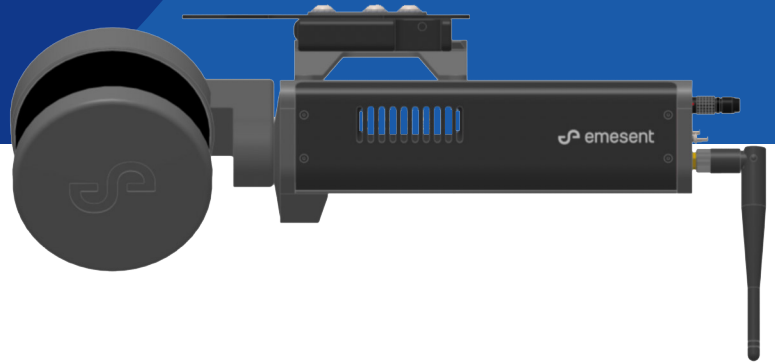# HOVERMAP™
HF1 SPECIFICATION

A versatile SLAM-based mapper, making data capture fast and simple.
Hovermap HF1 is a smart mobile scanning unit optimized for underground and vertical asset inspection.

MAPPING SPECIFICATIONS

SLAM mapping	Simultaneous Localization and Mapping (SLAM) based LiDAR mapping +/- 0.03% drift
LiDAR range	0.40 m to 100 m
LiDAR accuracy	+/- 30 mm
Mapping accuracy	+/- 20 mm in general environments +/- 15 mm in typical underground and indoor environments +/- 5 mm for close range scanning
Angular field of view	360° x 360°
LiDAR data acquisition speed	up to 300,000 points/sec
Maximum data capture travelling speed	Vehicle: 40 km/h; flight: 5 m/s above ground, 2 m/s underground or confined spaces
Start / stop scanning while in motion	Yes
Outputs	Full resolution point clouds, decimated point clouds, trajectory
Point cloud file format	.las, .laz, .ply, .dxf
Point cloud attributes	Intensity, range, time, return number (strongest & last) and ring number
Processing parameters	Pre-set profiles with 20+ adjustable parameters
USB3	High speed data offload
Storage	480 Gigabytes – approximately 12 hours of sensor data
Operating temperature	0-50°C

PHYSICAL SPECIFICATIONS

Weight	1.8 kg
Input voltage	12 - 50V, powered from a battery or auxiliary power input
Deployment	Can be mounted to a Drone/UAV
Supported drones	M210, M600 , M300
Quick release mount	Yes

AUTONOMY SPECIFICATIONS

Flight modes	Autonomy Level 1: Non-GPS flight, position hold and assisted flight, collision avoidance, regulated flight speed. Autonomy Level 2: Non-GPS waypoint flight
AL2 waypoint types	2D, 3D, planar, height
AL2 navigation modes	Guided exploration, local and global path planning
Autopilot compatibility	DJI A3
Omnidirectional collision avoidance	360° x 360°; range 0.4 – 40 m; size of an obstacle > 2 mm wire

INCLUDED ACCESSORIES
Handle
Universal carbon fiber mounting plate with appropriate drone mount

OPTIONAL ACCESSORIES
Colorization camera
Vehicle mounts
Protective cage
Hard case backpack

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