Zenmuse P1
Full frame 45MP Photogrammetry Camera

The Zenmuse P1 integrates a full-frame sensor with interchangeable fixed-focus lenses on a 3-axis stabilized gimbal. Designed for photogrammetry flight missions, it takes efficiency and accuracy to a whole new level.

- High Efficiency: 3 km2 covered in a single flight.
- 45 MP Full-frame Sensor
- 4.4μm Pixel Size
- Low-noise, high sensitivity imaging extends daily operational time.
- 3-axis Stabilized Gimbal, Smart Oblique Capture
- Global Mechanical Shutter Speed 1/2000 Seconds
- TimeSync 2.0 - synchronization at the microsecond level - TimeSync 2.0 aligns the camera, flight controller, RTK module, and gimbal at the microsecond level.
- Take a photo every 0.7 s during the flight!

Extraordinary Efficiency
The P1 includes a full-frame, low-noise high-sensitivity sensor that can take a photo every 0.7 s during the flight and covering 3 km2 in a single flight.

Remarkable Accuracy
Equipped with a global mechanical shutter and the all-new TimeSync 2.0 system, which synchronizes time across modules at the microsecond level, the Zenmuse P1 lets users capture centimeter-accurate data combined with the real-time position and orientation compensation technology.

Robust Versatility
Create 2D, 3D, and detailed models thanks to the integrated 3-axis gimbal that can be outfitted with 24/35/50mm lenses and the Smart Oblique Capture feature.

Smart Oblique Capture
Cover 7.5 km2 in a single workday with the P1. Elevate the efficiency of your oblique photography mission using Smart Oblique Capture, where the gimbal automatically rotates to take photos at the different angles needed. Only photos essential to the reconstruction will be taken at the edge of the flight area, increasing the efficiency of post processing by 20% to 50%.

Smart Data Management

- Mission result files are automatically associated with the Mission Name and Mission Time.
- A centralized storage location for photos, GNSS data, and TimeStamps.MRK files.
- The image metadata contains the camera's intrinsic and extrinsic parameters and the status of RTK.

Fieldwork Report
Verify data quality immediately post-flight by checking the position data and number of the images acquired, as well as RTK status and positioning accuracy.

A Mission Mode for Any Scenario

2D Orthomosaic Mission
Generate orthomosaics without GCPs using the P1, perfect for medium to large-area operations.

3D Oblique Mission
Effortlessly acquire oblique images from multiple angles that meet 3D modeling requirements across industries such as urban planning and centimeter-level accurate cadastral surveys to serve 3D reality models and smart city planning.

Detailed Modeling Mission
Acquire ultra-high resolution image data of vertical or slanted surfaces from a safe distance that faithfully recreates fine textures, structures, and features, for detailed reconstructions, geological surveys, heritage site conservation, hydraulic engineering, and more.

Real-time Mapping Mission

Gather geographic information of large areas in real-time using DJI Terra so that teams can make crucial decisions quickly on site.

Specs
- **Product Name:** ZENMUSE P1
- **Dimensions:** 198×166×129 mm
- **Weight:** Approx. 800 g
- **Power:** 20W
- **IP Rating:** IP4X
- **Supported Aircraft:** Matrice 300 RTK
- **Operating Temperature Range/** -20° to 50° C (-4° to 122° F)
- **Storage Temperature Range/** -20° to 60° C (-4° to 140° F)
- **Absolute Accuracy: Horizontal:** 3 cm, Vertical: 5 cm *

  *Using Mapping Mission at a GSD of 3 cm and flight speed of 15 m/s, with an 75% front overlap rate and a 55% side overlap rate.

Video
- **Video Format:** MP4
- **Video Resolution:**
  16:9 (1920×1080)
  16:9 (3840×2160)*
  *Only 35mm lens supported
- **Frame Rate:** 60fps

Gimbal
- **Stabilized System:** 3-axis (tilt, roll, pan)
- **Angular Vibration Range:** ±0.01°
- **Mount:** Detachable DJI SKYPORT
- **Mechanical Range: Tilt**: -125° to +40°; Roll: -55° to +55°; Pan: ±320°

Camera

Sensor
- Sensor size (Still): 35.9×24 mm (Full frame)
- Sensor size (Max video recording area): 34×19 mm
- Effective Pixels: 45MP
- Pixel size: 4.4 µm

Supported Lenses
- DJI DL 24mm F2.8 LS ASPH(ENTERPRISE) (with lens hood and balancing ring/filter), FOV 84°
- DJI DL 35mm F2.8 LS ASPH(ENTERPRISE) (with lens hood and balancing ring/filter), FOV 63.5°
- DJI DL 50mm F2.8 LS ASPH(ENTERPRISE) (with lens hood and balancing ring/filter), FOV 46.8°

Supported SD Cards
- SD: UHS-I rating or above; Max capacity: 512 GB

Storage Files
- Photo / GNSS Raw Observation Data/ Image Log File

Photo Size
- 3:2 (8192×5460)

Operation Modes
- Photo, Video, Playback

Minimum photo interval
- 0.7 s

Shutter Speed
- Mechanical Shutter Speed: 1/2000*-1 s
  Electronic Shutter Speed: 1/8000-1 s
  *Aperture value no larger than f/5.6

Aperture Range
- f/2.8-f/16

ISO Range
- Photo: 100-25600
- Video: 100-2560

CONTACT US for a QUOTE

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