

DJI

ZENMUSE

L2 LIDAR SENSOR



GENERAL

Product Name	Zenmuse L2
Dimensions	155×128×176 mm (L×W×H)
Weight	905±5 g
Power	28 W (typical) 58W (max.)
IP Rating	IP54
Supported Aircraft	Matrice 300 RTK (requires DJI RC Plus) Matrice 350 RTK
Storage Temperature	-20° to 60° C (-4° to 140° F)

LIDAR

Ranging Accuracy (RMS 1σ)	2 cm @ 150 m
Maximum Returns Supported	5
Scanning Modes	Non-repetitive scanning pattern, Repetitive scanning pattern
FOV	Repetitive scanning pattern: Horizontal 70°, Vertical 3° Non-repetitive scanning pattern: Horizontal 70°, Vertical 75°
Minimum Detection Range	3 m
Laser Beam Divergence	Horizontal 0.2 mrad, Vertical 0.6 mrad
Laser Wavelength	905 nm
Laser Spot Size	Horizontal 4 cm, vertical 12 cm @ 100 m (FWHM)
Laser Pulse Emission Frequency	240 kHz
Laser Safety	Class 1 (IEC 60825-1:2014)
Accessible Emission Limit (AEL)	233.59 nJ
Reference Aperture	Effective Aperture: 23.85 mm (equivalent to circular)
Max Laser Pulse Emission Power Within 5 Nanoseconds	46.718 W

SYSTEM PERFORMANCE

Detection Range	450m @50% reflectivity, 0 klx 250m @10% reflectivity, 100 klx
Point Cloud Rate	Single return: max. 240,000 pts/s Multiple returns: max. 1,200,000 pts/s
System Accuracy	Horizontal: 5 cm @ 150 m Vertical: 4 cm @ 150 m
Real-Time Point Cloud Coloring Coding	Reflectivity, Height, Distance, RGB

INERTIAL NAVIGATION SYSTEM

IMU Update Frequency	200 Hz
Accelerometer Range	±6 g
Angular Velocity Meter Range	±300 dps
Yaw Accuracy (RMS 1σ)	Real-time: 0.2°, Post-processing: 0.05°
Pitch/Roll Accuracy (RMS 1σ)	Real-time: 0.05°, Post-processing: 0.025°
Horizontal Positioning Accuracy	RTK FIX: 1 cm + 1 ppm
Vertical Positioning Accuracy	RTK FIX: 1.5 cm + 1 ppm

RGB MAPPING CAMERA

Sensor Lens	4/3 CMOS, Effective Pixels: 20 MP
Shutter Speed	FOV: 84° Format Equivalent: 24 mm Aperture: f/2.8-f/11 Focus Points: 1 m to ∞ (with autofocus)
Shutter Count	Mechanical Shutter: 2-1/2000 s Electronic Shutter: 2-1/8000 s
Photo Size	200000
Still Photography Modes	5280×3956 (4:3) Single shot: 20 MP Timed: 20 MP

DATA STORAGE

Raw Data Storage	Photo/IMU/Point cloud/GNSS/Calibration files
Point Cloud Data Storage	Real-time modeling data storage
Supported microSD Cards	microSD: Sequential writing speed 50 MB/s or above and UHS-I Speed Grade 3 rating or above; Max capacity: 256 GB. Use the recommended microSD cards.
Recommended microSD Cards	Lexar 1066x 64GB U3 A2 V30 microSDXC Lexar 1066x 128GB U3 A2 V30 microSDXC Kingston Canvas Go! Plus 128GB U3 A2 V30 microSDXC Lexar 1066x 256GB U3 A2 V30 microSDXC

GIMBAL

Stabilization System	3-axis (tilt, roll, pan)
Angular Vibration Range	0.01°
Mounting	Detachable DJI SKYPORT
Mechanical Range	Tilt: -143° to +43° Pan: ±105°
Controllable Range	Tilt: -120° to +30° Pan: ±90°
Operation Mode	Follow/Free/Re-center