

RESEPI Lite M2X

LIDAR SCANNING & MAPPING

A lightweight RESEPI mapping payload pairing the triple-return Hesai XT-32 M2X LiDAR with a tactical-grade Inertial Labs INS for high-accuracy aerial surveys.



32^{CH}
LIDAR CHANNELS

300^M
MAX RANGE

±1^{CM}
RANGE ACCURACY

±3^{CM}
VERTICAL
ACCURACY

1^{KG}
WEIGHT

■ GPS-Aided INS

IMU	Inertial Labs Tactical Grade IMU-P
GNSS	Single/Dual Antenna NovAtel OEM7720
Constellations	GPS, GLONASS, BEIDOU, GALILEO
Output Rate	Up to 200Hz (INS); Up to 2,000Hz (IMU)
Pitch/Roll Accuracy	0.006 (PPK)
Heading Accuracy	0.03 (PPK)
Velocity Accuracy	<0.03 m/s
Position Accuracy	0.5cm (PPK)

■ System

System Vertical Accuracy	±3cm 5m/s @ 50m
Recommended AGL	50-100m
Weight	1kg
External Storage	256GB USB

■ Key Capabilities

- Triple-return Hesai XT-32 M2X LiDAR
- 360° horizontal field of view
- Tactical-grade Inertial Labs INS with RTK + PPK
- Single or dual-antenna GNSS
- 1 kg ultra-lightweight payload
- SnapFit mounting on WISPR, Freely & DJI

■ LiDAR

Sensor	Hesai XT-32 M2X
Laser Range Capabilities	80m @ 10% (all channels) 0.5 - 300m
Range Accuracy	±1cm
FOV (Horizontal)	360°
FOV (Vertical)	40.3°
Scan Angle (Vertical)	-20.8° to 19.5°
Beam Divergence	0.21° (H), 0.047° (V)
Number of Laser	32
Number of Returns	3
Pulse Rate	640k/s (single return) 1280k/s (double return) · 1920k/s (triple return)

RESEPI PLATFORM

A sensor-fusion payload built on a high-performance Inertial Labs INS, Linux processing core, and data-logging software, operated from a single button or a wirelessly connected device.

APPLICATIONS

Utility and power-line mapping, construction volumetrics, site surveying, precision agriculture, forestry, and mining, with rapid mounting on WISPR, Freely, and DJI platforms.

SOFTWARE (PCMASTERPRO™)

Field checks, pre- and post-processing, strip alignment, coordinate transformation, and noise filtering for a complete collection-to-deliverable workflow.