

# 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<sup>2</sup> Up to 2mm

<sup>2</sup> 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