



LEARN MORE

SCOUT-X

The **SCOUT-X** is a fully integrated LiDAR and panoramic imaging solution purpose-built for the Mosaic X camera platform. The **SCOUT-X** adapts the proven Phoenix Scout-M2X into a streamlined, camera-mounted configuration that delivers cleaner integration, improved performance, and faster deployment. Designed as a true all-in-one mapping solution, the **SCOUT-X** combines LiDAR and high-resolution imaging into a compact, vehicle-ready system.

By mounting the LiDAR directly to the Mosaic X at an elevated position, the **SCOUT-X** achieves superior 360° coverage with fewer platform obstructions. The steeper 30° scan angle improves laser incident angle on the ground, resulting in enhanced point precision, stronger surface intensity returns, and higher quality data capture.

Better coverage. Better precision. Better data.

FEATURES

- Elevated, obstruction-reduced 360° LiDAR coverage
- Removable micro-SD Express storage for rapid data transfer
- Clean, integrated cabling, power and Ethernet only
- Optional dual GNSS antenna upgrade

PLATFORM

OVERALL DIMENSIONS	Without pyramid stand: 29.8 x 23.7 x 36.1 cm With pyramid stand: 99.8 x 99.8 x 101.2 cm
OPERATING VOLTAGE	14 - 16.5 VDC
OPERATING TEMPERATURE	0° - 40° C / 32° - 104° F
POWER CONSUMPTION	~50 W typical
WEIGHT	~9 kg

LiDAR SENSOR

LASER PROPERTIES	905 nm Class 1 (eye safe)
RANGE MAX	300 m (80 m @ 10% for all channels)
RANGE MIN	0.5 m
NUMBER OF LASERS	32
PULSE RATE	640 kHz (Up to 1.28 MHz in dual return mode)
LINE RATE	10 Hz
VERTICAL FIELD OF VIEW	40.3° (-20.8° to +19.5°)
VERTICAL RESOLUTION	1.3°
HORIZONTAL FIELD OF VIEW	360°
MAX RETURN COUNT	3

NAVIGATION SYSTEM

CONSTELLATION SUPPORT	GPS + GLONASS + BEIDOU + GALILEO
SUPPORT ALIGNMENT	KINEMATIC, DUAL-ANTENNA
POSITION ACCURACY	1 CM + 1 PPM RMS HORIZONTAL
ACCURACY ATTITUDE ⁽⁴⁾	
ROLL, PITCH	0.003° RMS
HEADING	0.011° RMS



VEHICLE

QUICK SPECS

INTRASWATH PRECISION
1.5 cm RMSDz @ 10 m ⁽¹⁾ ⁽²⁾ ⁽³⁾

EXAMPLE ACQUISITIONS:

MOBILE - URBAN

- » Pulse Rate = 640 kHz
- » Field of View = 360°
- » Point Density = Up to 900 points/m² @ 10 m range to target ⁽³⁾
- » Collection Rate = 40 km/h (25 mph)

MOBILE - HIGHWAY

- » Pulse Rate = 640 kHz
- » Field of View = 360°
- » Point Density = Up to 500 points/m² @ 10 m range to target ⁽³⁾
- » Collection Rate = 72 km/h (45 mph)

APPLICATIONS



GENERAL MAPPING



ASSET INVENTORY MAPPING



CONSTRUCTION SITE SURVEYING



UTILITIES MAPPING



RAILWAY TRACK MAPPING

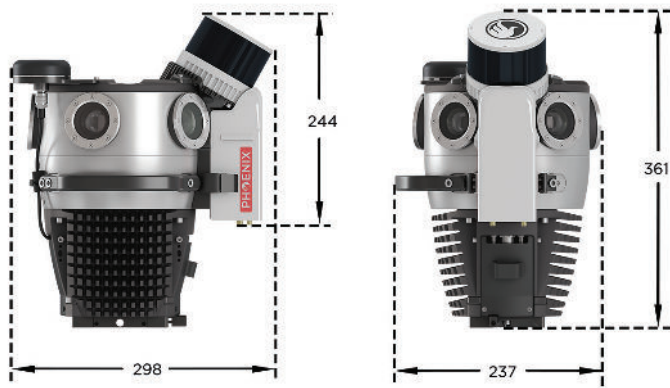
⁽¹⁾ Approximate values based on PLS test conditions

⁽²⁾ Range of elevation values on flat surfaces with > 20% reflectivity at the laser's wavelength

⁽³⁾ Estimated for surfaces perpendicular to the beam path.

⁽⁴⁾ Estimated post processed accuracy with IMU-27

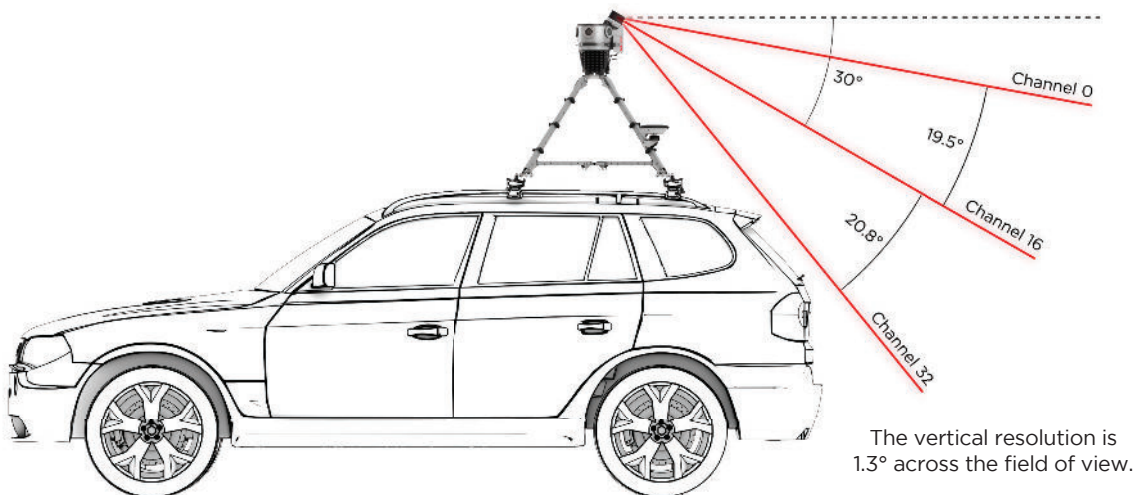
SCOUT-X DIMENSIONS



SCOUT-X COMPONENTS



CHANNEL VERTICAL DISTRIBUTION



SCOUT-X OPTIONS & MOUNTS



Mounted on Mosaic 360
Pyramid Roof Rack



Single GPS Antenna Option



Dual GPS Antenna Option



EXPLORE A PHOENIX LiDAR SYSTEM FOR YOUR TEAM, CONTACT US!

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