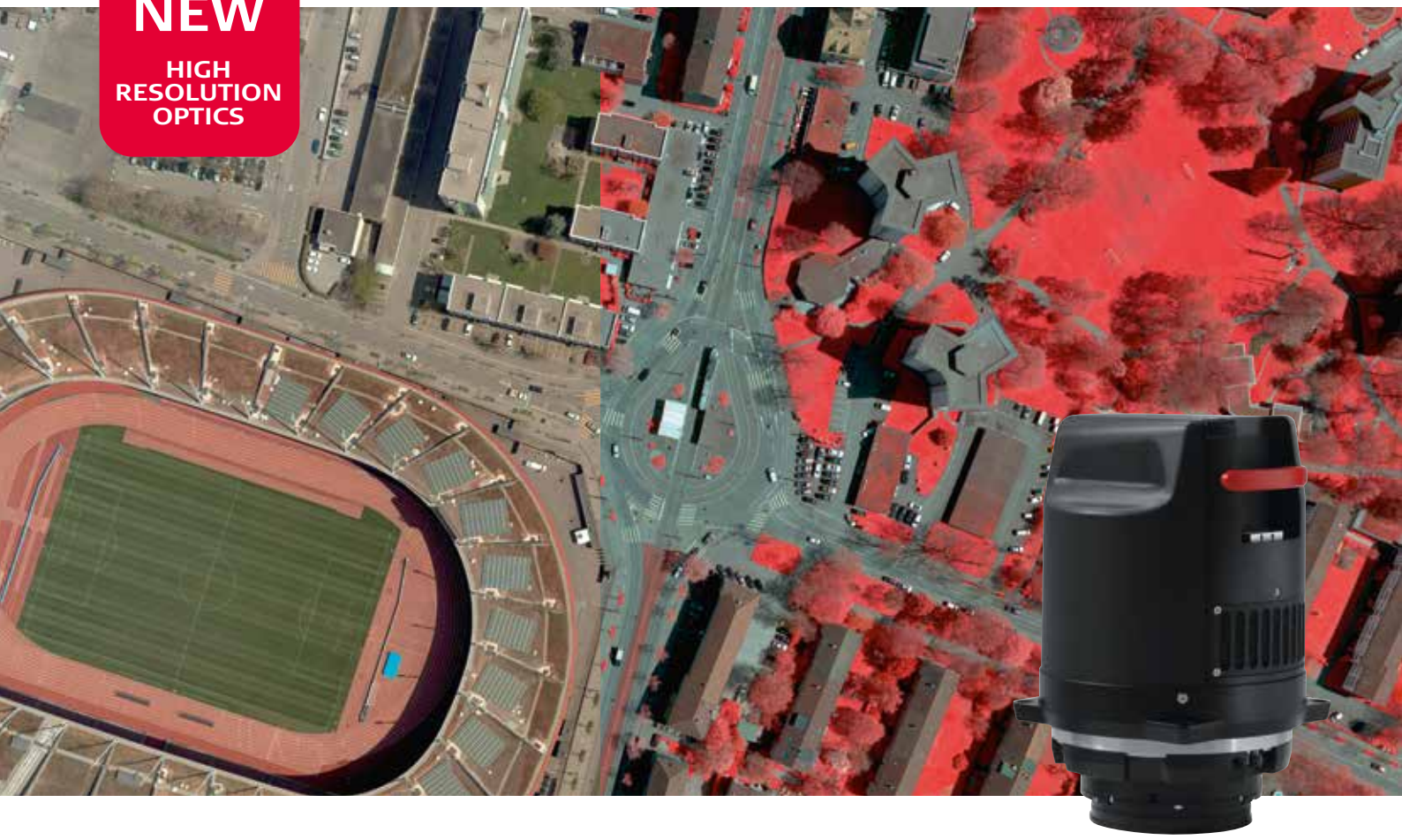
Leica RCD30 Series
80 MP multispectral RGBN imagery

NEW
HIGH RESOLUTION OPTICS



Multispectral imaging

The Leica RCD30 is the first medium format single head camera which collects perfectly co-registered 80 MP RGBN multispectral imagery. Innovative features and configuration flexibility support photogrammetric and remote sensing applications, offering performance otherwise only known from large format airborne sensors.

High resolution optics

The Leica RCD30 is based on a modular concept for single standalone, multi-head and oblique configurations. It offers a choice of three focal lengths up to 150 mm for a variety of applications, features mechanical Forward Motion Compensation (FMC) along two axis and has a ruggedised and thermal stabilised lens system.

Modularity

This innovative camera offers full integration with the Leica ALS LiDAR sensor series, other third party sensors and professional UAV-based mapping solutions. It is also compatible with the highly efficient post-processing workflow RealWorld and the common mission and flight planning software Leica MissionPro and Leica FlightPro.

