ULTRACAM OSPREY MARK 3 PREMIUM

Photogrammetry meets oblique
We have you covered from all angles

Designed for maximum flexibility, the UltraCam Osprey Mark 3 Premium extends a full photogrammetric nadir camera with oblique capture capability in four directions.

More than a standard camera, the UltraCam Osprey offers cutting-edge technology to collect photogrammetry-grade nadir images (PAN, RGB and NIR) and oblique images (80 Mega pixel RGB) simultaneously, supporting city mapping as well as classical nadir applications from the same flight mission. Additionally, the unique camera design of the UltraCam Osprey Premium enables generation of imagery based high-resolution point clouds. The result are dense, consistent and aligned data sets. The nadir and oblique camera channels are designed and oriented such that the full nadir footprint of 13,470 pixels can be leveraged. Meanwhile, oblique image characteristics such as resolution and overlap are well aligned. The combination of these factors leads to best-in-class flight collection efficiency. By offering automated features such as nadir and oblique color balancing, nadir and oblique AT, dense point cloud generation, DTM/DSM generation as well as 3D model generation through UltraMap, the UltraCam Osprey Premium is taking photogrammetry to new levels.

“UltraCam Osprey, simple-to-use but versatile enough to meet both the present and future requirements of our company. Two weeks after the initial training, we were able to produce orthomosaic images and 3D city models already.”

ROBERT CHENG
ULTRACAM OSPREY CUSTOMER
Specifications & details

SENSOR SYSTEM

**Nadir**

- **PAN image size**: 13,470 x 8,670 pixels
- **PAN physical pixel size**: 5.2 µm
- **Color capability (multi-spectral)**: 4 channels – RGB Bayer pattern & NIR
- **Color image size**: 6,735 x 4,335 pixels
- **Color physical pixel size**: 5.2 µm
- **Pansharpen ratio**: 1 : 2

**Oblique**

- **Color capability**: 3 channels – RGB Bayer pattern
- **Color image size**: 10,300 x 7,700 pixels
- **Color physical pixel size**: 5.2 µm

**Imaging sensor**: CCD
- **Shutter (longlife central leaf)**: 1/750 to 1/64
- **Forward-motion compensation (FMC)**: TDI controlled
- **Maximum FMC capacity**: 50 pixels
- **Frame rate (minimum inter-image interval)**: 1 frame per 1.75 seconds
- **Dynamic range**: > 72 db
- **Analog-to-digital-conversion at**: 14 bits

**LENS SYSTEM**

**Nadir**

- **PAN lens system focal distance**: 80 mm
- **PAN lens aperture**: f=1/5.6
- **Color (RGB Bayer pattern & NIR) lens system focal distance**: 40 mm
- **Color (RGB Bayer pattern & NIR) lens aperture**: f=1/5.6
- **Total field of view, across track along track**: 45° (+9.5° / -9.5°)
- **Flying height for RGB pixel size @ 10 cm GSD**: 1,538 m

**Oblique**

- **Color (RGB Bayer pattern) lens system focal distance**: 120 mm
- **Color (RGB Bayer pattern) lens aperture**: f=1/4.4
- **Total field of view, across track along track**: 45° (+9.5° / -15.7°)

**DATA STORAGE SYSTEM**

- **In-flight exchangeable & redundant storage system: Solid state disk pack**
- **Data unit storage capacity**: 10 TB (~6,300 images)
- **Input data quantity per image**: 1,290 MB
- **Weight of data unit**: 2.2 kg

**OPERATIONAL SPECIFICATION**

- **Flight altitude**: ≤ 7000 m
- **Humidity**: 5% to 95% no condensation
- **Temperature**: 0 °C to +45 °C (operation, computer stack); -20 °C to +45 °C (operation, sensor stack); -20 °C to +65 °C (storage)
- **Mounting**: UltraMount (QSM 4000, SSM 360L & SteadyTrack LG) and most current third-party mounts²
- **O/N/S/INS/FMS system support**: UltraNav (Applanix POSTrack OEM) and most current third-party systems²
- **Data processing**: UltraMap processing suite including data export in standard formats

² Please contact our sales team for detailed information.

³ For separated housing concept options please contact our sales team.
BENEFIT FROM OUR TECHNOLOGY

When you partner with Vexcel Imaging, you get more than a camera. You get cutting-edge technology combined with a progressive service concept for constant product upgrades, world-class support and one-stop solutions. Today and tomorrow.