

VEXCEL
IMAGING

ULTRACAM OSPREY 4.2

All-in-one mapping power



PRECISION FROM EVERY ANGLE
WITH NADIR AND OBLIQUE IMAGING

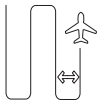
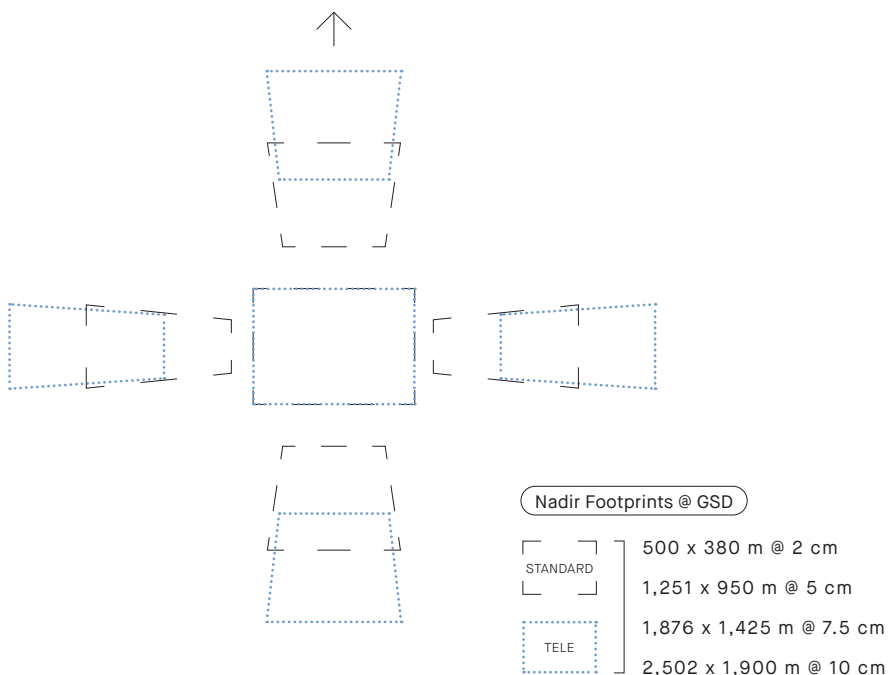


Maximum Coverage and Precision: Finish your projects in record time with the UltraCam Osprey 4.2

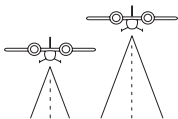
The UltraCam Osprey 4.2 captures over 25,000 pixels of photogrammetric nadir imagery and 243 megapixels of oblique imaging in four directions—all in one powerhouse system. With unmatched collection performance and operational flexibility thanks to standard and telephoto lens

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

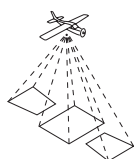
multi-directional motion blur in all nadir and oblique images in a scale-adaptive manner. Designed for optimal performance and precision, the UltraCam Osprey 4.2 is the ultimate choice for 3D city modeling, infrastructure monitoring, and high-precision urban mapping.



27% more flight line efficiency compared to the Osprey 4.1



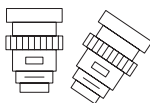
Higher altitudes, same GSD: powered by standard and tele lens system options



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

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

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)

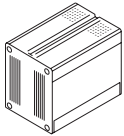
Number of raw images²
16 TB: up to 3,065 | 4,215³
32 TB: up to 6,396 | 8,795³

Features
In-flight exchangeable
Optional redundancy

Size of one raw image²
4,765 MB | 3,465 MB³

Storage Capacity
16 | 32 TB

Weight
1 kg









INSTALLATION
(Camera, UltraNav & UltraMount)
<95 kg¹ | 480 W (average), 560 W (peak)

LENS SYSTEM

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

OPERATIONAL SPECIFICATIONS

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

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

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

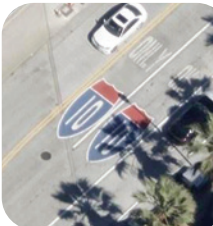
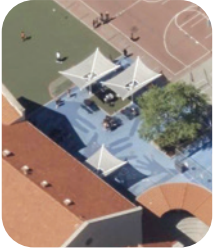
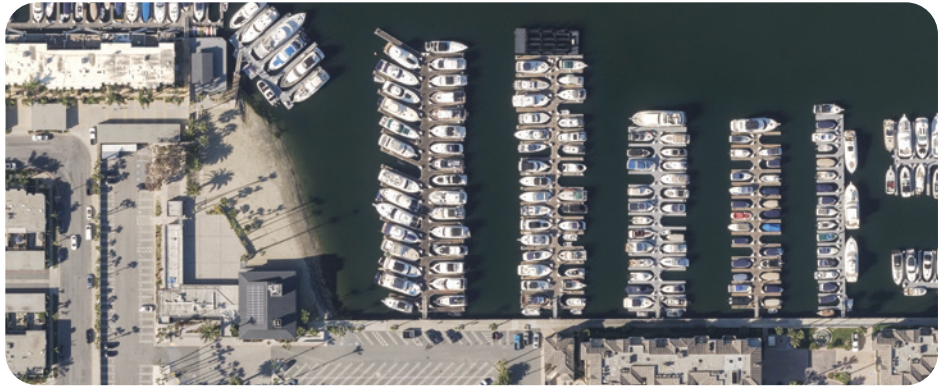
³ Without optional redundancy.

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

⁵ Please contact our sales team for detailed information.

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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.



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