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

SENSOR CONFIGURATION

DMC-4S	31,520 x 13,440 pixels RGBN Image FOV 58.0°
DMC-4H	31,520 x 13,760 pixels RGBN Image FOV 45.0°
DMC-4W	40,000 x 8,320 pixels RGBN Image FOV 66.2°
DMC-4X	54,400 x 8,320 pixels RGBN Image FOV 71.0°
RGB: NIR ratio DMC-4S DMC-4H DMC-4W DMC-4X	 1:1.6 1:2.1 1:1.6 1:2.1
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 4S, 4H, 4W 4X	 560 mm / 408 mm (lower diameter) / 435 (upper diameter) 583.5 mm / 408 mm (lower diameter) / 435 (upper diameter)
Sensor Weight 4S, 4H, 4W 4X	 37.3 kg 42.3 kg

Imaging performance

DMC-4S				
Imaging GSD	2 cm	5 cm	10 cm	20 cm
Collection AGL	570 m	1,420 m	2,850 m	5,690 m
DMC-4H				
Imaging GSD	2 cm	5 cm	10 cm	20 cm
Collection AGL	760 m	1,900 m	3,800 m	7,610 m
DMC-4W				
Imaging GSD	2 cm	5 cm	10 cm	20 cm
Collection AGL	610 m	1,530 m	3,070 m	6,140 m
DMC-4X				
Imaging GSD	2 cm	5 cm	10 cm	20 cm
Collection AGL	760 m	1,900 m	3,800 m	7,610 m

INTEGRATED GNSS/IMU SYSTEM

IMU	SPAN CNUS5-H, Class 5, 500 Hz, FOG no export license required US ECCN 7A994
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	• 2x Leica MM30 solid state drive, 7.68 TB each • Total storage 15.36 TB • Recording time about 8.0 hours for typical requirements • Weight including drives and enclosure 0.4kg • Removable, portable and extendable

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 4S, 4H, 4W 4X	 449 W / 28 VDC 471 W / 28 VDC
Max. peak power consumption of complete system 4S, 4H, 4W 4X	 512 W (<60s) / 28 VDC 541 W (<60s) / 28 VDC
Fuse on aircraft power outlet	1 x 40 A recommended

SYSTEM WEIGHT

System installation 4S, 4H, 4W 4X	 <86 kg <92.5 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

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