Hovermap ST X
SPECIFICATIONS

emesent

Hovermap ST-X, a versatile SLAM-based mapper with the latest in LiDAR sensing technology, provides high density point clouds and extensive coverage. It is uniquely versatile, allowing you to capture data in any environment as a handheld, backpack, or vehicle-mounted scanner. The tough, lightweight, and IP65 certified, weather sealed design makes Hovermap ST-X equally capable in the harshest environments, above ground or underground, indoors or out.

MAPPING SPECIFICATIONS

SLAM mapping	Simultaneous Localization and Mapping (SLAM) based LiDAR mapping +/- 0.03% drift
LiDAR range	0.50 m to 300 m (1.6 to 984 ft)
LiDAR accuracy	+/- 10 mm (3/8 in)
Mapping accuracy	+/- 15 mm (19/32 in) in general environments +/- 10 mm (3/8 in) in typical indoor and underground environments +/- 5 mm (7/32 in) isolated change detection capability
Angular field of view	360° x 290°
LiDAR data acquisition speed	Single Return Mode: up to 640,000 points/sec Multi Return Mode (3 return): up to 1,920,000 points/sec
Maximum data capture traveling speed	Vehicle: 60 km/h (37.3 mph); flight: 5 m/s (16.4 fps) above ground, 2 m/s (6.6 fps) underground or confined spaces
Start / stop scanning while walking or hovering	Yes
Outputs	Full resolution point cloud, decimated point cloud, trajectory file
Point cloud file format	.las, .laz, .ply, E57
Point cloud attributes	Intensity, range, time, return number (strongest, first, & last), ring number, RGB/true color (optional)
Storage	512 Gigabytes – approximately 4 hours of sensor data
Operating temperature	-10 to 45°C (14 to 113°F)

PHYSICAL SPECIFICATIONS

IP Rating	IP65
Weight	1.57 kg (3.46 lb)
Input voltage	14 - 54 V, 64W powered from a battery or auxiliary power input
Deployment	Drone/UAV, handheld, backpack, vehicle, tether, ground robot
Supported drones	DJI M210v1, DJI M300, Acecore Zoe
Quick release mount	Yes
Auxiliary port	Proprietary connector
USB port	Yes
WiFI Antenna	Internal

AUTONOMY SPECIFICATIONS

Flight modes	Pilot Assist: Non-GPS flight, position hold, assisted flight, collision avoidance, regulated flight speed. Autonomous Waypoint Mode: Autonomous navigation to waypoints
AL2 waypoint types	2D, 3D, planar, height
AL2 navigation modes	Guided exploration, local and global path planning
Autopilot compatibility	DJI, ArduPilot (Acecore Zoe)
Omnidirectional collision avoidance	360° x 360° size of an obstacle > 2 mm (3/32 in) wire range 1.2 to 40 m (3.9 to 131 ft) In-flight adjustable safety distance

KIT INCLUSIONS
- Hovermap ST-X
- Custom fitted tough case
- Hovermap handle & belt clip
- Power cable
- Battery & charger
- Aura software
- Hovermap scanning software USB

ENTITLEMENTS AVAILABLE
- Hovermap Autonomy
- Hovermap Plus
- Hovermap Mapping

TRAINING & SUPPORT INCLUDED
- Introductory training
- Global Support & Service

ADDITIONAL HARDWARE
- Emesent Control Point targets
- GoPro & Colorization kit
- Fitting kits for DJI M210 & M300
- Samsung tablet and tablet display kit for DJI Smart Controller

ACCESSORIES
- Backpack
- CMS adaptor kit
- Long Range Radio
- Magnetic vehicle mount
- Suction vehicle mount
- Cage
- Telescopic boom pole