Leica DMC-4

Precision, efficiency, versatility

Maximum Performance

The Leica DMC-4 is an efficient airborne imaging sensor delivering superior image fidelity. With models offering 31,250 to 54,400 pixel swaths, the systems maximize acquisition efficiency and improve performance by 23-100% compared to prior generation systems, covering larger areas with fewer flight lines.

Superior Image Quality

The sensor delivers the highest image detail by leveraging Leica Geosystems' CMOS-based Leica MFC150 camera module with mechanical forward-motion-compensation (FMC), providing crisp and full radiometry at faster aircraft speeds across various operating conditions.

Versatile Applications

The system provides the frame geometry needed to support multiple applications such as traditional orthoimaging, terrain extraction and vector mapping. Standard (S), high (H), wide (W) and wide+ (X) focal length configurations address a wide range of use cases and enable flying height flexibility in restricted access airspaces.

- when it has to be **right**

Leica Geosystems

Leica DMC-4 product specifications

LEICA DMC-4 POD

	Composite frame size (4-band)	Field of view	RGB : NIR resolution	Flying height examples
DMC-4S	31,520 x 13,440 pixels	58.0°	1 : 1.6	570 m AGL @ 2cm GSD 1420 m AGL @ 5cm GSD 2850 m AGL @ 10cm GSD 5690 m AGL @ 20cm GSD
DMC-4H	31,520 x 13,760 pixels	45.0°	1 : 2.1	760 m AGL @ 2cm GSD 1900 m AGL @ 5cm GSD 3800 m AGL @ 10cm GSD 7610 m AGL @ 20cm GSD
DMC-4W	40,000 x 8,320pixels	66.2°	1 : 1.6	610 m AGL @ 2cm GSD 1530 m AGL @ 5cm GSD 3070 m AGL @ 10cm GSD 6140 m AGL @ 20cm GSD
DMC-4X	54,400 x 8,320pixels	71.0°	1 : 2.1	760 m AGL @ 2cm GSD 1900 m AGL @ 5cm GSD 3800 m AGL @ 10cm GSD 7610 m AGL @ 20cm-GSD

Min. frame interval	0.8 sec
Dynamic range	83 dB
A/D converter	14-bit
Data channel	14-bit proprietary compression
Motion compensation	Mechanical FMC
Spectral bands	R (580 - 660 nm) G (480 - 590 nm) B (420 - 510 nm) NIR (720 – 850 nm, monochrome)
Shutter	Max. speed 1/1000 sec Mechanical central shutter with up to 500,000 cycles; Field exchangeable
Aperture	Automatically controlled aperture, 7 half f-stop steps
Lens mount	Positive mechanical connection
Height / diameter	560 mm / 408 mm (lower diameter) / 435 (upper diameter)
Weight	37.1 kg

INTEGRATED GNSS/IMU SYSTEM

IMU	SPAN CNUS5-H, Class 5, 500 Hz, FOG no export license required US ECCN 7A994
GNSS	NovAtel SPAN OEM7, 555 channel multi constellation receiver with 10 Hz GNSS data rate
Additional features	Real-time deeply coupled solution for position and attitude at highest accuracies, fully integrated and embedded solution, no interfaces to 3rd party needed
Position RMS DGNSS (post-processed)	Specification: X, Y ≤ 3-5 cm, Z ≤ 5-7 cm Typical: X,Y ≤ 2-3 cm, Z ≤ 3-5 cm
Attitude RMS (post-processed)	Specification: R, P ≤ 0.005°, H ≤ 0.008° Experienced: R, P ≤ 0.003°, H ≤ 0.004°

PERIPHERALS

Sensor mount	Leica PAV200 gyro-stabilised sensor mount for high-performance data acquisition 36.0 kg
Operator console	Leica OC61 12.1“ screen with 1,024 x 768 resolution 3.9 kg
Pilot display	Leica PD61 6.3“ screen with 1,024 x 768 resolution, designed for cockpit mounting 1.0 kg
Display stand	IS40-LW stand for Leica OC61 Operator Display 3.2 kg
Mass memory	MM30 solid state Mass Memory, 7,680 GB each. DMC-4 holds 2 MM30s, joint volume 15.36 TB, ≥ 8.0 h of data collection, 0.4 kg each, 2 required, removable and portable

ENVIRONMENTAL

Pressure	Non-pressurised cabin up to ICAO 25,000 ft
Humidity	0% to 95% RH according to ISO7137 (noncondensing)
Operating temperature	-10°C to 40°C
Storage temperature	-40°C to 70°C

ELECTRICAL

Max. avg. power consumption of complete system	449 W / 28 VDC
Max. peak power consumption of complete system	512 W (‹60s) / 28 VDC
Fuse on aircraft power outlet	1 x 40 A recommended

SYSTEM WEIGHT

System installation	‹86 kg

SOFTWARE

Mission planning	Leica MissionPro
Flight navigation & sensor operation	Leica FlightPro
GNSS/INS trajectory processing	NovAtel Inertial Explorer
Image processing	Leica HxMap

STANDARDS

RTCA DO-160G, EUROCAE-14G, USA FCC Part 15, ISO7137

973558 en – 11.24

Leica Geosystems AG
leica-geosystems.com