DJI M350 RTK + ZENMUSE L2 LIDAR

DJI Matrice 350 RTK is DJI's new **industrial drone** that draws inspiration directly from modern aviation systems. With over 55 minutes of battery life, the **integration of advanced AI capabilities,** six-way detection and positioning, and more, the M350 RTK sets a new standard of intelligence and reliability combined with unprecedented performance.

NOVATEST
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Caratteristiche principali:

- Autonomia di volo massima di 55 minuti;
- Grado di protezione IP55;
- Trasmissione DJI O3 Enterprise;
- DJI RC Plus;
- Batteria da 400 cicli;
- Rilevamento e posizionamento in 6 direzioni;
- Fotocamera FPV per visione notturna;
- Supporto multi carico.

Zenmuse L2 integrates LiDAR technology, an internally developed high-precision IMU system, and a CMOS 4/3 RGB mapping camera, providing DJI flight platforms with a **more precise, efficient, and reliable geospatial data acquisition.** When used with LP360 software, it offers a unique solution for high-precision 3D data collection and post-processing, including strip alignment and feature characterization.

The L2 LiDAR allows for precise scanning of complex objects within an extended range and faster point cloud acquisition. During operations, users can **preview, play back, and process** point cloud models on-site, with activity quality reports generated by DJI Terra, providing a simple and comprehensive solution to enhance overall efficiency. This enables users to achieve high-precision point clouds with a **unique post-processing approach.**

High-Level Precision

Combining GNSS and an internally developed high-precision IMU, this solution achieves a vertical accuracy of 4 cm and horizontal accuracy of 5 cm.

30% Increased Detection Range

L2 can detect from 250 meters with 10% reflectivity and 100 klx, up to 450 meters with 50% reflectivity and 0 klx. The typical operating altitude now extends up to 120 meters, significantly improving safety and operational efficiency.

Smaller Laser Points, Denser Point Clouds

With a reduced spot size of 4×12 cm at 100 meters, only one-fifth of that of L1, L2 not only detects smaller objects with more detail, but can also penetrate denser vegetation, generating more accurate Digital Elevation Models (DEMs).

Supports 5 Returns

In densely vegetated areas, L2 can capture more ground points beneath the foliage compared to the previous version.

Point Cloud Effective Speed: 240,000 points/s

In both single and multiple return modes, L2 can achieve a maximum point cloud emission rate of 240,000 points per second, allowing for the acquisition of more point cloud data within a given time frame.

Improved Accuracy

The self-developed high-precision IMU system, combined with the drone's RTK positioning system for data fusion during post-processing, provides L2 with extremely precise information on absolute position, velocity, and attitude. Furthermore, the IMU system's increased environmental adaptability enhances the operational reliability and accuracy of L2.

Technical features DJI M350 RTK:

Enhanced transmission system:

The exclusive OcuSync Enterprise system allows image transmission up to 15 km away and supports 1080p video on triple frequency channels3. Automatic selection between 2.4 GHz and 5.8 GHz4 allows for more reliable flight in close proximity to high interference environments, and AES-256 encryption ensures secure data transmission.

- 15km Transmission distance
- 1080p Triple channel video
- 2.4 /5.8GHz Automatic selection in real time

Enhanced flight performance:

The refined design of the body and engines offer a more stable and efficient movement, even in the most complex flight conditions.

- 55min Flight autonomy
- 7m / s Maximum descent speed 5
- 7000m Altitude of tangency 6
- 15m / s Wind resistance
- 23m / s Maximum speed

Multiple load configurations:

Configure the M350 RTK to meet your every operational need. Mount up to three loads at the same time for a maximum weight of 2.7 kg.

Technical features Zenmuse L2:

Zenmuse L2 is a high-precision aerial LiDAR system that **empowers drones with more accurate and efficient 3D data collection.** With 4cm vertical accuracy, 5cm horizontal accuracy, and the ability to cover an area of 2.5 km² during a single flight, this **IP54-rated system** allows users to effortlessly handle a wide range of operational scenarios.

LiDAR

- Smaller laser spots, denser point clouds
- Point rate of 240.000 pts/s
- 5 returns
- Detection Range: 450m (50% reflectivity, 0 klx); 250m (10% reflectivity, 100 klx)
- Repetitive and non-repetitive scanning
- Center Point Laser Rangefinder (RNG)

High-Accuracy IMU System

- Yaw accuracy: Real-time: 0.2°, post-processing: 0.05°
- Pitch/Roll accuracy: Real-time: 0.05°, post-processing: 0.025°
- No IMU Warm-up required, ready to operate after startup

RGB Mapping Camera

- 4/3 CMOS
- 20 MP
- Mechanical shutter, high-speed burst with 0.7s interval

Enhanced Operational Experience

- Point cloud LiveView
- Point cloud playback and merging
- On-site task quality report
- PPK
- One-click processing on DJI Terra