

CHCNAV

BB4 Mini

**MODERN AVIATION
PLATFORM**



**MAPPING
& GEOSPATIAL**

PROFESSIONAL UAV REALITY CAPTURE PLATFORM

The modern BB4 mini quadrotor UAV is equipped with a brand-new intelligent flight control system, which can carry out multi-scene data acquisition with LiDAR and camera and has the advantages of long endurance and multi scenario. BB4 mini sets a new standard of efficient data capturing for surveying and mapping applications by combining intelligence with superior performance.

LONG ENDURANCE

The advanced IWF manufacturing process guarantee the BB4 mini's high strength and light weight, thus achieving a longer endurance. The endurance with 1 kg AlphaAir 450 LiDAR is more than 50 minutes and even with 3 kg payload operation time is 32 min.

FLIGHT CONTROL SENSOR REDUNDANCY

BB4 mini is designed with extensive system and sensor redundancies to maximize flight safety and reliability. These redundancies and safety mechanisms include dual flight control system sensors, dual control signal links, dual intelligent batteries, dual transmission links. All this will help keep your critical missions going even in unexpected scenarios.

DUAL RTK & IMU SYSTEM

Mission planning can be done on desktop PC or on remote filed controller in CHCNAV self-designed GS Control SW. The terrain following function can be set easily with few clicks by information download from the cloud. Drone and payload controls can be easily accessed with one tap. Clear presentation of flight details and navigational information improves user experience and flight efficiency.

SWITCHABLE PAYLOAD

Easy to switch payload with simple lock mechanism can install few LiDAR options, oblique camera, ortho cameras. Truly realize the multi-purpose of one machine that will fit in all daily challenges of survey and mapping applications.

SIMPLE OPERATION, PORTABLE

Less than 5 minutes needed from unpacking, installation, route planning to UAV takeoff. The convenient detachable legs design and the foldable X-shaped structure of the arm make the space occupied smaller and the storage more. Extremely light fuselage, the ultimate module design, robust transport case can be carried, and towed with less efforts.

INTELLIGENT OPERATION

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**POWERFUL
FLIGHT
PERFORMANCE**



Dual RTK antennas

Providing cm-level accurate position in the images, to meet requirements of the surveying and mapping industry.



Multiple payloads

Mount different lidars and camera options from CHCNAV, with a maximum payload capacity of 3 kg.



Hot-swappable battery

A balance of power and portability delivers higher operational efficiency. With 1 kg BB4 mini can operate 50 min.



All-in-one SW

CHC self-developed GS Control flight interface designed to improve piloting efficiency and flight safety.

SPECIFICATIONS

General system performance

Type	Quadcopter with 4 propellers
Structure	Carbon fiber, quickly release design
Assembly time	Start ≤ 2 min / Finish ≤ 2 min
Empty weight	7.0 kg (with two batteries)
Max. payload	3.0 kg
Max. takeoff weight	10.0 kg
Dimensions of instrument	130.0 × 75.0 × 33.0 cm 51.18" × 29.52" × 12.99"
Transport container	Water, dust and quake proof
Dimensions of instrument in container	78.0 × 57.0 × 26.0 cm 30.70" × 22.44" × 10.23"
Flight control system	Dual-frequency GNSS navigation, dual redundancy sensor design, fully-automatic work mode
Remote control SW	CHC GS Control
Operating temperature	-20 °C to +45 °C
Terrain following	Support follow DEM flight by simple online download
Hovering accuracy	150 cm Hz 50 cm V
Hovering accuracy RTK	10 cm + 1 ppm Hz 10 cm + 1 ppm V
Auto-flight mode	Pre-design air route, flight height change

Flight performance

Max. flight altitude MAMSL	5000 m
Flight time ⁽¹⁾	50 min with 1 kg payload 32 min with 3 kg payload
Max. speed	15 m/sec
Max. ascent speed	7 m/sec
Max. descent speed	4 m/sec
Max. wind resistance	13.9 m/sec (level 6)
Takeoff type	Automated takeoff and landing

Remote controller

Operating frequency	2.400 GHz to 2.483 GHz
Max. transmission distance	Specialized UAV frequency, radius 10 km
Operating temperature	-20 °C to +45 °C
Battery	10 000 mAh

Electrical

Standard battery	2 x Li-Polymer batteries, 16,000 mAh
Voltage	22.8 V
Energy	364.8 Wh

Supported payload

RGB camera	CHC C30 oblique camera, 130 MP CHC C5 orthographic camera, 45 MP
	Other sensors, but request factory customisation and calibration
LiDAR	CHC AlphaUni 10 CHC AlphaAir 450

* Specifications are subject to change without notice.

(1) Flight time depends on operation mode, weather conditions, altitude and payload.

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