PRODUCT INFORMATION

NavVis VLX 3

The cornerstone of reality capture

NavVis VLX 3 is the industry-leading, wearable mobile mapping system that efficiently delivers comprehensive, highly detailed reality capture data to laser scanning professionals for complex sites, both indoor and outdoor.

Scan more with **NavVis** VLX 3

All-in-one, highly-detailed reality capture
Comprehensively capture 3D measurements with two 32-layer lidar sensors in combination with groundbreaking SLAM software to deliver industry-leading point cloud quality for a wearable device. Four cameras positioned on top of the device take high-resolution, sharp images in every direction for a complete 360° image — all without the operator appearing in the field of view.

Live scanning feedback
Monitor your scanning progress in real time with a built-in touchscreen interface to ensure complete coverage as you move.

Precision meets ergonomics
A first-of-its-kind wearable device which enables operators to comfortably scan at the speed of walking. The forward-facing design allows for targeted scanning, together with a built-in screen for optimal viewing. Comes fully equipped with:

- Grip pads
- Shoulder pads
- Built-in screen
- Forward-facing design
- Stabilizing belt

highly-detailed reality capture

Geo-registration
NavVis VLX 3 takes your laser scanning and survey workflows to the next level. It's fully compatible with standard tools in the field, and can capture control points in a local site coordinate system measured by both Total Stations and GNSS rovers. It also supports national and global coordinates for precise geo-registration and alignment of datasets.

Innovative folding design
The unique hinged design folds up and fits into a protective case or backpack, so that a single operator can easily transport and set up.

Seamless transportation
With multiple methods of transporting NavVis VLX 3, moving around and between sites has never been simpler. A protective, hard-shelled case on wheels enables air and rail travel, while a compact, sturdy backpack allows you to move to and from your site with ease.

Complete coverage

With a nearly unobstructed field of view, NavVis VLX 3 delivers comprehensive coverage of both indoor and outdoor environments so you can scan more at scale.

Superb accuracy

For accuracy that exceeds industry standards, NavVis VLX 3 is powered by precision SLAM technology that's entirely in a class of its own.

Industry-leading data quality

Preserves original details
Point cloud surface reconstruction preserves details while removing noise for more efficient use in 2D drawings and 3D models.

Highly realistic texturing
Highly detailed point clouds include color and realistic texturing.

Detect and remove dynamic objects
Objects that move through the scan are automatically detected and removed from point clouds during post-processing, resulting in less manual work.

Robust SLAM
Robust [illegible] surroundings.

High detail at range
State-of-the-art lidar sensors generate twice the amount of data at range, optimizing the level of detail that can be extracted from the point cloud improving modeling accuracy and precision.

Reduced point cloud noise
NavVis VLX 3 generates sharper details and thinner point cloud slices for precise modeling and meshing results.

NavVis

NavVis Authorized Reseller

BUILD BETTER REALITY

Bridge the gap between the physical and digital worlds through reality capture technology that provides the digital foundation for the world you want to live in.

PRODUCT DATA SHEET

NavVis VLX 3

Laser Scanners

Number of laser scanners	2 × 32-layer
Laser class	1, eye-safe per IEC 60825-1:2007 & 2014
Wavelength	903 nm
Range	Up to 300 m
Points per second	2 × 1,280,000

Accuracy

Accuracy of point cloud	5 mm in a dedicated test environment of 500 m² [1]
Control point support	Ground and wall

Cameras

Number of cameras	4
Image resolution	4 × 20 megapixel
Focus	Fixed
Lens	Fisheye, 3.3 mm, aperture f/2.4

Operation

Battery	2 × 2 Li-ion 98 Wh V-Mount Micro, hot swappable
Operating time	1.5 hours (with 1 set of 2 batteries)
Memory	Portable SSD with 1 TB storage
Sensors	WiFi, Bluetooth, IMU
Field of view	360° horizontal, 360° vertical

Display

Type	AMOLED capacitive multi-touch display
Dimensions	5.5”
Resolution	1920 × 1080

Environment

Operating temperature	0°C to 35°C
Robustness	Outdoor and indoor
IP classification	IP42

Output

Images	JPEG
Point cloud	E57, LAS, PTS, XYZ, PLY

Physical

Design	Wearable
Dimensions (H x W x L)	111 × 33 × 57 cm In XL positon
Weight	8.5 kg
Housing	Powder coated & anodized aluminum, carbon frame

Transport Case

Dimensions (H × W × L)	43 × 54 × 82 cm
Weight (fully equipped)	23.9 kg
Weight (excluding batteries)	21.7 kg

[1] All accuracy statements are 1 sigma. More details on the dedicated environment and accuracy metric can be found in our whitepaper (navv.is/accuracy)