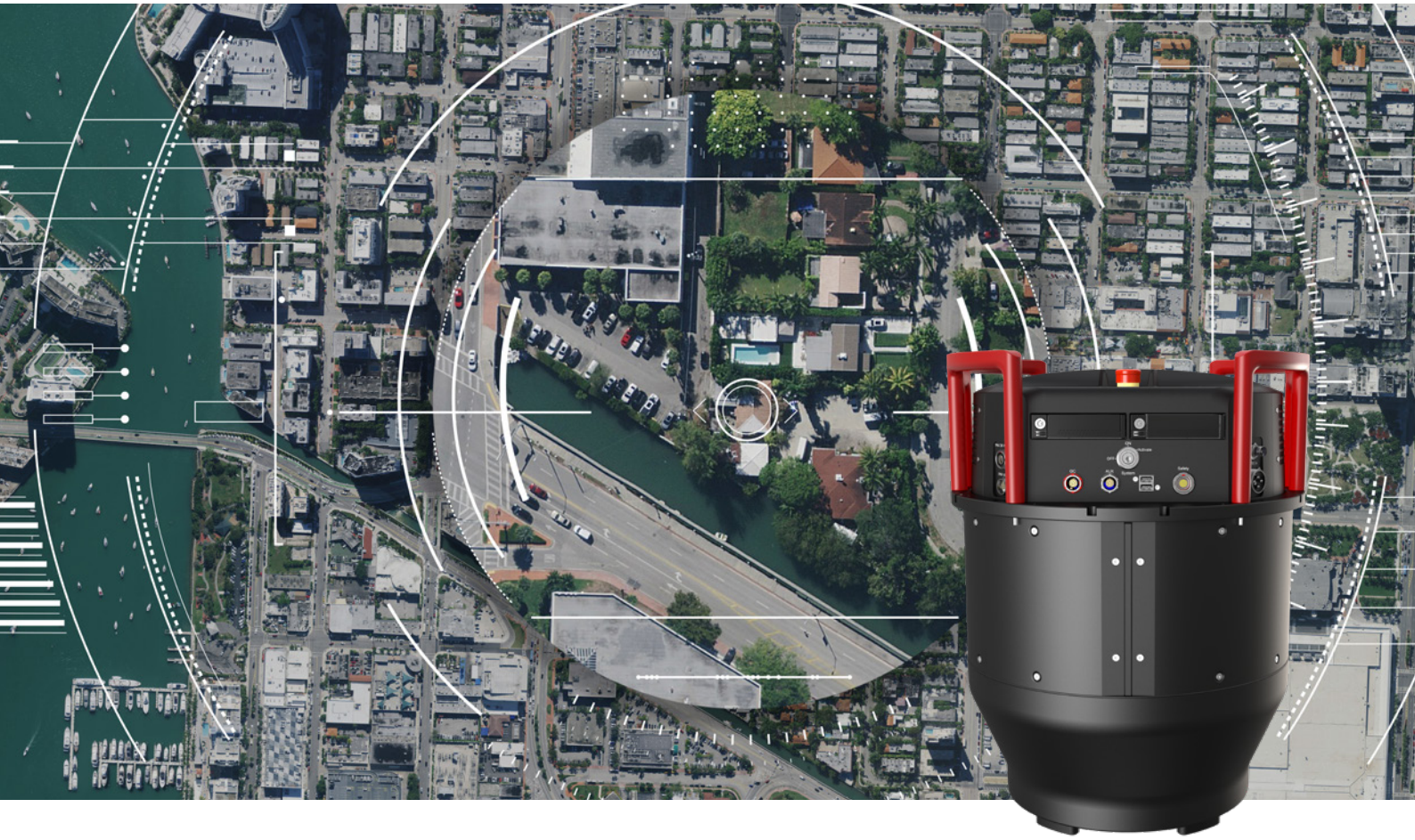
Leica ContentMapper

Unmatched efficiency for large scale content collection



Highest Performance

ContentMapper is the innovative airborne imaging sensor for large-scale geospatial mapping projects. With 40,000 pixels across swath, this camera provides maximum performance and delivers twice the resolution at the same flying parameters compared to previous systems.

Best Image Quality

The first large-format camera featuring the innovative MFC150 optical system. Metric CMOS technology, calibrated custom-built lenses (RGB/NIR) and the unique mechanical forward-motion-compensation provide the highest image detail across a wide range of operating conditions.

Processing Efficiency

Leica HxMap provides a scalable, end-to-end post-processing workflow that keeps up with the throughput demands of the ContentMapper. The software features the latest innovations in selective sharpening and auto colour correction and delivers various data products from orthophotos to mosaics.

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Leica Geosystems

Leica ContentMapper product specifications

LEICA CONTENTMAPPER POD

Composite frame size (nominal)	40,000 x 8200 pixels (4-band)
Min. frame interval	0.8 sec
Field of view	67.1°
RGB : NIR resolution	1 : 1.6
Flying height examples	1510 m AGL @ 5cm GSD 3020 m AGL @ 10cm GSD 6030 m AGL @ 20cm GSD
Height / diameter	560 mm / 408 mm (lower diameter) / 435 (upper diameter)
Weight	37.1 kg
Pixel size & type	3.76 um, BSI CMOS
Dynamic range	83 dB
Resolution 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

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 Post-processed (typical): X,Y ≤ 2-3 cm, Z ≤ 3-5 cm
Attitude RMS	Post-processed (specification): R,P ≤ 0.005°, H ≤ 0.008° Post-processed (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 1024 x 768 resolution 3.9 kg
Pilot display	Leica PD61 6.3“ screen with 1024 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	Leica MM30 solid state drive 7,680 GB each ContentMapper 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 (non-condensing)
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	‹87 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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