



LEICA BLK2FLY

AUTONOMOUS FLYING LASER SCANNER



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DESIGN & PHYSICAL

Housing	Carbon and glass fiber frame
Dimensions (unfolded)	53 x 60 x 19 cm
Dimensions (folded)	53 x 32 x 14 cm
Weight (incl. battery)	2.6 kg

OPERATION

Remote control	BLK2FLY Live App for iPad supporting LTE connectivity (iOS 13 or later). Including: flight planning, live 2D and 3D visualization, device status, and data management
Communication	LTE Bluetooth LE
WLAN frequencies	2.4Ghz access point (flight operation), 5 GHz client (data offload operation)
Max. / typical transmission distance	WLAN: ~100m, line of sight
Internal storage	256 GB
Battery	Li-ion 14.8 V, 6.75 Ah, 99.9 Wh

LiDAR & IMAGING

Laser class	1 (in accordance with IEC 60825-1)
Wavelength	830 nm
Field of view	360° (vertical)/270° (horizontal)
Scan range	Min. 0.5 m - up to 25 m
Point measurement rate	420,000 pts/sec
Vision system	5-camera system, 1.6 MP, 300° x 180° total, global shutter

SYSTEM PERFORMANCE (SLAM-BASED)

Relative accuracy	<20 mm*
Absolute accuracy (w/o GNSS)	40 mm**
Area coverage: Vertical	1,550 m ² in 12 min. (0.5 pts/cm ²) 4,700 m ² in 12 min. (0.17 pts/cm ²)
Area coverage: Horizontal	1,350 m ² in 12 min. (0.5 pts/cm ²) 4,100 m ² in 12 min. (0.17 pts/cm ²)

ENVIRONMENTAL

Operations temperature	BLK2FLY: +5° to +35° Smart Battery: +10° to +35°***
Storage temperature	BLK2FLY: -10° to +60° C Smart Battery: -10° to +45° C
IP rating	IP54

DATA PROCESSING

Data transfer	Wireless (WLAN & LTE) and USB 3.1 (USB C)
Desktop software compatibility	Leica Cyclone REGISTER 360 Leica Cyclone REGISTER 360 (BLK EDITION)
Cloud solution	Reality Cloud Studio, powered by HxDR (direct upload WLAN & LTE)

FLIGHT PERFORMANCE

Max speed	5 m/s (obstacle avoidance disabled) 2.5 m/s (standard mode) 1.5 m/s (indoor mode)
Max wind resistance	12 m/s
Max flight altitude above sea level	1,800 m
Flight time	13 min* *400 m above sea level

AUTONOMY

Obstacle avoidance coverage	Full spherical, 360°
Obstacle avoidance min. distance	3.0m (standard mode) 1.3m (indoor mode)
Collision avoidance: Undetectable objects	Cables <5mm diameter Radar does not reliably detect very thin objects like cardboard or small tree branches. It might miss glossy, transparent or dark surfaces.

All specifications are subject to change without notice. All accuracy specifications are one sigma unless otherwise noted.

* concrete/brick surface

** 4 m distance from object, 2m/s flying speed, 8 min flight, concrete / brick surface

*** Flight start temperature at +5 °C is allowed, once the temperature of the Smart Battery GEB374 is ≥ 10 °C when flight starts.

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