PHOENIX
LiDAR SYSTEMS

VTOL UAV VEHICLE BACKPACK SLAM

SCOUT ULTRA

The **SCOUT ULTRA** is the most powerful member of the SCOUT Series. Lightweight and long range, this sensor enables efficient data collection for challenging areas at higher altitudes and speeds. An excellent option for building high-density point clouds, customize your **SCOUT ULTRA** with photogrammetry, hyperspectral, thermal imaging, and additional options.

FEATURES

- Live Data Feed: View/analyze data in real time
- Remote Data View: Transmit live data to remote viewers via 4G connection
- Acquisition Upgrades: Dual LiDAR Sensors; High-Res DSLR; RGB GigE Cam; thermal, hyperspectral cameras; panoramic/spherical cameras; and more

QUICK SPECS

Absolute Accuracy
55 mm RMSE @ 50 m Range

PP Attitude Heading RMS Error
0.019 / 0.074° IMU options

Weight
2.2kg / 4.9 lbs.

Dimensions
18.5 x 11.6 x 11.6 (cm)

Laser Range
220 m @ 60% Reflectivity

Scan Rate
600 k points/s, up to 2 returns

APPLICATIONS

- Oil & Gas Surveying
- Utilities Mapping
- Railway Track Mapping
- Agriculture & Forestry Monitoring
- Construction Site Surveying
- Open Pit Mining Operations
- General Mapping

PLATFORM

OVERALL DIMENSIONS (Sensor)	18.5 x 11.6 x 11.6 cm
OVERALL DIMENSIONS (Nav Box)	9.8 x 11.6 x 11.6 cm
OPERATING VOLTAGE	12 - 28 v
POWER CONSUMPTION	~50 w
OPERATING TEMPERATURE	-10° – +40° c
WEIGHT (incl. Nav Box)	2.2 kg

LiDAR SENSOR

LASER PROPERTIES	905 nm Class 1 (eye safe)
NUMBER OF LASERS	32
RANGE MIN / MAX / RESOLUTION	1.0 m / 200 m / 4 mm
MAX EFFECTIVE MEASUREMENT RATE	600,000 meas./s
HORIZONTAL FIELD OF VIEW	360°
VERTICAL FIELD OF VIEW	40° (-25° to +15°)
ACCURACY	Up to ±3 cm
SENSOR CLASSIFICATION	IP67
BEAM DIVERGENCE H x V	3.0mrad (0.171887°) / 1.5 mrad (0.0859437°)
LASER BEAM FOOTPRINT H x V	8.8 cm x 4.7 cm @ 25 m 16.3 cm x 8.5 cm @ 50 m 23.8 cm x 12.2 cm @ 75 m 31.3 cm x 16.0 cm @ 100 m 46.3 cm x 23.5 cm @ 150 m 61.3 cm x 31.3 cm @ 200 m

NAVIGATION SYSTEM

CONSTELLATION SUPPORT	GPS + GLONASS + BEIDOU + GALILEO
SUPPORT ALIGNMENT	Kinematic, Single-Antenna
OPERATION MODES	Real-time, Post-processing optional
ACCURACY POSITION	1 cm + 1 ppm RMS horizontal
PP ATTITUDE HEADING RMS ERROR	0.019° / 0.074° IMU options

SOFTWARE

PLS Software Suite

Phoenix LiDAR Systems provides a complete proprietary software suite for streamlined mission planning, acquisition, georeferencing, data fusion & export.

Explore the effects that different parameters have on your data before you fly. Estimate your data quality and reduce costs by experimenting with various flight paths, altitudes, and other variables using the **Phoenix Flight Planner.**

Streamline your LiDAR acquisition, georeferencing, data fusion and exporting with: **PLS SpatialExplorer** to enable in-field QA/QC and cut down wait-time on extensive photogrammetry applications by creating colorized point clouds & **PLS SpatialLighthouse** to stream real-time corrections for RTK trajectories and in-flight QA/QC.

Additional Software Suite Benefits include:

- Real-time point cloud visualization via 4G or built-in long range wifi – now with patent pending real-time RGB colorization
- Designed for multi-rotors, car, bicycle, backpack, and more
- Analyze LiDAR penetration and measure positions, paths and cross sections – while scanning

PLAN + ADJUST + ACQUIRE

LiDARMill

LiDARMill.com

Automated Post-Processing in the Cloud

LiDAR acquisition is only half the job. Our goal is to decrease the time and cost for users to process their raw data into a calibrated point cloud with basic ground/non-ground classification.

Meet **LiDARMill**, the first cloud-based LiDAR post-processing platform that enables surveying teams to take advantage of precision laser mapping without investing in expensive post-processing software and training.

Processing your LiDAR data in the cloud has never been easier. View your data, track project status, and invite clients to view point clouds – all from your LiDARMill dashboard with faster turnaround times and lower overhead costs.

LiDARMill can be customized to serve any size organization, from small survey teams to government departments with heavy post-processing requirements. Contact sales@phoenixlidar.com for pricing and packages.

Key Features:

NavLab combines IMU and GNSS data to generate a smoothed and accurate trajectory.

Auto Flight Line Detection reduces processing time by automatically detecting and omitting turns and calibration maneuvers to focus on data-collecting flight lines.

LiDARSnap is a powerful feature that minimizes offsets from multiple flight lines, exporting aligned data in LAS files.

Classification & DTM, use data from previous workflow steps to automatically generate a ground/non-ground LAS and gridded DTM.

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

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