



# LEICA BLK2FLY

AUTONOMOUS FLYING LASER SCANNER



# LEICA BLK2FLY

## 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). Recommended devices: iPad Pro 11" Cellular and iPad Pro 12.9" Cellular.
Communication	WLAN, LTE, Bluetooth® LE
WLAN frequencies	2.4GHz access point (flight operation), 5 GHz client (data offload operation)
Transmission distance	WLAN: up to 100 m when in line of sight LTE: no limitations as long as both sides have a connection to the LTE network
Internal storage	256 GB
Battery	LiPo 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	1290 m <sup>2</sup> in 10 min. (0.5 pts/cm <sup>2</sup> ) 3920 m <sup>2</sup> in 10 min. (0.17 pts/cm <sup>2</sup> )
Area coverage: Horizontal	1130 m <sup>2</sup> in 10 min. (0.5 pts/cm <sup>2</sup> ) 3420 m <sup>2</sup> in 10 min. (0.17 pts/cm <sup>2</sup> )

## 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 PLUS Leica Cyclone REGISTER 360 PLUS (BLK Edition)
Cloud solution	Reality Cloud Studio, powered by HxD R (direct upload WLAN & LTE)

## FLIGHT PERFORMANCE

Max speed	5 m/s (obstacle avoidance disabled) 2 m/s (standard mode) 2 m/s (indoor mode, obstacle avoidance disabled) 1.5 m/s (Indoor mode)
Max wind resistance	12 m/s
Max flight altitude above sea level	1,800 m
Flight time	10 min Tested while hovering under ideal atmospheric conditions at sea level altitude

## AUTONOMY

Obstacle avoidance coverage	Full spherical, 360°
Obstacle avoidance min. distance	3.5 m (standard mode) 1.3 m (indoor mode)
Collision avoidance: Undetectable objects	Cables <5 mm 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.

\* At 78% albedo

\*\* 4 m distance from object, 2 m/s flying speed, at 78% albedo

\*\*\* 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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