CAP50 Payload Options



American Made
Professional Drone Platform

LiDAR Solution

Offering the benefits of best-in-class data accuracy, good detection range, high point density, and versatility, this compact and light-weight LiDAR scanner is an all-around performer.



Flight Time With LiDAR Payload

22-25 Minutes

Specifications

RGB Camera Sony α 5100 – 24 MP Camera

Operating Conditions -4 - 149°F (-20°C to 65°C)

Power Consumption 16 Watts

IMU Atitude Acc <0.006 deg Pitch and roll; < 0.03

deg Heading

IMU Position Acc 0.5cm (PPK); 1cm + 1ppm (RTK)

MAX Points Per Second 1.28M points/s (dual return)

Scan Rate 640,000 pts/s and 2 returns

Field of View +15° -16° (Vertical) × 360°

(Horizontal)

Weight 1.70 kg (3.8 lbs)

Storage 256 GB Provided (1TB supported)

System Accuracy (5m/s @ 50m) ± 3 cm

Scan Range 120 m @ 50% reflectivity (MAX)

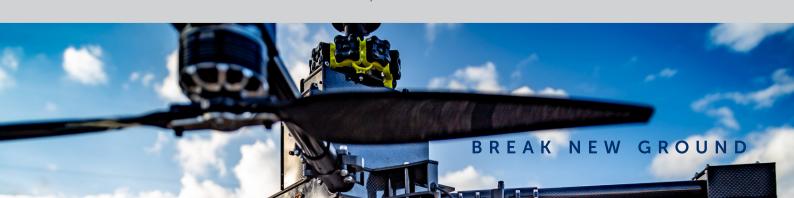
Range Accuracy (RMS) 50 m @ 10% reflectivity

(Recommended)

± 10 mm (0.5m - 50m @ 50%

reflectivity)

Laser Sensor Hesai PandarXT 32



Photogrammetry Solution

High-resolution full-frame mirrorless camera built around a BSI-CMOS sensor that outputs 60.2MP images, complete with 35mm lens and gimbal

Flight Time With Photogrammetry Payload

22-26 Minutes

Specifications - Camera

Camera model Sony α7R IV

Sensor CMOS, 1.69" (43mm)

Effective Pixels: 60.2 MP

Lens (interchangeable) f/2.8 35mm FE E-Mount

FOV 60°

Photo formats JPEG (Exif 2.31), RAW (14-

bit ARW 2.3), RAW+JPEG

Shutter speeds 1/8000 - 30 sec

ISO range 100 - 32.000

Dimensions $5.0 \times 3.8 \times 2.4 \text{ in.}$

(127 x 96 x 60 mm)

Specifications - Environmental

Operating Temperature 14° – 122°F (-10° – 50°C)

Storage Temperature $-4^{\circ} - 140^{\circ}F (-20^{\circ} - 60^{\circ}C)$

Specifications - Gimbal

Angular Vibration Range ±0.01°

Mount Detachable

Controllable Range Tilt: +120° to -45°, Pan: ±345°. Roll: ±45°

Mechanical Range Tilt: ±150°, Pan: ±345°, Roll: +80° to -264°

Max Controllable Angular Speed Tilt: 180°/s, Pan: 180°/s, Roll: 180°/s

Bathymetry Solution

Ultracompact, survey-grade echosounder for hydrographic

and environmental survey applications

Specifications

Measurement range*

Sensor ECT D052S

Type Dual frequency

Acoustic frequency 50/200 kHz

1.0 ... 200m (50 kHz) 0.5 ... 200m (200 kHz)

Beam width Conical (-3dB) $27^{\circ} / 7^{\circ} (50 \text{ kHz}/200 \text{ kHz})$

Weight (echosounder) 460 g (1.01 lbs)
Weight (full payload package in air) 2.7 kg (5.95 lbs)

