CHCNAV

X500

ROTOR UAV

MAPPING
& GEOSPATIAL

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HIGH-PERFORMANCE ROTOR UAV

Designed by CHCNAV, the X500 Rotor UAV is a professional drone platform with exceptional payload capacity and endurance. Featuring advanced flight control systems and high-precision positioning technology, the X500 provides superior maneuverability, outstanding flight performance, and industry-leading stability. Its built-in Visual SLAM and obstacle detection radar ensure advanced intelligent flight operations for optimal efficiency and safety. The CHCNAV X500 supports multiple payloads and third-party extensions, making it the most versatile drone for applications such as surveying, urban surveillance, emergency reconnaissance, disaster relief, and demanding inspection missions.

SPECIFICATIONS

General System Performance

Type	Quadcopter with 4 propellers
Structure	Carbon fiber, quickly release design
Dimensions (unfolded, without propellers)	770 x 804 x 440 mm(L x W x H) 30.3" × 31.7" × 17.32"
Dimensions (folded, with propellers)	485 x 410 x 440 mm(L x W x H) 19.1" × 16.1" × 17.32"
Diagonal wheelbase	1000mm
Empty weight (with single downward gimbal)	Approx. 4.4 kg (without batteries) Approx. 8.9 kg (with two batteries)
Max. payload	5.0 kg
Max. takeoff weight	13.9 kg
Hovering accuracy (with moderate or no wind)	Vertical: ±0.5 m (with GNSS positioning) ±0.1 m (with RTK positioning) Horizontal: ±1.5 m (with GNSS positioning) ±0.1 m (with RTK positioning)
RTK accuracy (RTK FIX)	1 cm ± 1 ppm Hz 1.5 cm ± 1 ppm V
GNSS	GPS + GLONASS + BeiDou + Galileo
Operating temperature	-20° to 50° C (-4° to 122° F)
Storage temperature	-40° to 70° C (-40° to 158° F)
Transport container dimensions	853 x 594 x 390 mm(L x W x H) 33.6" × 23.4" × 15.4"

Flight Performance

Max. ascent speed	8 m/s
Max. descent speed	5 m/s
Max. speed	23 m/s
Max.flight altitude MAMSL	4000 m, with standard blades and takeoff weight ≤ 10.8 kg 7000 m, with plateau blades and takeoff weight ≤ 10.6 kg
Max. flight time(1)	58 mins with no payload 52 mins with 2 kg payload 40 mins with 4 kg payload
IP rating(2)	IP55
Obstacle avoidance module	Forward millimeter wave radar
Obstacle detection range	80 m
Landing deviation(3)	≤ 10 cm (with vision positioning) ≤ 8 cm (with RTK fixed)

Remote Controller

Screen	10.1-inch touchscreen resolution: 1920 ×1200 max. brightness: 1000 nits
Weight	Approx. 1.5 kg
Built-in battery	Li-ion (20000 mAh @4.2 V)
Operating time	Approx. 5 hours
Operating temperature	-20° to 50° C (-4° to 122° F)
Operating frequency	2.400 GHz to 2.483 GHz
Max. transmission distance (unobstructed, free of interference)	Specialized UAV frequency, auti-disturb feature, radius 20 km

Intelligent Battery

Model	B10
Battery	Li-ion (10000 mAh @47.04 V)
Energy	470.4 Wh
Weight	Approx. 2.25 kg
Operating temperature	-20° to 50° C (-4° to 122° F)
Ideal Storage temperature	22° to 30° C (71.6° to 86° F)
Charging temperature(4)	-20° to 40° C (-4° to 104° F)
Charging Time	Approx. 70 mins to fully charge 2*B10 Approx. 40 mins to charge them from 20% to 90%

Intelligent Battery Station

Net weight	≤ 10.5 kg
Compatible stored items	Six B10 intelligent flight batteries
Input voltage	100-120 VAC, 50-60 Hz 220-240 VAC, 50-60 Hz

Supported Payload

Supported payload configurations	Single downward payload Single upward payload Dual downward payload Single downward payload + single upward payload
Supported CHCNAV payload(5)	RGB camera: C5/C30 LiDAR: AU20/AA15/AA10/AA9
Third-party payload	Supports only certified payloads developed based on CHCNAV SDK

* All specifications are subject to change without notice.

(1) Measured with X500 flying at approximately 10 m/s in a windless environment until the battery level reached 5%. Data is for reference only. Actual usage time may vary depending on flight mode, accessories, and environmental conditions. Please pay attention to reminders in the app.

(2) The IP rating is not permanently effective and may decrease due to product wear and tear.

(3)Measured with X500 in open environments with good GNSS signals; results may vary due to differences in takeoff and landing environments and weather conditions.

(4)When the ambient temperature is below 5°C (41°F), the battery will trigger the auto-heating function. Charging at low temperatures may reduce battery life. It is recommended to charge at 15°C to 35°C (59°F to 95°F).

(5)The supported payload types are detailed in the user manual and will be updated according to the latest support.

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