



New perspectives on 3D aerial mapping



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Taking collection efficiency to new heights.



AICKE DAMRAU ULTRACAM OSPREY CUSTOMER

The UltraCam Osprey 4.1 collects photogrammetry-grade nadir imagery plus oblique images simultaneously, enabling unprecedented flight collection efficiency at industry-leading image and data quality.

The UltraCam Osprey introduces the 4th generation UltraCam aerial imaging sensors. A highly versatile system, the UltraCam Osprey simultaneously collects photogrammetry-grade nadir images (PAN, RGB and NIR) and oblique images (RGB) in four directions. As a result of a combination of industryleading customized lens systems, next generation image sensors with custom electronics, and a best-inclass image processing pipeline, the UltraCam Osprey 4.1 delivers imagery of unprecedented quality in terms of detail resolution, clarity and dynamic range. The system pushes urban flight productivity to new levels, collecting 1.2 Gigapixels every 0.7 seconds. Customers can fly faster, cover more area and see more detail. The new and innovative Adaptive Motion Compensation (AMC) method compensates for multidirectional motion inducted image blur and additionally also compensates for ground sampling distance variations in oblique images, produces imagery of unprecedented vividness and sharpness. From orthophotos to point clouds and 3D models, the UltraCam Osprey 4.1 high-performance system sets new standards in urban mapping and 3D city modeling.

"We selected the UltraCam Osprey knowing that it was developed based on sound photogrammetric principles. The integration of the sensor and the uniquely continuous UltraMap software workflow are a winning advantage over other solutions on the market."

Specifications & details

Technical changes, printing errors, mistakes and amendments reserved.

SENSOR SYSTEM

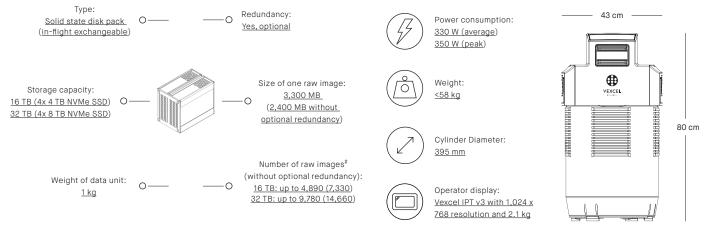
Alerdia	PAN image size	20,544 x 14,016 pixels	Imaging sensor	CMOS	
Oblique	PAN physical pixel size	3.76 µm	Shutter (longlife central leaf)	Prontor magnetic-0 HS; field exchangeable	
	Color capability (multi-spectral)	4 channels - RGB Bayer pattern & NIR	Motion compensation (multi-directional)	Adaptive Motion Compensation (AMC)	
	Color image size	12,840 x 8,760 pixels	Frame rate (min. inter-image interval)	1 frame per 0.7 seconds	
	Color physical pixel size	3.76 µm	Dynamic range	> 83 dB at base ISO	
	Pansharpen ratio	1 : 1.6	Analog-to-digital-conversion at	14 bits	
			Spectral bands (FWHM ¹)	R (580-690 nm) G (480-600 nm) B (420-510 nm) IR (690-800 nm) PAN (430-690 nm)	
	Color capability	3 channels - RGB Bayer pattern			
	Color image size	14,144 x 10,560 pixels			

¹ Full Width at Half Maximum.

Color physical pixel size

DATA STORAGE SYSTEM & CAMERA SPECIFICATIONS

3.76 µm



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

LENS SYSTEM

FLIGHT DIRECTION	Forward Oblique	Right Oblique	Nadir	PAN lens system focal length PAN lens aperture	80 mm f=1/4.8	Sample flying heights: 1588 m @ 7.5 cm GSD	
				Color (RGB Bayer pattern & NIR) lens system focal length	50 mm		
1	Nadir			Color (RGB Bayer pattern & NIR) lens aperture	f=1/4.0		
Left Oblique				Total field of view, across track along track	51.8° 36.6°		
						2117 m @ 10 cm GSD	
	Backward Oblique		Oblique	Color (RGB Bayer pattern) lens system focal length	123 mm		
				Color (RGB Bayer pattern) lens aperture	f=1/4.0		
				Total field of view, across track along track	45° (+9.2° / -15.1°) 45° (+9.2° / -9.2°)		

OPERATIONAL SPECIFICATIONS



FLIGHT ALTITUDE

<u>≤ 7,000 m</u>

above sea level



HUMIDITY



non-condensing

-20 °C to +45 °C (operation) -20 °C to +65 °C (<u>storage</u>)

TEMPERATURE

<u>0 °C to 45 °C</u>

MOUNTING

UltraMount and most current third party mounts⁴

GNSS/INS/FMS UltraNav and most current third party systems⁴



INSTALLATION (Camera, UltraNav & UltraMount): <95 kg, 480 W (average) 560 W (peak)



DATA PROCESSING <u>UltraMap</u>

processing suite including data export in standard formats

³ Camera cylinder exposed to outside airflow only. ⁴ 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.



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