

Hovermap STX

Specifications

**Specifications are indicative only and are subject to change without notice.*

Emesent Hovermap STX is powered by Emesent SLAM, a proprietary SLAM algorithm which is the key to unlocking stunning global accuracies in a variety of environments. All global accuracies are reported as 3D RMSE in accordance with good surveying practice. SLAM global accuracy is correlated with the density of features in the scan environment.

Global accuracy

Global accuracy	5 - 10mm
Global accuracy - RTK/PPK1	15 - 30mm

Local accuracy & precision

Local accuracy	5 - 10mm
Precision ²	Up to 2mm

² Reported at 1 standard deviation.

RTK

RTK georeferencing	With external RTK receivers: → Emlid RS2/RS2+/RS3 → Leica GS18/GS18I/GS18T → Trimble R10/R12/R12i/R980
PPK	Yes

Cameras

Cameras	Optional accessories: → 360 colorization kit (GoPro Max) → Handheld 360 Image Kit
Panorama field of view	360°

LiDAR

Model	Hesai XT32M2X
Sensing range	300 meters / 984ft
Returns	3
Points/sec	→ 640,000 (single return) → 1,920,000 (triple returns)
Channels	32

Battery & charging

Power	External battery (V-Mount compatible), or Platform power (drone or robot) 14-55V
Battery life	2 hours
Charging	Battery charger (with international adapters US/Canada/Japan, AUS/NZ, UK and Europe)
Charging time	Approx 3-4 hours

Scanner

Weight	1.57kg / 3.46lb
IMU	High-performance AHRS
Travel protection	→ Hardshell backpack or → Hovermap carry case
IP rating	IP65
Operating temperature	-10 to 45°C (14 to 113 °F)
External interfaces	→ USB-A (USB 3.0) → Push-pull connector → Smart connector (accessory expansion)
Wireless interfaces	WiFi (2.4GHz)
Storage	512 Gigabytes (<16 hours of sensor data)
Mounting methods	→ Handheld → Backpack → Vehicle → Drone → Boston Dynamics Spot Robot → LHD Mount → Cage → Telescopic boom pole → Cavity Monitoring System adapter kit

Other Accessories & Hardware

Supported drones	→ Freefly Astro → Astro Max → DJI M300 → M350
Additional hardware	→ Long Range Radio → Emesent Control Point targets → Samsung tablet and tablet display kit for DJI Smart Controller

Autonomy

Tap-to-fly and guided exploration	Waypoint, bounding box settings in real time 3D map and autonomous path planning.
Collision avoidance	→ LiDAR omnidirectional range of 1.2 to 40m (3.9 to 131 ft) → Size of an obstacle > 2 mm wire (3/32 in) → In-flight adjustable safety distance
Intelligent return to home	Autonomous Return To Home navigation triggered by low battery or excessive dust.
Assisted flight	Non-GPS flight, position hold, assisted flight, collision avoidance, regulated flight speed