

VEXCEL  
IMAGING

ULTRACAM OSPREY 4.2

# All-in-one mapping power



PRECISION FROM EVERY ANGLE  
WITH NADIR AND OBLIQUE IMAGING

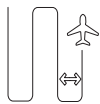
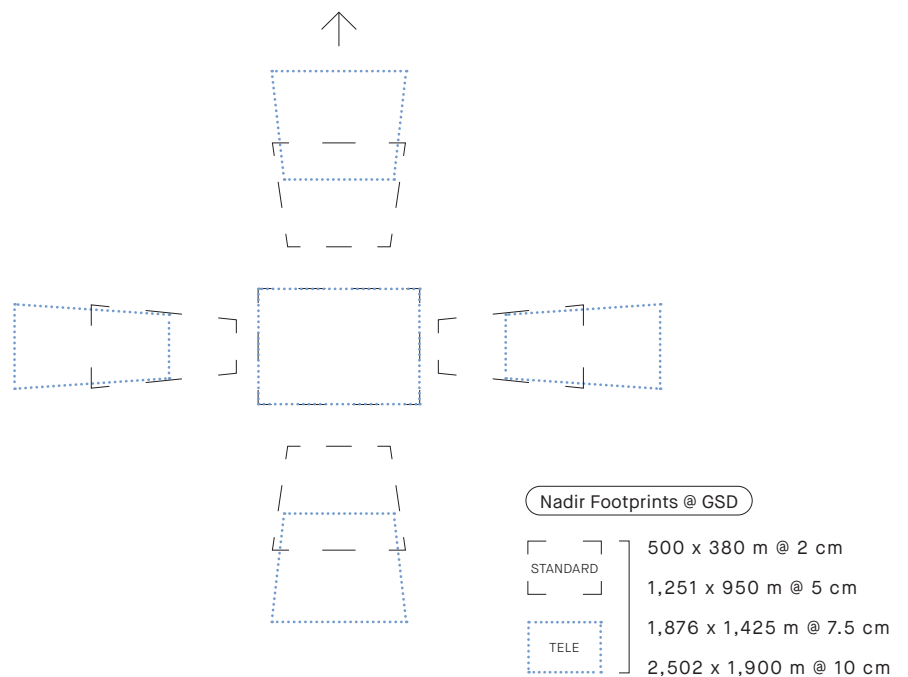


# Maximum Coverage and Precision: Finish your projects in record time with the UltraCam Osprey 4.2

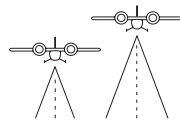
The UltraCam Osprey 4.2 captures over 25,000 pixels of photogrammetric nadir imagery and 243 megapixels of oblique imaging in four directions—all in one powerhouse system. With unmatched collection performance and operational flexibility thanks to standard and telephoto lens

system configurations, it maximizes productivity and consistently delivers industry-leading image accuracy and quality throughout every project. A high-resolution panchromatic channel ensures precise details, while scene-aware Adaptive Motion Compensation (AMC) eliminates all

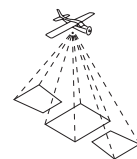
multi-directional motion blur in all nadir and oblique images in a scale-adaptive manner. Designed for optimal performance and precision, the UltraCam Osprey 4.2 is the ultimate choice for 3D city modeling, infrastructure monitoring, and high-precision urban mapping.



27% more flight line efficiency compared to the Osprey 4.1



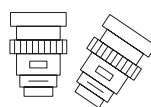
Higher altitudes, same GSD: powered by standard and tele lens system options



Faster processing & longer flights with selective data capture



Precise measurements with high-resolution panchromatic channel



Large-scale nadir (PAN, RGB, NIR) & oblique imaging (RGB, 4 directions)



