VEXCEL
IMAGING

ULTRACAM CONDOR 4.1

48,462 pixels for record flight efficiency

High Altitude. High Quality.

The UltraCam Condor 4.1 is the ideal solution for best-in-class high-altitude and wide-area mapping without compromising data quality.

Specifically designed and optimized for nationwide mapping, the UltraCam Condor 4.1 boasts an impressive image footprint of about 48,460 pixels across the flight strip. Combining a high-resolution RGB strip and lower resolution rectangular PAN and NIR images, the UltraCam Condor 4.1 delivers imagery of the utmost quality. The rectangular PAN channel enables automated dense matching, DSM, DTM and ortho image generation. This eliminates the need for additional flights by other sensors as all necessary data sets can be derived from a single flight with the UltraCam Condor.

The innovative camera system features numerous enhancements, beginning with a fully CMOS based architecture that enables a fast frame rate of 1 frame per 0.7 seconds. To manage the impressive amount of data collected by the latest CMOS sensors, new state-of-the art electronics were implemented for UltraCam 4th generation systems. Custom-designed lenses ensure imagery of exceptional sharpness, resolution, and contrast.

The UltraCam Condor 4.1 is the gold standard for wide-area mapping, empowering you to map countries and continents in record time.

YOERI SLAGBOOM
ULTRACAM CONDOR CUSTOMER

“We found that the Condor 4.1 offers the highest rate of production possible to cover an area for ortho imagery. The Condor’s fast frame rate enables us to operate the camera in a jet or a fast turboprop aircraft and shoot with 85% overlap. The Condor is a perfect tool to combat traffic and weather challenges and capture excellent data on time.”

Specifications & details

SENSOR SYSTEM

Color capability (multi-spectral)	4 channels - RGB Bayer pattern & NIR
Color (RGB Bayer pattern) image size	48,462 x 6,150 pixels
Color (RGB Bayer pattern) physical pixel size	3.76 µm
PAN image size (RGB coverage)	20,488 x 14,040 pixels
PAN physical pixel size | L2 pixel size	3.76 µm | 8.89 µm
NIR image size (RGB coverage)	9,456 x 6,240 pixels
NIR physical pixel size | L2 pixel size	3.76 µm | 19.27 µm
Ratio RGB to PAN | NIR	1 : 2.37 | 1 : 5.13
Ratio PAN to NIR	1 : 2.17

Imaging sensor	CMOS
Shutter (longlife central leaf)	Prontor Magnetic-0 HS; field exchangeable
Motion Compensation	Adaptive Motion Compensation (AMC)
Frame rate (minimum 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 (480–600 nm) B (420–510 nm) IR (690–800 nm) PAN (430–690 nm)

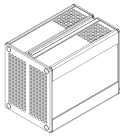
[1] Full Width at Half Maximum.

DATA STORAGE SYSTEM & CAMERA SPECIFICATIONS

Type:
4x NVMe SSD

Features:
in-flight exchangeable,
optional redundancy,
4th generaton compatible

Storage capacity:
16 TB | 32 TB



Size of one raw image:
1,830 MB
(1,300 MB without
optional redundancy)

Weight:
1 kg

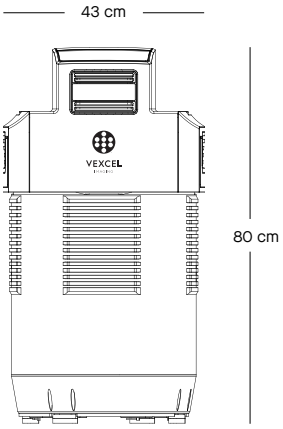
Number of raw images[2]
(without optional redundancy):
16 TB: up to 8,150 (12,200)
32 TB: up to 16,300 (24,400)

Power consumption:
330 W (average)
350 W (peak)

Weight:
<55 kg

Cylinder Diameter:
395 mm

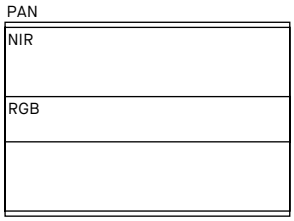
Operator display:
Vexcel Interface Panel
Touch (IPT)



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

LENS SYSTEM

FOOTPRINT



	f120
Color (RGB Bayer pattern) lens system focal length	123 mm
Color (RGB Bayer pattern) lens working aperture	f=1/5.6
PAN lens system focal length	52 mm
PAN lens working aperture	f=1/6.7
Color (NIR) lens system focal length	24 mm
Color (NIR) lens working aperture	f=1/5.6
PAN total field of view, across track | along track	73.1° | 53.8°
RGB total field of view, across track | along track	73.1° | 10.7°
NIR total field of view, across track | along track	73.1° | 52.1°

