

JO-VTOL UAV CW-100

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JOUAV
Unmanned Aircraft System



JO-VTOL UAV CW-100

Large Payload Long Endurance Hybrid Power Medium UAV

Extra-long flight time (14 hours) and exceptional payload capability (up to 25KG) makes CW-100 an excellent choice for large-scale missions. Multiple payloads can be integrated according to your operational requirements.

Benefits and Features

With the continuous technical updates , our drones bring many actual benefits to our customers, including saving time and cost, getting more comprehensive data, keeping personnel safe.

Professional Technical Support

We are committed to ensuring that every customer can get timely and professional technical support. Engineers can provide customers with remote product installation guidance, software updates, and UAV flight technical support; they can also arrive at the scene to provide services.

- Complete drones flight training
- Professional after-sales engineer team, online or on-site support
- Well documented support and videos
- Worry-free package and professional insurance
- Warranty and return to factory repair



110Kg

MTOW

8.2Kg

Airframe

5200mm

Wing Span

3m

Fuselage

Up to 200Km

Radio Link

RTK/PPK

DGPS

≤25kg

Payload

14Hrs

Endurance

135Km/h

Cruising Speed

13.9-17.1m/s

Wind Resistance

5100m

Ceiling

3000m

Max Takeoff Altitude

3cm

V Positioning Accuracy

1cm+1ppm

H positioning Accuracy



Outstanding Performance: 3000m max take off attitude, 5100m max flight ceiling, 840min endurance, exposure delay within 10ms.

VTOL: Vertical takeoff and landing, greatly reduce terrain dependence and adapts to most places.

Large Payload Capacity: The CW-100 can carry up to 25kg payloads, which means it can use most mission equipment. This gives it a high degree of compatibility.

Modular design: Set up or take down in a few minutes, get started quickly.

Fully Auto: One-button take-off and land, safe and simple, landing accuracy within 10cm

Long Data Link: The maximum 200 km data link allows the CW-100 to easily perform a variety of long-range missions, such as automated surveillance.

RTK and PPK Function: This means centimeter-level autonomous vertical landing and high-precision POS data.

Super Adaptability: Fly in high altitude, high humidity, low temperature, and light rain condition with self-heating airspeed tube and battery.

CW-100 UAV can carry many types of mission payloads.

You can choose different cameras according to the actual mission needs, including LiDAR system, industrial aerial camera, oblique camera system, gimbal system and SAR. Simple and flexible, multi-purpose.

Supporting Software

Eagle Map Drone Surveillance Software

Automate drone flight missions, live video feed, AI-based detection, and data processing



We provide one-stop UAV products, including the supporting software needed for the task. You can use these software to plan a flight path, control and manage the drone, track and identify targets, and see video and geo-data information from the drone in real time.

Specifically designed for UAV products, Eagle Map is mainly used for power line inspection, emergency response, search and rescue, etc. Together with JOUAV's flight control system, the software not only ensures the stability and safety of the drone but is also easy to operate.

Eagle Map can automatically generate routes according to different gimbal cameras and transmits 1080P HD real-time videos to the ground station. In addition to that, it can also generate orthomosaic maps based on the keyframes of the live video.

3D Mission Previews of Your Entire Mission Plan: It helps you plan, simulate, and control your drone's trajectory more accurately for safer flight

Automatic Route Generation Based on Different Gimbal Cameras: The software eliminates the manual workflows and it's ideal for both beginners and advanced users

AI-based Object Detection and Tracking: It can detect objects while flying and allows the analysis and recording of information on the ground.

Project Real-time Video atop the 3D map of the Ground Station: This shows the environmental danger and location of the affected area, enhancing people's situational awareness.

Real-time Video Stitching to Generate Orthophotos: 2D orthomosaic maps are created simultaneously with the real-time video, providing situational information for security teams.

Live Video Transmission down to 300ms: Transmit 1080P HD live video footage to the ground station via a dedicated data link and allow more officers to see the video from their mobile devices.

Supporting Software

FlightSurv Drone Mapping Software

Comprehensive cloud-based drone mapping software for flight planning, data collection, processing, and analysis



Getting the right drone mapping software is essential.

Our FlightSurv is designed especially for professional drone mapping applications.

