

**CHCNAV**

**BB4**

**MULTIROTOR  
UAV SOLUTION**



**MAPPING  
& GEOSPATIAL**

# PROFESSIONAL UAV REALITY CAPTURE PLATFORM

BB4 is a high-end unmanned aircraft system resulting from an alliance between the two industry leaders in their respective segments. Its scientific design and highly integrated production technology come from CHCNAV - a global manufacturer specialized in efficient geospatial measurement technologies - and its fully automated flight control system from DJI, the pioneer in the manufacturing of commercial UAVs.

## STATE-OF-THE-ART PLATFORM

### **2 min for flight preparation.**

BB4 UAV is specially designed for professional industrial applications. The modular design with pre-installed arms and antennas reduces the time required for setup, making the platform ready for use in just 2 minutes. Thanks to its structure, little space is required for BB4 take-offs and landings.

## SUPERIOR FLYING PERFORMANCE

### **Extended survey coverage capacity.**

BB4 offers up to 55 minutes of flight time with a 1 kg payload and up to 40 minutes with a 5 kg payload, providing users with the ability to install a high-performance LiDAR and survey large areas in a single flight mission.

## LONG RANGE OPERATION

### **Operating range up to 5 km.**

The BB4s use the DJI Lightbridge 2 flight controller with an operating range of 5 km. The integrated controller and advanced algorithms set a new standard for wireless HD image transmission by reducing latency and increasing maximum range and reliability.

## HIGH CAPACITY

### **Up to 7 kg payload.**

Due to its large capacity of up to 7 kg, the BB4 can be configured according to your mission needs. To generate an accurate 3D point cloud, the BB4 can carry CHCNAV scanners with DSRL cameras. 3D photogrammetry is also possible with an oblique camera system. For inspection and agriculture, users can use multi-spectral cameras.

## INTELLIGENT, SIMPLIFIED FLIGHT SOFTWARE

### **Operated by DJI Ground Station Pro.**

Enhance the BB4's operation with the DJI Ground Station Pro (DJI GS Pro), an iPad App. Perform automated flight missions, manage flight data in the cloud, and collaborate between projects to efficiently manage your drone workflow.

## SURVEY-GRADE ACCURACY

### **Integrated GNSS RTK + IMU.**

The BB4 integrates dual DJI A3 IMUs and GNSS units that work together with CHCNAV's advanced positioning solution, consisting of a high-end GNSS receiver and an industry leading IMU to meet the high accuracy requirements of the surveying and mapping industry.

 **EFFICIENT  
DATA CAPTURE**



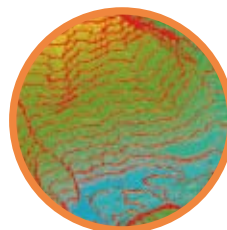
**Topographic  
survey**



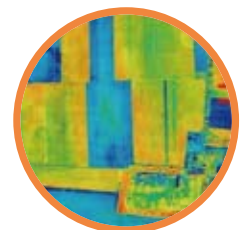
**Construction**



**Asset  
inspections**



**Mining**



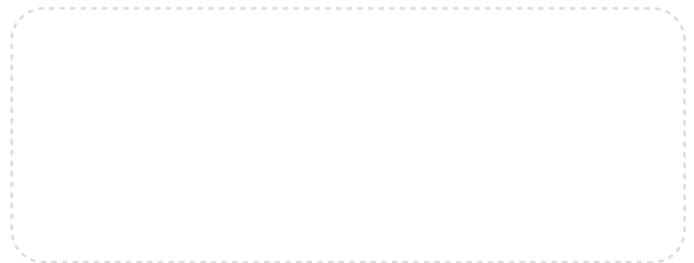
**Natural  
resources**

# 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                    | 20.9 kg (incl. 9.7 kg batteries)   |
| Max. payload                    | 7.1 kg   |
| Max. takeoff weight             | 28.0 kg  |
| Dimensions of instrument        | 110.0 × 110.0 × 44.0 cm<br>43.3" × 43.3" × 17.32"  |
| Transport container             | Water, dust and quakeproof   |
| Dimensions of unit in container | 94.0 × 64.0 × 50.0 cm<br>37.0" × 25.2" × 19.7"   |
| Flight control system           | Dual DJI A3  |
| Remote control SW               | DJI GS PRO   |
| Operating temperature           | -10 °C to +40 °C   |
| Control system                  | Dual-frequency GNSS navigation, dual redundancy sensor design, fully-automatic work mode |
| Hovering accuracy               | 1 cm + 1 ppm Hz<br>2 cm + 1 ppm V  |
| Auto-flight mode                | Pre-design air route, flight height change   |
| Flight performance              |  |
| Max. flight altitude MAMSL      | 5000 m   |
| Flight time <sup>(1)</sup>      | 55 min with 1 kg payload<br>40 min with 5 kg payload                                     |
| Max. speed                      | 14 m/sec   |
| Max. ascent speed               | 5 m/sec  |
| Max. descent speed              | 3 m/sec  |
| Max. wind resistance            | 13.9 m/sec (level 6)   |
| Takeoff type                    | Automated takeoff and landing  |

| Remote controller          |   |
|----------------------------|---|
| Operating frequency        | 5.725 GHz to 5.825 GHz;<br>2.400 GHz to 2.483 GHz                   |
| Max. transmission distance | Specialized UAV frequency, anti-disturb feature, radius 7 km        |
| Video output port          | HDMI, SDI, USB  |
| Operating temperature      | -10 °C to +40 °C  |
| Battery                    | 6000 mAh LiPo 2S  |
| Electrical                 |   |
| Standard battery           | 4x Li-Polymer batteries, 22000 mAh                                  |
| Voltage                    | 22.2 V  |
| Energy                     | 501.6 Wh  |
| Connectors                 | XT60 XT-60 XT60 female  |
| Supported payload          |   |
|                            | CHC AS-C420 (calibrated Sony A7 RII)<br>7952 x 5304, 42.4 MP, 5 fps |
| RGB camera                 | CHC AS-C240 (calibrated Sony A6000)<br>6000 x 4000, 24.3 MP, 11 fps |
|                            | Other sensors, but request factory customisation and calibration    |
|                            | CHC AlphaUniXXX series<br>Riegl miniVUX and VUX-1 based scanners    |
| LiDAR                      | CHC ASXXXseries<br><br>3rd party LiDARS ≤7 kg weight                |

\*All specifications are subject to change without notice.  
(1) Flight time depends on operation mode, weather conditions, altitude and payload.



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