



BLK3D

REAL-TIME, PROFESSIONAL GRADE, IN-PICTURE 3D MEASUREMENT.

Take a picture. Measure anything.

The BLK3D captures images and places precise measurements at your fingertips. Share images and measurements in multiple formats.



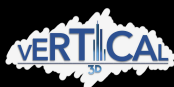
The art of photogrammetry. Simplified.

Unmatched combination of a calibrated stereo-camera, advanced algorithms and real-time edge computing fused with leading Electronic Distance Measurement technology.

For more information, visit:

www.BLK3D.com

All specifications are subject to change without notice.
All accuracy specifications are one sigma unless otherwise noted.
Copyright Leica Geosystems AG, Heerbrugg, Switzerland 2018.



www.vertical-3d.com
contact@vertical-3d.com
07 67 89 20 34

GENERAL SPECIFICATIONS

Dimensions (H x W x D)	180.6 x 77.6 x 27.1 mm (7.11 x 3.06 x 1.07 in)
Weight (with rechargeable battery)	480 g (17 oz)
Temperature range	Storage: -25 to 60 °C (-13 to 140 °F) Operation: -10 to 50 °C (14 to 122 °F) Charging: 0 to 40 °C (32 to 104 °F)
Tripod adapter	Supports 1/4-20 UNC screw adapters

TECHNOLOGY

Operating system	Android 7.1.2 (Nougat)
Processor (with integrated GPU)	Snapdragon 820E QuadCore (2.35 GHz)
RAM Memory	4 GB
Real-time Processor	STM32F446
Screen	5.0" IPS, HD 720x1280 LCD capacitive multi-touch screen, chemically strengthened, brightness: 450 cd/m ²
Stereo camera	Pixels: 2 x 10 MP (15.8 cm diagonal base line) Field of view: 80° Focal length: 4.0 mm (22 mm in 35 mm equiv. in 1:1) Aperture: F3.0
EDM camera	Pixels: 2 MP Field of view: 14°
I/O	USB Type-C 1.0 for data transfer and charging (water-resistant), integrated speaker and microphone
Keyboard	Three physical buttons (Power, Laser/Photo capture, Photo capture), four touch buttons (Back, Home, Recents, Laser/Photo capture)
Additional sensors	Compass, 3D accelerometer and 3D gyroscope
Laser class	2
Laser type	655 nm, 0.95 mW

STORAGE

Internal storage	64 GB (equals 14000 single-shot or 5000 multi-shot 3D images)
------------------	---

COMMUNICATION

Bluetooth® Smart	Bluetooth v4.1 and v2.1 Radiated power: 1.78 mW (BLE) Radiated power: 10.00 mW (BT classic) Frequency: 2402-2480 MHz
Wireless LAN	Standard: 802.11 b/g/n Radiated power: 6.31 mW Frequency: 2412-2472 to 2412-2462 MHz
GPS	A-GPS and GLONASS

POWER MANAGEMENT

Battery	Rechargeable battery pack Li-ion (3.80 V, 3880 mAh, 14.7 Wh)
Power management	AC adaptor (input: 100-240 V AC) External charger (input: 100-240 V AC) (optional)
Charge time	< 3.5 h (with AC adaptor) < 5h (with optional external charger)
Operating time	Typical capture: 4h / 220 multi-shot captures ¹ Continuous capture: 2.5 h / 1000 single-shot captures ¹ Laser measurements: 6.5 h / 9500 laser measurements Auto power off: after 3 h in sleep mode

¹Wi-Fi off, Bluetooth off, flash off, screen brightness 50%.

² Multi-shot with recommended baseline length (all except 2.5 m 2D).

³ Measurement precision, accuracy, and reliability are dependent upon various factor including distance and position to object, baseline length, texture of object, light conditions, ambient temperature, calibration etc. Figures quoted assume normal to favourable conditions at close range and are subject to change.