This all-in-one software solution allows you to automate drone both your drone flight planning, data collection, and image transfer.

In addition, it also helps you create detailed and accurate 2D and 3D visuals.

If you're just starting out with drone mapping, look no further than FlightSurv! This easy-to-use drone mapping software helps you get your drone in the air quickly and output data results efficiently.

The software offers unparalleled efficiency and user experience by allowing you to plan a mission consisting of multiple flight plans from the ground.

Support Drone Data Collection, Processing, Asset Inspection: Besides drone flight planning, FlightSurv can also capture images, inspect your assets, analyze collected data.

Full of Cloud-based Operations: It's easy to manage even if you have many team members or clients who need your drone data on their own mobile devices.

Simple and Intuitive Interface Design: Users can quickly complete the entire flight mission while navigating the intuitively designed interface effortlessly.

High-speed Data Processing: To process 1000 photos, the software only takes only 2 hours to generate high precision TDOM and DSM.

Fly Multiple Plans at Once: You don't need to land the drone between flight plans, which maximizes its efficiency in the air.

Import and Create Routes from KML Data: Your flight plan will automatically be generated once import a KML file that will save you 50% time.

OPTIONAL



Ground Control Station GCS-303

GCS-303 Ground Control Station is capable of controlling the flight operations and gimbal cameras at the same time. With a terminal control and transmission Base (GCS-1000), this ground station is easy to carry and suitable for any harsh environment.

GCS-303 ground control station has a professional graphics card, enabling the operator to plan, execute and track the UAV in real-time. In addition to this, it is equipped with two batteries and 1T of memory, giving it a longer endurance and more memory storage than other ground control stations.

Portable Ground Control Station: Well suited for typical flight operations in field environments

Screen Brightness up to 480cd/m2: Allow the system to work under extreme sunlight conditions

Two Different Screen Monitors: One displays information about the mission plan while the other screen shows video streams

Integrated 3 Ethernet Ports: 3 x 100M RJ45 Ethernet ports for fast network communication

Equipped with professional GPU: Enable High-performance Processing Capacity

2 Power Supply Batteries Included: Provide seamless battery switching for long endurance

With a Large Onboard Memory of 1T: Store up to 200 hours of high-resolution video and 100 mission plans

Include a Joystick for Payloads: Enable 3600 controls of the gimbal including pan, tilt, rotate and zoom

Phase One iXM Series Camera



High-resolution medium format cameras for mapping and surveying

The iXM 50MP and iXM 100MP offer users the reliability and versatility of a full-featured medium format aerial camera. They are a breakthrough camera platform created for drones, ready for full control of wireless links for defining ISO, shutter speed, aperture and advanced features, focal length and uploading flight plans.

Benefits and Features: With ultra-high resolution, backside illuminated CMOS sensor, fast capture speed, and enhanced light sensitivity, these two PhaseOne cameras provides increased productivity in a wide range of aerial image acquisition projects.

Backside Illumination (BSI) Medium Format Sensor: Deliver higher sensitivity, less noise and better all-round image quality

High-resolution Lenses: 11664 x 8750 pixel for the iXM 100MP, 14204×10652 for iXM RS150MP

New Leaf Shutter Technology: Fast capture rate of 3 fps and exposure time down as low as 1/2500 of a second for the iXM 100MP

Super-fast XQD Storage Card: The SD card in the camera keeps pace with the shooting speed of your camera, to clear the memory buffer fast

Easy Integration with a Variety of UAV Platforms: With serial communication camera control and HDMI output, including camera status and image data in the overlay

35mm to 50mm Fixed Focus: It is auto focusable and wide enough to cover up to 50 square kilometers in a single 1:500 operation, making it suitable for photogrammetric and mapping tasks.

The raw data acquired by Phase One aerial cameras can be processed into DEMs, DOMs, DLGs, 3D models and other surveying and mapping data

MG-150E EO/IR/LR Gimbal Camera

30 x optical zoom and thermal imaging drone gimbal camera with 4km laser rangefinder

MG-150E is a 2-axis high-precision gimbal camera with a laser rangefinder, optical camera, and thermal sensor.

The optical camera provides 1080P full HD video streaming and 30X zoom capability enabling you to see objects in detail over a distance.

