds of up to 15m/second
- Compact and lightweight 6-rotor carbon fiber frame
- Full redundancy system for approved operation in Austria and other countries with stringent requirements (optional)
- Outstanding innovation designed and assembled in Germany. Winner of the Innovation Prize 2014

PRODUCT DESCRIPTION

The HoverHawk is powered by the proven and award winning MULTIROTER G4 technology, founded in Germany. The hardware and supporting systems are also 100% designed and assembled in Germany supported by rigorous and no-expenses spared research and development, precision engineering, and extensive field testing prior to launch.

The state of the art MULTIROTER flight control system equipped with each HoverHawk allows for unprecedented precision and stability in the flight and measurement process. At the core of the flight control system is a 32-bit dual processor board, supported by a 10-fold higher computing capacity, state of the art hardware components and circuitry, a 128Hz measurement data log and a referenced GPS system.

The HoverHawk package contains everything that users would require for an out-of-box usage and operation. Besides the UAV unit, included are a fully integrated camera system to facilitate fully automated image capturing, and a flight planning software package. Georeferenced photos can be generated with ease and speed, and detailed orthophotos with 1mm ground resolution can be built, along with digital elevation models (DEM), point clouds, volume and area calculations, and 3D models. The HoverHawk value adds to any surveying process in terms of efficiency, user safety, and easy facilitation of post-processing work. The processing of georeferenced photos can be done with software readily available in the market, like Pix4D and Agisoft.

Last but not least, The HoverHawk is also built with competitiveness of price in mind to allow users to access this previously costly technology.

*- Certain applications may require optional accessories to be purchased separately. HORIZON is also able to supply other application specific UAV models upon enquiry

SCOPE OF SUPPLY AND SERVICES

- The HoverHawk UAV unit
- MULTIROTER Groundstation and GeoMap Win v3.3 software
- Olympus PEN E-PL5 camera (or equivalent) incl. Geo-Plug with 14mm objective lens
- MULTIROTER Flight-Control software system, winner of the Innovation Prize 2014
- Software license Multicontrol v3.3 incl. registration
- Autopilot system with 250m flight radius, Position Hold, Come Home, Automatic Treble control features
- Gyro-stabilized brushless camera mount (2 axes) with 90° pan
- Lightweight and unbreakable folding system carbon frame
- Lightweight and unbreakable folding system carbon landing gear
- Quick assembly carbon propeller
- UAV dome cover
- Jetti dc-14 portable transmitter (MULTIROTER edition) including battery and charger
- Two-way data telemetry with language assistance
- High performance flight battery
- LiPo battery tester
- Battery charger
- HoverHawk manual and safety briefing
- Groundstation and GeoMap v3.3 software manual
- Technical device documentation incl. system check and signed certification from the aircraft engineer responsible for the specific testing of the UAV

HOVERHAWK SPECIFICATIONS

Product name	The HORIZON HoverHawk
Payload (incl. camera and flight batteries)	2300g
Ideal max. take-off weight	5000g
Ideal max. flight time	20 Minutes
Max. airspeed	21 km/h
Drive redundancy	YES
Flight Control redundancy	OPTIONAL
Cantilever beam fold system	YES
Dimensions	Ø 85cm, H 49cm
Pack size	88x45x22cm
Flight Control MULTIROTER G4 dual 32-bit	Standard feature
Attitude control 512 times per second	Standard feature
Windspeed tolerance	15 meters/second
Flight data log	128 bit
Servo connectors	6
Digital option port (for future applications)	Standard feature
L1 GPS	Standard feature
GPS flight assistant/autopilot	Standard feature
Automatic treble control 24-bit barometric	Standard feature
Autonomous flight max. 500 waypoints	Standard feature
Autostart/Autolanding assistant	Standard feature
Emergency landing enablement	Standard feature
Camera suspension	Brushless
Live-View 5.8 Ghz diversity	Optional
Digital RC transmitter pilot	Jetti dc-14
Flight training and flight practice certificate	Optional
Inspection (12 months, 25 flight lines, 350 starts)	Optional
Device insurance	Optional

CAMERA SPECIFICATIONS

Olympus digital camera	E-PL5
Product type	Digital camera with interchangeable Micro Four Thirds Standard lens system
Lens	M.Zuiko Digital, Micro Four Thirds System Lens
Lens mount	Micro Four Thirds mount
Equivalent focal length on a 35 mm film camera	Approx. twice the focal length of the lens
Product type	4/3" Live MOS sensor
No. of total pixels	Approx. 17,200,000 pixels
No. of effective pixels	Approx. 16,050,000 pixels
Screen size	17.3 mm (H) × 13.0 mm (V)
Aspect ratio	1.33 (4:3)
Sensor	Uses Live MOS sensor
Field of view	100%
Total no. of pixels	Approx. 460,000 dots (aspect ratio 16 : 9)
Product type	Computerized focal-plane shutter
Shutter	1/4000 – 60 sec., bulb photography, time photography
Focusing points	35 points
Metering system	TTL metering system (imager metering) Digital ESP metering/Center weighted averaging metering/Spot metering
Metered range	EV 0 - 20 (Digital ESP metering/Center weighted averaging metering/ Spot metering)
ISO sensitivity	200 - 25600 (1/3, 1 EV step)
Exposure compensation	±3 EV (1/3, 1/2, 1 EV step)
Memory	SD/SDHC/SDXC/Eye-Fi card (supports UHS-I)
Recording system	Digital recording, JPEG (in accordance with Design rule for Camera File system (DCF)), RAW Data, MP format
Applicable standards	Exif 2.3, Digital Print Order Format (DPOF), PRINT Image Matching III, PictBridge
Drive mode	Single-frame shooting/Sequential shooting/Self-timer
Sequential shooting	Up to 8 fps
Sync speed	1/250 s or slower
Battery	Li-ion Battery ×1
Dimensions	110.5 mm (W) × 63.7 mm (H) × 38.2 mm (D) (4.4" × 2.5" × 1.8")
Humidity	30% - 90% (operation)/10% - 90% (storage)



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