Multi-directional & scene-aware motion blur removal

# Preliminary Specifications & Details

## SENSOR SYSTEM

Orientation	Specification	Value
NADIR	PAN image size	25,024 x 19,008 pixels
	PAN physical pixel size	2.81 µm
	Color capability (multi-spectral)	4 channels - RGB Bayer pattern & NIR
	Color image size	15,640 x 11,880 pixels
	Color physical pixel size	2.81 µm
	Pansharpen ratio	1:1.6 (Standard) 1:2.4 (Tele)
OBLIQUE	Color capability	3 channels - RGB Bayer pattern
	Color image size	19,136 x 12,736 pixels
	Color physical pixel size	2.81 µm
Imaging sensor		Sony IMX811 (CMOS) 2x PAN, 1x RGB, 1x NIR nadir 4x RGB oblique
Shutter (longlife central leaf)		Prontor magnetic-0 HS2 field exchangeable
Motion compensation (multi-directional)		Adaptive Motion Compensation (AMC)
Frame rate (min. inter-image interval)		1 frame per 0.7 seconds (without redundancy)
Dynamic range		>83 dB at base ISO
Analog-to-digital-conversion at		14 bits
Spectral bands (Full Width at Half Maximum)		R (580–690 nm) G (480–600 nm) B (420–510 nm) IR (690–800 nm) PAN (430–690 nm)

## CAMERA

**Height | Width**  
80 cm | 43 cm

**Cylinder Diameter**  
39.5 cm

**Weight**  
<60 kg (Standard) | <65 kg (Tele)

**Power Consumption**  
330 W (average)  
350 W (peak)

## PERIPHERALS

**Vexcel Interface Panel Touch (IPT)** for camera and UltraNav

**UltraNav Xenarc Pilot Display**

**UltraMount**

**Vexcel Unit Lifter Pro**  
(recommended for Tele)

**Vexcel Transfer Unit**

## DATA STORAGE

**Type**  
4x NVMe solid state disk pack (SSD)

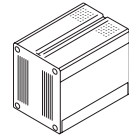
**Number of raw images<sup>2</sup>**  
16 TB: up to 3,065 | 4,215<sup>3</sup>  
32 TB: up to 6,396 | 8,795<sup>3</sup>

**Features**  
In-flight exchangeable  
Optional redundancy

**Size of one raw image<sup>2</sup>**  
4,765 MB | 3,465 MB<sup>3</sup>

**Storage Capacity**  
16 | 32 TB

**Weight**  
1 kg









**INSTALLATION**  
(Camera, UltraNav & UltraMount)  
<95 kg<sup>1</sup> | 480 W (average), 560 W (peak)

## LENS SYSTEM

Orientation	Standard	Tele	
NADIR	PAN lens system focal length	80 mm	120 mm
	PAN lens aperture	f=1/4.3	f=1/5.6
	Color (RGB Bayer pattern & NIR) lens system focal length	50 mm	50 mm
	Color (RGB Bayer pattern & NIR) lens aperture	f=1/4.2	f=1/4.2
	Total field of view, across track along track	47.4° 36.9°	32.7° 25.1°
OBLIQUE	Color (RGB Bayer pattern) lens system focal length	124 mm	180 mm
	Color (RGB Bayer pattern) lens aperture	f=1/4.2	f=1/5.6
	Total field of view, across track along track	45° (+8.2° / -16.1°) 45° (+8.2° / -8.2°)	45° (+5.7° / -11.3°) 45° (+5.7° / -5.7°)
<b>COLLECTION SCENARIOS</b>			
Sample GSD @ AGL	2 cm @ 569 m 5 cm @ 1,423 m 7.5 cm @ 2,135 m 10 cm @ 2,847 m	2 cm @ 854 m 5 cm @ 2,135 m 7.5 cm @ 3,203 m 10 cm @ 4,270 m	

## OPERATIONAL SPECIFICATIONS

 <b>FLIGHT ALTITUDE</b> ≤ 7,000 m above sea level	 <b>HUMIDITY</b> 5% to 95%, non-condensing	 <b>TEMPERATURE</b> 0 °C to +45 °C -20 °C to +45 °C <sup>4</sup> (operation)
 <b>MOUNTING</b> UltraMount and most current third party mounts <sup>5</sup>	 <b>GNSS/INS/FMS</b> UltraNav and most current third party systems <sup>5</sup>	 <b>DATA PROCESSING</b> UltraMap suite supporting standard file exports

<sup>1</sup> Valid for the Standard lens system. <100 kg with Tele lens system.

<sup>2</sup> Due to configuration and change in SSD technology, usable storage size may vary and can not be guaranteed.

<sup>3</sup> Without optional redundancy.

<sup>4</sup> Camera cylinder exposed to outside airflow only. Storage temperature range: -20 °C to +65 °C.

<sup>5</sup> Please contact our sales team for detailed information.





## 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.