With a 640*512 thermal camera, you can detect targets at night or in low visibility.



Benefits and Features: Integrated with a laser rangefinder, MG-150E can calculate the distance of the object within 4000 meters, accurately analyze the longitude and latitude of the object, and displays them on the screen.

Besides, this gimbal camera is using the most advanced thermal tracking technology, with which you will never lose the object, the tracking function works on daylight sensors too.

30X Optical Zoom EO Camera: This HD 1920 x 1080 high-resolution and 30X optical zoom camera allows you to observe objects up to 500m away.

Integrate Thermal Image Sensor: With 640*512 thermal camera, you can find the missing and trapped persons or animals at night or in low visibility situations.

4000 Meters Laser Rangefinder: MG-150E helps you determine the distance to your target and pinpoint it at long distances up to 4000 meters

Geo-Location Feature: The geo-location function will output the GPS position of the object and machine being viewed in the video image.

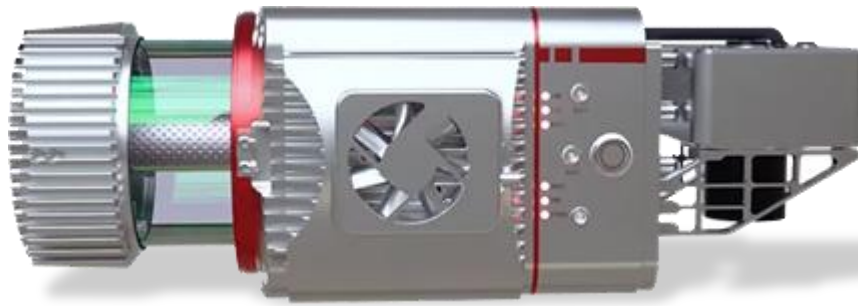
Autonomous Track Ground Targets: Automatically target an moving object, guide the drone to track it and keep it in the center of the video screen.

2-axis Gyro Stabilizer: It stabilizes your video on the pitch and roll axis, which features high stability, accuracy, and sensitivity.

Raw Data Download and Duplicate Storage: The camera lets you download and storage airborne raw data of video, photos and POS data.

Detect & Identify Ground Targets: This comprehensive detection camera can quickly find small, hard-to-see, moving objects on the ground.

JoLiDAR-LR22S



JoLiDAR-LR22S is a lightweight and long-range laser scanner for UAV surveying.

JoLiDAR-LR22S is a multi-functional and long-range LiDAR scanning system that has a long endurance, high measurement accuracy, and fast data processing speed. It integrates a laser scanner, GNSS high-precision positioning system, Lrg guidance system, high-speed data acquisition, and storage system, and full-frame camera.

This drone-based LiDAR scanner features a full 360° field view and laser pulse repetition rates of up to 1500 kHz, and integration of a full-frame camera, which is ideal for challenging UAV applications such as measurement of inaccessible canyons and open-pit mines.

Capture Synchronized Point Clouds and Orthophotos: LR22S simultaneously captures centimeter-level precision point clouds and 61M orthophotos, significantly improving the efficiency of data acquisition.

Detection Range of 1854m, 100% Eye Safe: Thanks to the advanced 1550nm wavelength, LR22S has a detection distance of 1845m or further. It lets this device overcome flight altitude constraints, reducing operational difficulties.

Higher Point Cloud Density: With 1500 kHz laser emission frequency and 1.5 million points/sec measurement frequency, LR22S gives you higher density laser point clouds and a more accurate detailed picture of your object.

Improved Penetration of Dense Vegetation: The device provides 15 echoes that can penetrate dense vegetation and obtain detailed topographic data, making it the best solution for mapping mountainous areas.

High Point Cloud Accuracy: LR22S integrates a high-precision laser scanner and navigation system which ensures the vertical accuracy better than 3cm and horizontal accuracy better than 5cm.

High-resolution 3D Models: With an angular resolution of less than 0.001°, LR22S helps create finer and clearer 3D point cloud models, allowing to easily check small objects at a distance.

GCP-free, Save Manpower: Integrated with JOUAV drones, it automatically calculates location information without Ground Control Points. Just one person can complete the entire process of data collection.

360° Field of View : LR22S has a field of view up to 360°. There is no need to join multiple products in order to obtain a large field.

