AUTONOMOUS MOBILE LIDAR

Hovermap ST-X autonomous LiDAR scanner

The Emesent Hovermap ST-X combines 32-channel LiDAR with SLAM-based autonomy to deliver survey-grade 3D point clouds across drone, backpack, vehicle, handheld and cage-mounted deployments — including GPS-denied and hazardous environments.

SURVEY-GRADE LIDAR PAYLOAD



Hovermap ST-X

Autonomous mobile LiDAR scanner

AVAILABLE NOW FROM D2 RENTALS — CALIBRATED, COMPLETE, FIELD-READY.

CAPABILITIES & OPERATING MODES

Fast, accurate, high-detail mobile data capture

Hovermap ST-X uses Emesent's award-winning SLAM and onboard autonomy to capture survey-grade 3D point clouds without GPS. Three operating modes cover everything from drone-based inspection to ground-based mobile mapping.

Mapping Mode

SLAM-based mobile scanning for environments where drone autonomy isn't needed. The quick-release mount lets the same scanner switch from backpack to handheld, vehicle, or protective cage in seconds — ideal for stope surveys, confined-space scans, walk-through site capture, and vehicle-mounted corridor mapping.

Pilot Assist Mode

Omnidirectional collision avoidance and GPS-denied stability for close-quarters drone inspection. Acts as a safety bubble around the aircraft, allowing thorough capture of complex assets without risking contact damage. (Subject to Emesent subscription tier.)

Autonomous Waypoint Mode

Beyond-line-of-sight tap-to-fly. Set smart waypoints on a tablet and the Hovermap takes over — navigating, mapping, avoiding obstacles and returning home automatically. Designed for previously inaccessible environments where pilots can't safely follow.

- Triple-return LiDAR — penetrates vegetation and complex layers
- Optional Long Range Radio extends comms range ~20×
- Live point cloud streaming to the Hovermap app in real time

APPLICATIONS & DEPLOYMENT

One scanner. Every deployment.

Hovermap ST-X's quick-release mount allows the same unit to switch between drone payload, vehicle, backpack and handheld configurations — capturing data in places GPS and traditional scanners can't reach.



DRONE-MOUNTED

Aerial capture for inaccessible or hazardous sites



BACKPACK

Walk-through capture in forestry and open terrain



HANDHELD

Confined-space and indoor scanning

Inspection & Asset Integrity

- Above-ground asset inspection from outside exclusion zones — telecoms towers, energy infrastructure, live industrial sites
- Confined-space and GPS-denied environments — tunnels, cellars, plant rooms, vessels
- Bridge and civil structure inspection
- Pipeline corridor and linear asset surveys

Survey & Mapping

- Underground mine stope and void surveys
- Forestry and canopy-penetration surveys (triple-return capable)
- As-built capture for construction and infrastructure
- Stockpile and volumetric measurement
- Topographic and feature-poor site mapping (with optional GCPs)

SPECIFICATIONS & HIRE

Survey-grade performance, field-ready hire.

KEY SPECIFICATIONS	
LiDAR range	0.5 – 300 m
LiDAR channels	32
Acquisition rate	Up to 640,000 pts/s (single return) Up to 1,920,000 pts/s (triple return)

Specifications quoted from Emesent manufacturer data. Mapping accuracy is environment-dependent.

WHAT DO I NEED TO BOOK A RENTAL?

Provide us with some key documents — then enjoy your hire.

01

Insurance

Insure your rental under a Hired-in (non-owned) equipment cover policy — to the full cost value of the equipment and for the duration of your hire period.

02

Proof of ID

After check-out, submit a copy of your passport or driving licence, plus a utility, bank, or council tax statement that matches your name and delivery address.

03

Flyer ID

For the UAV payload option, you need a valid Flyer ID and Operator ID for the drone the Hovermap ST-X is mounted to.

READY WHEN YOU ARE

Available now from D2 Rentals — calibrated, complete, and field-ready.

www.d2-rentals.co.uk · Inverurie, Aberdeenshire