CHCNAV

Geospatial

X500

Professional Multirotor Drone

CHCNAV X500 Rotor UAV

The CHCNAV X500 rotor UAV is a professional drone engineered for exceptional pay load capacity and endurance. Equipped with advanced flight controls and high-precision positioning, it delivers superior maneuverability, outstanding flight performance, and industry-leading stability. Its built-in Visual SLAM and obstacle detection sensor ensure advanced intelligent flight operations for optimal efficiency and safety

High Payload Capacity , Long Endurance

5.0 KG Max. payload

supports mainstream payload weights

52 Mins with 2KG payload

Worry-Free in Challenging Environments

IP55 protection rating

vSLAM visual positioning

Follow terrain flight mode

-20°C to 50°C operating temperature

Multiple Redundancies Combined with Intelligent Safeguards Ensure Stable and Safe Flight

Stable Flight
GNSS, IMU, flight control, and other key components feature redundant design for reliable, worry-free flight performance.

Safe Flight
GNSS, IMU, flight control, and other key components feature redundant design for reliable, worry-free flight performance.

Exceptional Flight
Highly sensitive, anti-interference, and fault-tolerant flight control ensures an exceptional flying experience.

High-Efficiency Energy System

B10 Intelligent Battery
- 450-cycle lifespan, reducing average operational costs
- Supports hot-swappable dual batteries

BS10 Intelligent Battery Station
- Holds up to 6 batteries,charges 2 simultaneously
- Allows fast charging from 20% to 90% in just 40 minutes
- Advanced battery management system with 3 charging modes

Multiple Payloads and Open SDK for Versatile Applications

Supports up to three payloads simultaneously
Compatible with LiDAR, photogrammetric cameras, gimbal cameras, searchlight, loudspeakers, etc.

LiDAR | Photogrammetric cameras | Gimbal-mounted cameras | Illumination devices | Loudspeakers

Application Scenario


Geospatial surveying


Urban surveillance


Disaster relief


Emergency scouting


Inspection missions


Mine surveying

SPECIFICATIONS

General system performance

Type	Quadcopter with 4 propellers
Structure	Carbon fiber, quickly release design
Dimensions (unfolded, without propellers)	770 x 804 x 450 mm (L x W x H) 30.3" × 31.7" × 17.7"
Dimensions (folded, with propellers)	485 x 490 x 450 mm (L x W x H) 19.1" × 19.3" × 17.7"
Diagonal wheelbase	1000 mm
Empty weight (with single downward gimbal)	Approx. 4.4 kg (without batteries) Approx. 8.9 kg (with two batteries)
Max. payload	5 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	792 x 520 x 313 mm(L x W x H) 31.2" × 20.5" × 12.3"

Flight performance

Max. ascent speed	8 m/s
Max. descent speed	6 m/s
Max. speed	23 m/s
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 obstacle detection sensor
Obstacle detection range	80 m
Landing deviation(3)	≤ 10 cm (with vision positioning) ≤ 8 cm (with RTK fixed)

Remote controller

Model	EC10
Screen	10.1-inch touchscreen resolution: 1920 ×1200 max. brightness: 1000 nits
Weight	Approx. 1.5 kg
Built-in battery	Li-ion
Operating time	Approx. 5 hours
Operating temperature	-20° to 50° C (-4° to 122° F)
Operating frequency	2.4015 GHz to 2.4814 GHz
Max. transmission distance (with moderate or no wind)	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%

Supported payload

Charging time	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(5)	Supports only certified payloads developed based on CHCNAV SDK

Intelligent Battery Station

Model	BS10
Size	576 x 372 x 302 mm(L x W x H) 22.7" × 14.6" × 11.9"
Net weight	Approx. 9.9 kg
Compatible stored items	Six B10 intelligent flight batteries
Input voltage	100-120 VAC, 50-60 Hz 220-240 VAC, 50-60 Hz
Max. input power	1200 W
Output power	1000 W
Operating temperature	-20° to 40° C (-4° to 104° F)

***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 0%. Data is for reference only, and actual usage time may vary based on flight mode, accessories, and environmental conditions. please follow app reminders.

(2) The IP rating was tested under controlled conditions; it is not permanently effective and may decrease due to product wear and tear.

(3) GNSS performance was measured with the X500 in open environments with good signal conditions. Results may vary based on takeoff/landing environments and weather conditions.

(4) When the temperature drops below 11°C (51.8°F), the battery activates an auto-heating function. Charging at low temperatures may reduce battery life. It is recommended to charge within 15°C to 35°C (59°F to 95°F).

(5) Supported payload types are listed in the user manual and updated with the latest support details.

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