

Leica BLK2FLY



Quick Guide
Version 1.1
English

- when it has to be **right**

Leica
Geosystems

 **DAUGHTER OF
HEXAGON**

1 Instrument Information



Read and follow the User Manual on the accompanying Leica USB documentation card before using the product or the accessories delivered with the product.



Keep for future reference!

1.1 Definition of Use

Intended use

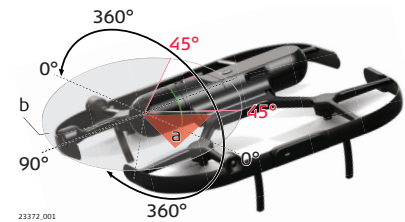
- Scanning objects
- Measuring horizontal and vertical angles
- Measuring distances
- Capturing and recording images
- Recording measurements
- Computing with software
- Remote control of product
- Data communication with external appliances

Information on flight warnings

- Ensure that all parts are in good condition before each flight. DO NOT fly with worn or damaged parts
- If the pilot disabled the obstacle avoidance limitation, he must manually maintain a safe distance from people, buildings, high-voltage power lines, tall trees, water and other hazards when flying the aircraft.
- Even the BLK2FLY is rated IP54, flying while raining/snowing is prohibited
- DO NOT add extra weight to the BLK2FLY
- DO NOT go near or touch the propellers while they are spinning. It can cause serious injuries
- DO NOT attach 3-rd party equipment to the BLK2FLY
- Respect system limitations
- Disconnect the battery during transportation to avoid damage or injury

Laser products and location of laser apertures

Laser product	Laser class	Classification
EDM, Electronic Distance Measurement	Class 1	IEC 60825-1:2014



- a Laser beam
- b Scanning laser beam

Important information

NOTICE

- ▶ It is the sole responsibility of the user who operates the aircraft to provide for correct registration and compliance of the legal regulations for the system at the location of the flight execution.
- ▶ Leica is not responsible where and when the aircraft is operated. It is the sole responsibility of the user.

1.2 Conformity to National Regulations

Europe



Hereby, Leica Geosystems AG declares that the radio equipment type BLK2FLY is in compliance with Directive 2014/53/EU and other applicable European Directives.

USA

FCC ID: RFD-BLK2FLY
FCC Part 15

Canada

CAN ICES-003 A/NMB-003 A
IC ID: 3177A-BLK2FLY

Others

The conformity for countries with other national regulations has to be approved prior to use and operation.

Top view

Main components of the BLK2FLY hardware



- a LTE antenna: Diversity
- b 3D LiDAR: Mapping, obstacle avoidance
- c Side camera: SLAM, mapping, user Live View
- d WLAN antenna
- e Side radar: Side obstacle perception
- f Rear radar: Rear obstacle perception
- g Front camera: SLAM, mapping, user Live View
- h Top camera: SLAM, mapping, user Live View
- i GNSS antenna
- j Power: ON. To turn the BLK2FLY off, remove battery
- k Battery: Smart Battery GEB374, hot-swap (< 10 s)
- l LTE antenna: Main

Bottom view



- a Bottom camera: SLAM, mapping, user Live View
- b Folding joint: Compact transportation
- c Motor and 10" propeller: Producing lift
- d Landing gear, 4 ×
- e Time-of-Flight sensor: Distance to ground



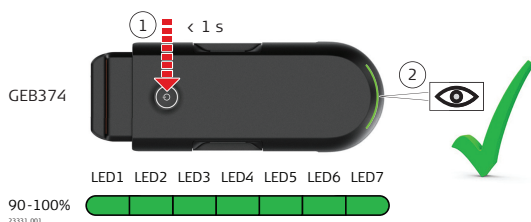
Read and follow the User Manual before using the product or the accessories delivered with the product.



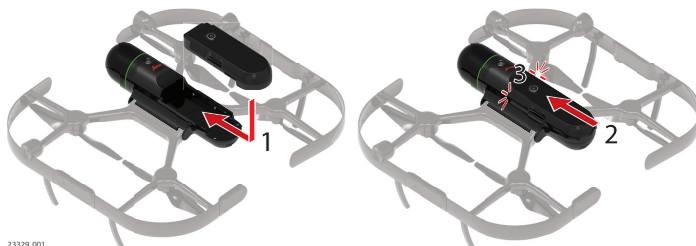
Strictly follow the restrictions given in the User Manual before flying with the BLK2FLY.

Getting started

- Check the status of the Apple iPad battery
- Check the status of the Smart Battery GEB374



The battery must be charged before using it for the first time.