Sample flying
heights:
3,271m @ 10 cm GSD
4,907m @ 15 cm GSD
6,543m @ 20 cm GSD

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[3]
(operation)
-20 °C to +65 °C
(storage)

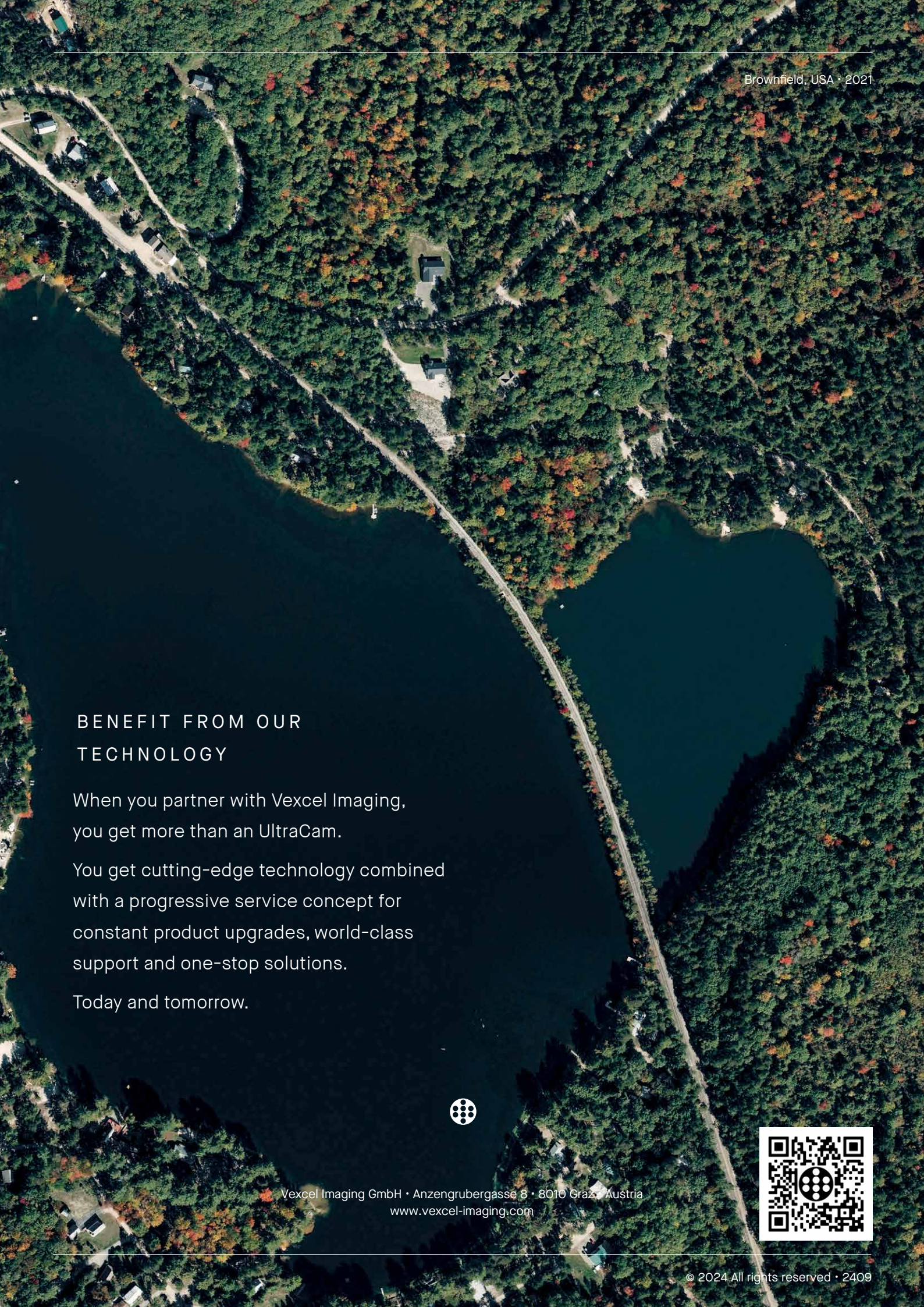
MOUNTING
UltraMount and most
current third party
mounts[4]

GNSS/INS/FMS
UltraNav and most
current third party
systems[4]

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.



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BENEFIT FROM OUR TECHNOLOGY

When you partner with Vexcel Imaging, you get more than an UltraCam.

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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