

LiDAR

LiDAR sensor	2 x 200,000 points per second class 1 ⁽¹⁾ 905 nm
Operational range	Up to 30 m ⁽²⁾

Point cloud quality

Accuracy of the point cloud	8 mm in a dedicated test environment of 100 m ² ⁽³⁾
Resolution of the point cloud	5 mm ⁽⁴⁾
Control point support	Physical control point pin on the detachable pole to capture ground and wall control points ⁽⁵⁾

Cameras

Cameras for panoramic images	3 x 12 MP 2.14 mm fisheye lens fixed focus f/2.0 rolling shutter
Panorama field of view	360° and 270° ⁽⁶⁾

Operation

Live scanning feedback	Real-time 2D and 3D visual feedback on data coverage
Battery and operating time	36 Wh Li-ion carry-on hot swappable with external power supply ⁽⁷⁾ 1 hour
Storage	External 512 GB microSD card ⁽⁸⁾
Interfaces	Wi-Fi USB-C port
IMU	Industrial-grade

Display

Type	Capacitive multi-touch display
Size	4"
Resolution	720 × 720

Environment

Operating temperature	-10°C to 40°C (14°F to 104°F) ⁽⁹⁾
IP rating	IP54

Output

Point cloud formats	E57 PLY LAS PTS XYZ
Image formats	JPEG TIFF
Data processing	Different processing presets including automated object detection and blurring

Device and Harness

Form factor	Handheld with optional pole and harness
Housing	Carbon reinforced polymer
Dimensions	30 x 16 × 15 cm
Weight	1.8 kg including battery and integrated display
Pole	Detachable 26 cm pole for added support, extended reach and control point capture
Harness	Ergonomic weight distribution, hands free operation ⁽¹⁰⁾ , adjustable to fit all sizes
Mounting Adapter	Quick release adapter with 5/8"-11 UNC and 3/8"-16 UNC thread interfaces to connect NavVis CLX to 3rd party poles, tripods or other equipment

Transportation

Backpack	50 x 25 x 20 cm 4 kg ⁽¹¹⁾ carry-on
Shipping case	57 × 43 × 24 cm 8 kg ⁽¹²⁾ IP65

⁽¹⁾ Eye-safe per IEC 60825-1:2014.

⁽²⁾ Depending on processing settings. LiDAR range 40m @ 10% reflectivity.

⁽³⁾ Local accuracy with fully constrained LiDAR SLAM in a residential indoor environment. All accuracy statements are 1 sigma. Absolute accuracy depends on the environment.

⁽⁴⁾ Maximum point cloud processing quality.

⁽⁵⁾ Supports survey targets (e.g., checkerboards, nails, scribe marks) and natural features. Control points can only be captured with the supplied NavVis CLX Extension Pole.

⁽⁶⁾ 270° panoramas are completed to 360° using the colored point cloud.

⁽⁷⁾ Hot swap possible while externally powered through USB-C via a 65W power bank or equivalent power supply.

⁽⁸⁾ exFAT file system (compatible with Windows, macOS, Linux)

⁽⁹⁾ Operation possible below 0°C (32°F) for a maximum of 20 minutes in calm conditions (no wind) following a 20-minute warm-up period above 0°C (32°F).

⁽¹⁰⁾ Supports hands free operation when necessary.

⁽¹¹⁾ Total backpack weight with scanner and accessories packed.

⁽¹²⁾ Total shipping case weight with backpack, scanner and accessories packed.