The Phoenix RECON-A is the ideal solution for reconnaissance mapping missions such as vegetation encroachment on power lines. This all-in-one payload offers ease of use and efficient data collection all at an affordable price point.

The RECON-A maximizes point cloud density by utilizing its multi-pattern laser to pick up even the lowest reflective points. The integrated 24 MP high resolution camera has the same FOV as the LiDAR sensor yielding maximum RGB colorization of the point cloud.

**FEATURES**

- Lightest unit in its class
- Multi-Pattern acquisition allows for high density data even with low reflectance

**PLATFOR**

- OVERALL DIMENSIONS (Sensor) 19.9 x 9.2 x 12.1 (cm)
- WEIGHT 1.2 kg / 2.64 lbs
- CAMERA FOV 70°
- CAMERA RESOLUTION 24MP
- EXTERNAL STORAGE 256GB USB drive included
- OPERATING TEMPERATURE -20°C – +40°C

**LiDAR SENSOR**

- LASER PROPERTIES 905 nm Class 1 (eye safe)
- DISTANCE RANDOM ERROR 1σ @ 20 m < 2 cm (80% Reflective)
- RANGE MAX 190 m
- RANGE ACCURACY ±2 cm
- SCAN RATE 240,000 points/s (first or strongest return) 480,000 points/s (dual return) 720,000 points/s (triple return)
- FIELD OF VIEW (H x V) Non-repetitive scanning pattern: 70.4° × 77.2° Repetitive line scanning: 70.4° × 4.5°
- MAX RETURNS SUPPORTED: 3
- BEAM DIVERGENCE (H x V) 0.03° x 0.28°

**NAVIGATION SYSTEM**

- CONSTELLATION SUPPORT GPS + GLONASS + BEIDOU + GALILEO
- SUPPORT ALIGNMENT Kinematic, Dual-Antenna (optional)
- OPERATION MODES Post-processing only
- POSITION ACCURACY 0.5 cm (PPK Estimated)
- ATTITUDE ACCURACY <0.01° Pitch & Roll; <0.05° Heading

**APPLICATIONS**

- UTILITIES MAPPING
- CONSTRUCTION SITE SURVEYING
- AGRICULTURE & FORESTRY MONITORING
- OPEN PIT MINING OPERATIONS
- STOCKPILE VOLUMETRICS
- GENERAL MAPPING

---

(1) Approximate values based on PLS test condition.  (2) Using a 90° downward field of view.  (3) Range of elevation values on flat surfaces with >20% reflectivity at the laser’s wavelength.  (4) Expected RMSE when following the PLS recommended acquisition & processing workflow and ASPRS check point guidelines.
The RECON-A comes equipped with two scanning modes:

**NON-REPETITIVE PATTERN SCAN (70.4°)**

The non-repetitive scan mode increases the vertical FOV to 77.2°. This is the preferred mode when scanning structures such as power line towers.

**REPETITIVE LINE SCAN (4.5°)**

The repetitive scan pattern adjusts the vertical FOV to 4.5°. This is the preferred scan pattern for jobs that require the highest accuracy.