⁴ Applies to 100 % target reflectivity (white painted wall), low background illumination, 25 °C.

⁵ Applies to 10 to 100 % target reflectivity, high background illumination, - 10 °C to + 50 °C.

⁶ Tolerances apply to ranges from 0.05 m to 10 m with a confidence level of 95%. The maximum tolerance may deteriorate to 0.1 mm/m between 10 m to 30 m, to 0.20 mm/m between 30 m to 100 m and to 0.30 mm/m for distances above 100 m.

LASER DISTANCE MEASUREMENT

Accuracy with favourable conditions ⁴	± 1.0 mm (0.04 in) ⁶
Accuracy with unfavourable conditions ⁵	± 2.0 mm (0.08 in) ⁶
Range with favourable conditions ⁴	250 m (820 ft)
Range with unfavourable conditions ⁵	120 m (394 ft)
Smallest unit displayed	0.1 mm (1/32 in)
X-Range Power Technology™	yes
Ø laser point at distances	6 / 30 / 60 mm (10 / 50 / 100 m)

TILT MEASUREMENT

Measuring tolerance to laser beam ⁷	± 0.2°
Measuring tolerance to housing ⁷	± 0.2°
Range	360°

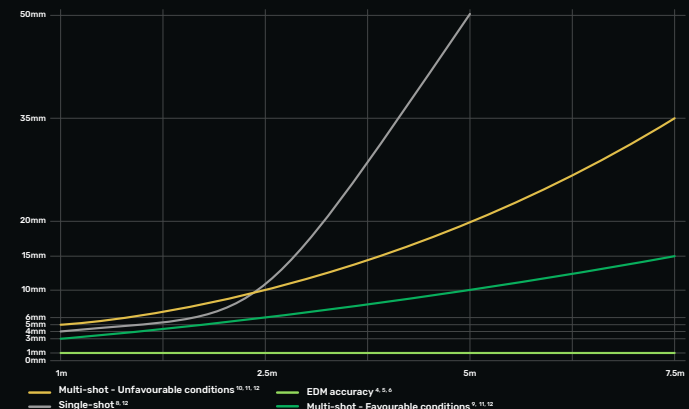
P2P MEASUREMENT WITH DST 360 (OPTIONAL)

Working range vertical sensor	-64° to > 90°
Accuracy vertical sensor up to	± 0.1°
Working range horizontal sensor	360°
Accuracy horizontal sensor up to	± 0.1°
Tolerance P2P function at distances (combination of sensors and distance measuring) approx.	± 2 mm / 2 m ± 5 mm / 5 m ± 10 mm / 10 m
Levelling range	± 5°

SOFTWARE OPTIONS OVERVIEW

BLK3D Mobile	
BLK3D Mobile (included)	Reality Capture, Laser, Organiser, 3D Image export to pdf and jpg
Sketch & Document Option (optional)	Sketch Plan , P2P Measure, Smart Room, Plan export to pdf, jpg, DXF and DWG (2D/3D/raw)
BLK3D Desktop	
BLK3D Desktop Base (optional)	Organiser, Measure, working with plans
3D Model Option (optional)	3D Modelling on 3D Images incl. export to DXF and DWG (3D)
Minimum system requirements	Windows 8.1, 10 with 64-bit; 6 GB RAM

IN-PICTURE MEASUREMENT ACCURACY TABLE



⁷ After user calibration. Additional angle related deviation of ±0.01° per degree up to ±45° in each quadrant.

⁸ A single-shot is only recommended up to a distance of 2.5 meters to the target object

⁹ 2D distances

¹⁰ Long 2D distances (corner to corner measurements in a 3D Image) and 3D distances

¹¹ Multi-shot with recommended baseline length of 10% of the distance to the target object

¹² Measurement precision, accuracy, and reliability are dependent upon various factors including distance and position to object, baseline length, texture of object, light conditions, ambient temperature, calibration etc. Figures quoted are subject to change.