

## miniRANGER-LITE

The **miniRANGER-LITE** is a system that features an impressive recommended AGL of up to 75 meters, filling a major AGL gap in the ultra-lightweight UAV LiDAR market. With the photogrammetry package, operators of mid-size multirotors, like the DJI M600 Pro, can now simultaneously acquire survey-grade LiDAR data and high resolution 42 MP RTK photogrammetry at up to 100 m operating flight altitude.

### FEATURES

- » Includes the new AIR NavBox for increased range & flexibility
- » Ideal for configuring heavier mapping payloads on the DJI M600
- » Significantly lighter (37%) than miniRANGER providing increased range & flexibility
- » Modular upgrades: Dual LiDAR Sensors, DSLR, GenICam, GigEVision, thermal, multispectral, hyperspectral, imaging and custom sensors

### PLATFORM

OVERALL DIMENSIONS (SENSOR)	348.5 x 164 x 189 mm
OPERATING VOLTAGE	12 - 28 V
POWER CONSUMPTION	-55 W
OPERATING TEMPERATURE	-10° - +40° C
WEIGHT (INCLUDING AIR NAVBOX)	2.2 kg / 4.85 lbs.

### LiDAR SENSOR

LASER PROPERTIES	905nm Class 1 (eye safe)
RANGE MIN	3 m
MAX EFFECTIVE MEASUREMENT RATE	100,000 meas./sec
HORIZONTAL FIELD OF VIEW	360°
ACCURACY	15mm one Sigma @ 50 m
MAX MEASURING RANGE $\rho$ 20% ( $\rho$ 60%)	150 m (250 m)
SENSOR CLASSIFICATION	IP64
WEIGHT	1.55 kg
POWER CONSUMPTION	16W

### NAVIGATION SYSTEM

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



### QUICK SPECS

Absolute Accuracy  
20 / 30 mm RMSE @ 75m Range

PP Attitude Heading RMS Error  
0.019°

Weight  
2.2kg /4.9lbs. (3kg w/ Sony A7R)

Dimensions  
24.3 x 14 x 10 (cm)

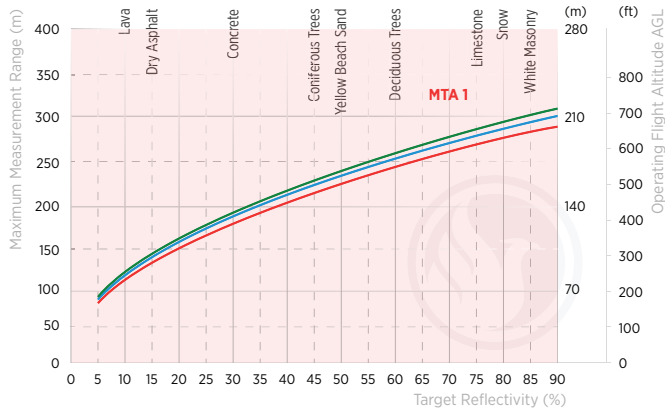
Laser Range  
250m @ 60% Reflectivity

Scan Rate  
100k shots/s, up to 5 returns

### APPLICATIONS

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

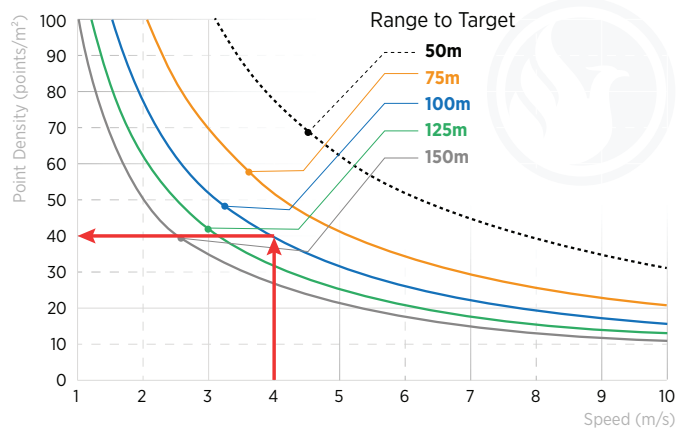
# MAX MEASUREMENT RANGE & POINT DENSITY miniRANGER LITE



### MTA 1

No ambiguity / one transmitted pulse "in the air"

- @ visibility 23km
- @ visibility 15km
- @ visibility 8km



### EXAMPLE

miniRanger at 100k pulses/s  
Range to target = 100 m, speed 4 m/s

Resulting Point Density **40 pts/m<sup>2</sup>**

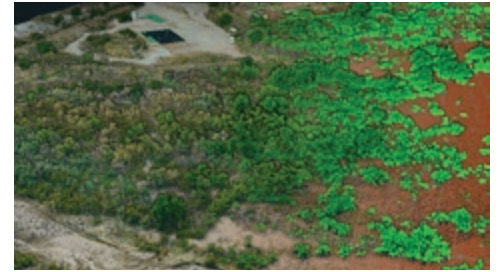
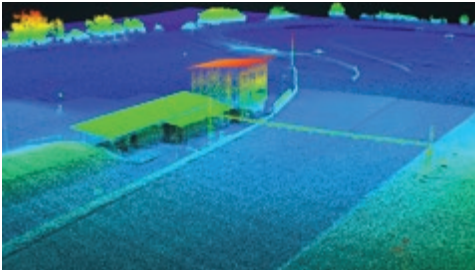
### The following conditions are assumed for the Operating Flight Altitude AGL

- ambiguity resolved by multiple-time-around (MTA) processing and flight planning
- target size  $\geq$  laser footprint

- average ambient brightness
- operating flight altitude given at a FOV of +/-45°

Source: RIEGL Laser Measurement Systems.

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## PHOENIX SOFTWARE SUITE INCLUDED



### PLS Software Suite

Phoenix LiDAR Systems provides a proprietary complete 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 Spatial Explorer** to enable in-field QA/QC and cut down wait-time on extensive photogrammetry applications by creating colorized point clouds; & **PLS Spatial Lighthouse** to stream real-time corrections for RTK trajectories and in-flight QA/QC.

## SAVE TIME, GROW YOUR BUSINESS



### Automated Post-Processing in the Cloud

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](mailto:sales@phoenixlidar.com) for pricing and packages.

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

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