Hot-swap

The BLK2FLY is switched on. Swap a used battery against a charged battery within < 10 s without the need of rebooting the BLK2FLY.

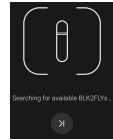
Pairing BLK2FLY with BLK2FLY Live app

1. Install the BLK2FLY Live app. Accept all preconditions like allowing Bluetooth or iPad location.
2. Put a charged battery into BLK2FLY.
3. Tap and hold the power button until the LED colour ring and battery LED start blinking blue.
4. Start the BLK2FLY Live app.

5. The app searches for BLK2FLY devices which are currently in pairing mode. After a few seconds, it jumps to the next screen.



Do not tap . Otherwise the search is aborted.



6. Listed are all detected BLK2FLY which are currently in pairing mode. But BLK2FLY Live app will automatically connect to the BLK2FLY that was used the last time if available.



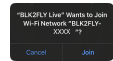
To change to a different BLK2FLY, repeat the pairing process.

If no BLK2FLY appears in the list, make sure BLK2FLY is in pairing mode (blue light). Tap to repeat the search.

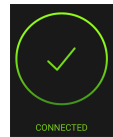


7. Tap on the desired BLK2FLY device in the list.

8. Join the network of the selected BLK2FLY.



9. Wait until pairing is successful. BLK2FLY is now ready to be used.



After this procedure, the app knows the credentials of the paired BLK2FLY. If the app is closed and restarted, it tries to connect automatically to the paired BLK2FLY. For successful connection, BLK2FLY must be turned on.

Switch ON the BLK2FLY

Booting of the BLK2FLY starts after press/hold the power on button for more than 3 seconds. The LED colour ring indicates the current status. Booting lasts ~80 seconds.



Read the User Manual for detailed LED colour information.

Environmental specifications

Temperature		
Type	Operating temperature [°C]	Storage temperature [°C]
BLK2FLY	+5 to +35	-10 to +60
Apple iPad tablet	-20 to +40	< than 3 months: -28 to +45 > than 3 months: +22 to +30
Smart Battery GEB374	+10 ¹⁾ to +35	-10 to +45
Single Charger Leica GKL352	+10 to +30	-10 to +60
Multicharger	+10 to +30	-10 to +60

Aircraft	
Type	IP rating
BLK2FLY	IP54 (IEC 60529) in non-operating mode Dust protected
Type	Humidity
BLK2FLY	Protection against splashing water from any direction. Humidity max. 95% non condensing.

4.1

Care and Transport


Care and transport

Carry the product in its original container to protect the product against shock and vibration and to protect the dome against scratches.

Field check

Periodically carry out test measurements and perform the field adjustments indicated in the User Manual, particularly after the product has been dropped, stored for long periods or transported.

Smart Battery GEB374



Charge the Smart Battery GEB374 at least once every 3 months to 60% for optimal storage and lifetime.

¹⁾ Flight start temperature at +5 °C is allowed, once the temperature of the Smart Battery GEB374 is ≥ 10 °C when flight starts.

EU Declaration of
Conformity

This corresponds
to EN ISO/
IEC 17050-1



We, **Leica Geosystems AG, CH-9435 Heerbrugg (Switzerland)**, declare under our sole responsibility that the product(s) **BLK2FLY**, following the provision of Directive(s)

- **2006/42/EU**
- **2011/65/EU Restriction of hazardous substances (RoHS)**
(incl. delegated directive 2015/863 amending Annex II to Directive 2011/65/EU)
- **2014/53/EU**
(in accordance with annex III, Module B of the Directive 2014/53/EU)
(EU-Type Examination Certificate G0M-2011-9488-V0x)
Notified Body 0681: Eurofins Product Service GmbH,
Storkower Straße 38c, 15526 Reichenwalde, Germany

to which this declaration relates, is in compliance with the following standards:

- **CISPR 32:2015**
- **EN 60825-1:2014**
- **EN 61010-1:2010+A1:2016**
- **EN 62311:2008**
- **EN 300 328 V2.2.2**
- **EN 301 489-1 V2.2.3**
- **EN 301 489-3 V2.1.1**
- **EN 301 489-17 V3.2.2**
- **EN 301 489-19 V2.1.1**
- **EN 301 489-52 V1.1.1**
- **EN 301 893 V2.1.1**
- **EN 301 908-1 V13.1.1**
- **EN 303 413 V1.1.1**
- **EN 305 550-2 V1.2.1**



For translations into the official EU languages please refer to:

<http://www.leica-geosystems.com/ce>



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