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Leica RCD30 product specifications

CHARACTERISTICS OF DATA ACQUISITION

CCD Size	
80MP camera head CH81/82	10320 x 7752 pixels
Pixel size	5.2 µm
Dynamic range of CCD	73 dB
60MP camera head CH61/62	8956 x 6708 pixels
Pixel size	6 µm
Dynamic range of CCD	73 dB
Resolution A/D Converter	14-bit
Data channel	16-bit lossless
Maximum frame rate	60MP: 1.00 sec 80MP: 1.25 sec Penta: 1.50 sec
Motion compensation	Mechanical forward and lateral motion compensation along two axis

SPECTRAL RANGE

Camera head CH81/61	RGB
Camera head CH82/62	RGB and NIR, coregistered
NIR range	780 – 880 nm

OPTICS

Lenses	
Leica NAG-D 50 mm	53.8° FOV across track, 41.8° FOV along track
Leica NAT-D 80 mm	35.9° FOV across track, 27.4° FOV along track
Leica SAT-D 150 mm	19.5° FOV across track, 14.8° FOV along track
	Ruggedised and temperature compensated for high accuracy performance between – 10 °C and + 30 °C
Shutter	Central shutter, user replaceable Life › 200'000 frames
Aperture	Automatically controlled aperture
Leica NAG-D 50 mm	4, 5.6, 8, 11
Leica NAT-D 80 mm	2.8, 4, 5.6, 8
Leica SAT-D 150 mm	4, 5.6, 8, 11
Lens mount	Easy to use bayonet connection Automated electrical connection Stabilised connection mechanics

PHYSICAL

Camera Head CH8x/CH6x	
Weight, height	
without lense	3.1 kg, 168 mm
Leica NAG-D 50 mm	3.9 kg, 238 mm
Leica NAT-D 80 mm	3.6 kg, 193 mm
Leica SAT-D 150 mm	3.9 kg, 242 mm
Diameter	128 mm
Camera Controller CC31/CC32	
Weight without MM30	5.0 kg
L x W x H	300 x 260 x 140
	Controls up to five camera heads
Camera Controller CC31	Without GNSS/IMU system (for use with Leica ALS)
Camera Controller CC32	With GNSS/IMU system for standalone use
Processor CC31/CC32	Core-I7, Win7 64 Bit, 8 GB RAM, 32 GB CF-card
GNSS/IMU	Supports wide variety of IMUs Supports GPS/GLONASS Deeply coupled solution for more efficient data acquisition
Mass memory MM30	Solid state drive, 600 GB, 1,600 GB Weight 0.5 kg, removable, portable

PERIPHERALS

Leica RCD30 standalone	For installation in Leica PAV80 for RCD
Height / diameter / weight	492,5 mm / 314 mm / 10 kg
Leica RCD30 Oblique	For installation of oblique trio and penta cameras in Leica PAV100 gyro-stabilised mount
Pod 37 Height / diameter / weight	533 mm / 407 mm / 17 kg
Pod 53 Height / diameter / weight	693 mm / 407 mm / 18 kg
Operator interface OC60	12.1" screen, 1024 x 768 pixel resolution
Interface stand IS40	IS40 stand fits RC30 NAV-sight installation
Pilot interface PD60	6.3" touch screen with 1024 x 768 pixel resolution designed for cockpit mounting

OPERATIONAL

Capacity of mass memory MM30 (CH8x)

	Single MM30	Joint MM30
MM30 - 1600	21,000 RGB 16,800 RGBN	42,100 RGB 33,600 RGBN
MM30 - 600	7,900 RGB 6,300 RGBN	15,000 RGB 12,600 RGBN

Capacity of mass memory MM30 (CH6x)

	Single MM30	Joint MM30
MM30 - 1600	26,400 RGB 21,000 RGBN	52,800 RGB 42,100 RGBN
MM30 - 600	9,900 RGB 7,900 RGBN	18,800 RGB 15,800 RGBN

Typical image storage per MM30 configuration, inflight exchange two slots, supporting joint and backup mode

Firmware & software	Leica FlightPro flight and sensor control management system Automatic integration time control

ENVIRONMENTAL

Pressure	Non-pressurised cabin up to ICAO 25,000 ft (7,620 m)
Humidity	0 % to 95 % RH according ISO 7137
Operating temperature	– 20 °C to + 55 °C
Storage temperature (except CH6x and lens)	– 40 °C to + 85 °C
Storage temperature CH6x and lens	– 40 °C to + 70 °C

ELECTRICAL

Average power consumption of standalone system	CH82/CH62, CC32, PAV80 for RCD, OC60, PD60, IMU ‹281 W/28 VDC
Fuses on aircraft power outlet	Typically 1 × 20 A

STANDARDS

General standards for temperature, electronics environment, etc.	RTCA DO-160G, EUROCAE-14G
Conformity to national regulations	USA: FCC Part 15, EU: Directive 1999/5/EC

POST-PROCESSING AND DATA FORMAT

Post-processing	Leica FramePro
Output from Leica FramePro post-processing	Distortion-free, 8 and 16-bit JPEG, TIFF and BSQ images with RGB, RGBN, NRG, NIR and NDVI band combinations

784004en - 02.17

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