CHCNAV

P330 Pro

VTOL FIXED-WING DRONE FOR SURVEYING AND MAPPING

MAPPING &
GEOSPATIAL

UNMANNED LONG ENDURANCE VTOL FIXED-WING DRONE

The P330 Pro is a high-performance vertical takeoff and landing (VTOL) fixed-wing unmanned aircraft system (UAS), specially designed for aerial surveying and mapping applications. With its concept of high accuracy, long endurance and multiple payloads, it meets the requirements of mapping and aerial surveying professionals for many different applications. The P330 Pro features a 100 Hz differential module, which allows aerial mapping operations at the centimeter level, and a flight endurance with payload reaching more than 150 minutes. The VTOL P330 Pro UAV allows you to conduct small- and large-scale aerial surveys with extreme data quality and at significant time and cost savings. The CHCNAV P330 Pro is an alternative to manned aircraft for surveying and mapping, mining, construction and infrastructure, environmental monitoring, agriculture, etc.

HIGH EFFICIENCY, LONG ENDURANCE

150 mins endurance and up to 20 km² coverage per flight

The P330 Pro VTOL drone is characterized by an ultra-efficient aerodynamic design and can reach 150 minutes endurance with its payload to cover large areas per flight. With a wingspan of only 2.53 m and a fuselage of only 1.21 m, its advanced power management and superior navigation algorithms, the P330 Pro can accurately map a region of 20 km² at a scale of 1:2000. Mapping highway corridors and surveying open-pit mines are now within reach in a single flight.

AERIAL MAPPING. ANYWHERE

Vertical takeoff and landing with adjustable tail paddle

The P330 Pro is a vertical takeoff and landing fixed-wing drone. With its VTOL concept and high accuracy GNSS positioning system, it ensures take-off and landing in a smaller area. With the use of dedicated propeller blades, it can be operated at altitudes of up to 6,000 m, extending its operational range to high altitude survey areas. The P330 Pro can be assembled and disassembled in minutes and allows for easy portability to the mission site in its carrying case.

CAPTURE HIGHER ACCURACY DATA

High-resolution camera and high-accuracy GNSS PPK/RTK module

The P330 Pro supports various high-resolution cameras to guarantee a high ground sampling distance (GSD) and undistorted images. Survey-grade aerial data are obtained with the built-in high-accuracy GNSS module, providing absolute horizontal accuracy of up to 1 cm/pixel.

SWAPPABLE AIRBORNE SENSORS FOR ALL APPLICATIONS

Switching cameras in the field is fast and simple

The P330 Pro is not only available with an orthophoto camera for producing orthophoto maps, but also with optional sensors, such as an oblique camera for 3D modeling applications to address the most demanding mapping and topographic surveys. The new load bay design supports a wide range of sensors, including orthophoto cameras, half-frame and full-frame oblique cameras, medium-frame cameras, multispectral cameras, or lightweight laser scanners, and the ability to quickly switch between them.

REDUCE OPERATING COSTS AND SAVE TIME

No more systematic Ground Control Points (GCP) required

The P330 Pro is equipped with a high-accuracy GNSS RTK/PPK module with up to 100 Hz differential data update rate. With its advanced GNSS PPK data processing and photogrammetry software, the final mapping results are accurate to the centimeter level. Avoiding the establishment of ground control points can also save up to half of the time required for the project. Faster data acquisition with a smaller field crew significantly increases the return on investment of the mission.

TRUSTED BY AERIAL SURVEY SPECIALISTS

**Triple redundant flight control system and safer operation**

The P330 Pro is packed with the latest aviation technologies. A dual GNSS system, a triple IMU system, dual antenna positioning and orientation, 5 safe return to base strategies, and 9 safety monitoring checks guarantee safe flight operations and reliable aerial survey results.

User Friendly Software

EasyFly ground control software makes mission planning and pre-flight checks easier and safer.
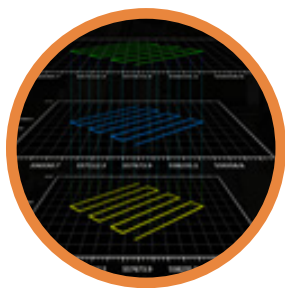
High Precision POS

CHCNAV CGO2 processes the POS data of the drone with base station to get a higher precision POS.

Multiple Payloads

Swappable payload, easy to switch, meets the request of different applications.

Smart Battery

Easier for management, transportation and storage.

SPECIFICATIONS

Drone	
Drone Type	Vertical take-off and landing (VTOL)
Electric Motors	4 + 1
Max. Payload	2 kg
Max. Take-off Weight	14 kg
Max. Flight Time [1]	160 mins (without payload)
Cruise Speed	21 m/s
Max. Climbing Speed	5 m/s
Max. Descent Speed	2.8 m/s
Wingspan	2.53 m
Fuselage Length	1.21 m
Vertical Take-off Height	50 ~ 200 m
RTK Accuracy [2]	H: 1 cm + 1 ppm V: 2 cm + 1 ppm
Take-off & Landing Area	4 x 4 m required
Setup Time	5 mins
Max. Flight Altitude (MSL) [3]	6000 m
Transmission Distance [4]	Up to 5 km
Operating Temperature	-20°C ~ + 50°C
Wind Resistance	Up to 12 m/s
Transport Case Dimension	1250 mm x 450 mm x 450 mm
GCPs [5]	Not required with PPK
Operating Frequency	2.400 GHz - 2.483 GHz

Battery	
Battery Type	Li-Po (12S)
Capacity	27,000 mAh
Charging Time	< 100 mins
Operating Temperature	-10°C ~ +65°C
Weight	5.7 kg
Size	240 mm x 135 mm x 100 mm

Ground Control System	
Ground Control Software	EasyFly (Windows)
Operating Frequency	2.400 GHz - 2.483 GHz

*All specifications are subject to change without notice.
(1) Under optimal condition, ≈1000 hPa pressure, no wind or breeze, +10°C ~ +25°C. (2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. (3) With plateau tail paddle. (4) Under optimal condition, open area, no obstacle between the base and drone. (5) Depends on project requirement, please refer to the white paper of the performance without GCPs.

PAYLOADS

	α7RII	α7RIV
Number of CMOS	1	1
Sensor size	Full frame (35.9 x 24 mm)	Full frame (35.9 x 24 mm)
Pixel	42 MP	61 MP
Storage	64 GB	64 GB
Operating Temperature	0°C ~ +40°C	0°C ~ +40°C
Power Supply	Independent or flight control power supply	Independent or flight control power supply
Weight	582 g (Host only)	580 g (Host only)
	DG3	DG4 Pro
Number of CMOS	5	5
Sensor Size	APS-C, 23.5 x 15.6 mm	Full frame (35.9 x 24 mm)
Pixel	120 MP (in total)	210 MP (in total)
Exposure Interval	≥ 0.8 s	≥ 0.6 s
Storage	640 GB	640 GB /1280 GB
Power Supply	Powered by drone	Powered by drone
Weight	870 g	960 g

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