

ULTRACAM EAGLE 4.1 Push the limits of your aerial missions





FLEXIBILITY IS KEY

The unique user-exchangeable lens system, coupled with an industry-leading nadir footprint, makes the UltraCam Eagle one of the most versatile airborne systems on the market.

O USER-EXCHANGEABLE

Field-exchangeable lens kits by trained personnel within 3-4 hours



O VERIFICATION

Straightforward lens change procedure with radiometric (LED Panel) and geometric validation process





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NO RECALIBRATION

Photogrammetric-grade accuracy maintained even after multiple lens exchanges



O 3 FOCAL LENGTHS

From low altitude engineering applications to high altitude orthophotography projects

Going the extra mile so you can, too.

An industry-leading footprint, three different focal lengths, high-resolution PAN sensors and multi-directional motion compensation: The UltraCam Eagle 4.1 again outperforms other aerial cameras in the market, delivering the efficiency, flexibility and image quality your organization needs to succeed in today's rapidly evolving market.

KAORU ORIMO ULTRACAM EAGLE CUSTOMER

Built on the renowned UltraCam approach and leveraging the latest 4th generation system advancements, the new UltraCam Eagle 4.1 is the pinnacle of nadir photogrammetric aerial camera systems. As a true mapping-grade aerial camera, the UltraCam Eagle 4.1 collects highresolution panchromatic (PAN), R, G, B and NIR color information at over 500 Megapixels – an impressive footprint that can be exploited at different altitudes, thanks to three user-exchangeable lens kits.

The Eagle 4.1 features CMOS sensors for a finer pixel pitch, industry-leading panchromatic image footprint, and a rapid cycle rate of 1 frame every 0.7 seconds. The new sensors, coupled with new electronics and new lenses developed exclusively for Vexcel, provide UltraCam customers with imagery of unprecedented sharpness, detail and image dynamic. Central to this is also the proprietary Adaptive Motion Compensation (AMC), correcting image motion blur caused by multi-directional camera movement during flight.

Vexcel cuts no corners in developing best-in-class UltraCams. The result is once again an aerial camera sensor that provides more than just pretty pictures – imagery taken by the UltraCam Eagle 4.1 is visually stunning but also of photogrammetric-grade quality, higher in acuity and better for analysis and interpretation. "We continue to choose the UltraCam Eagle over other systems on the market because of its large footprint, the user-exchangeable lens system and its state-ofthe-art technology. With the Eagle 4.1, we can provide our customers with highest quality imagery and data."



Specifications & details



VEXCEL

Technical changes, printing errors, mistakes and amendments reserved.

SENSOR SYSTEM

PAN image size	28,110 x 18,060 pixels
PAN physical pixel size	3,76 µm
Color capability (multi-spectral)	4 channels - R, G, B & NIR
Color image size	9,370 x 6,020 pixels
Color physical pixel size	3.76 µm
Pansharpen ratio	1:3

Imaging sensor	CMOS
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
Dynamic range	>83 dB at base ISO
Analog-to-digital-conversion at	14 bits
Spectral bands (FWHM ¹)	R (580-690 nm) G (490-580 nm) B (420-500 nm) NIR (690-880 nm) PAN (420-690 nm)

¹ Full Width at Half Maximum.

DATA STORAGE SYSTEM & CAMERA SPECIFICATIONS



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

LENS SYSTEM

GR	6 P1) P2) P3	NIR B
Ø	e (P4)	Ŋ

	(f90)	(f120)	(f150)
PAN lens system focal length	90 mm	120 mm	150 mm
PAN lens aperture	f=1/5.6	f=1/5.6	f=1/7.0
Color (R, G, B & NIR) lens system focal length	30 mm	40 mm	50 mm
Color (R, G, B & NIR) lens aperture	f=1/4.8	f=1/4.8	f=1/4.8
PAN total field of view, across track (along track)	60.5° (41.1°)	47.5° (31.6°)	38.8° (25.5°)
Flying height for PAN pixel size @ 10 cm GSD	2,410 m	3,191 m	3,989 m
Footprint for lean restriction of 1 m lean @ 5 m height across x along	9,638 x 9,638	12,765 x 12,765	15,957 x 15,957

FLIGHT ALTITUDE <u>≤ 7,000 m</u> <u>above sea level</u>



<u>5 % to 95 %.</u> non-condensing OPERATIONAL SPECIFICATIONS



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TEMPERATURE

<u>0 °C to 45 °C</u>

-20 °C to +45 °C3

(operation)

-20 °C to +65 °C

(<u>storage</u>)

MOUNTING

UltraMount and most current third party <u>mounts</u>⁴



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



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



DATA PROCESSING

UltraMap 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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