



RECON-A

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

QUICK SPECS

Absolute Accuracy (H x V)
 <10 cm x <5 cm @ 50 m flight altitude AGL







Weight
 1.2 kg / 2.64 lbs

Dimensions
 19.9 x 9.2 x 12.1 (cm)

Multi-Pattern Scanning
 Repetitive line scan or
 Non-repetitive scanning pattern

Max DJI M300 Flight time
 35 Minutes

APPLICATIONS

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

PLATFORM

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

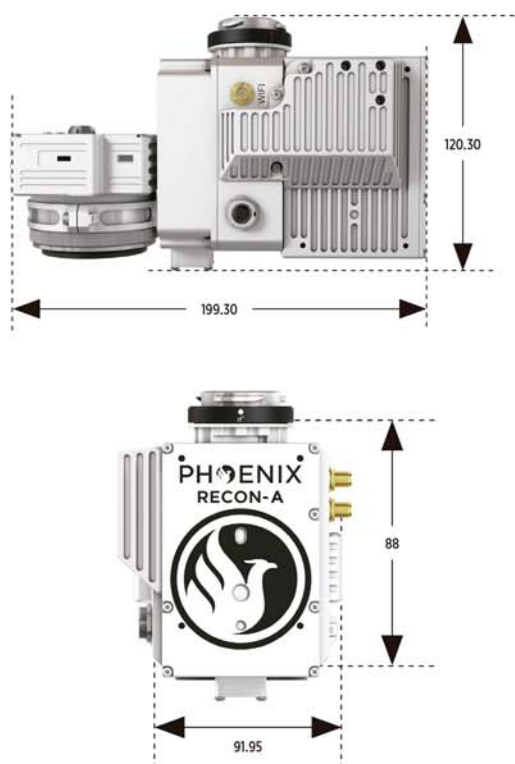
LiDAR SENSOR

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° x 77.2° Repetitive line scanning: 70.4° x 4.5°
MAX RETURNS SUPPORTED:	3
BEAM DIVERGENCE (H x V)	0.03° x 0.28°

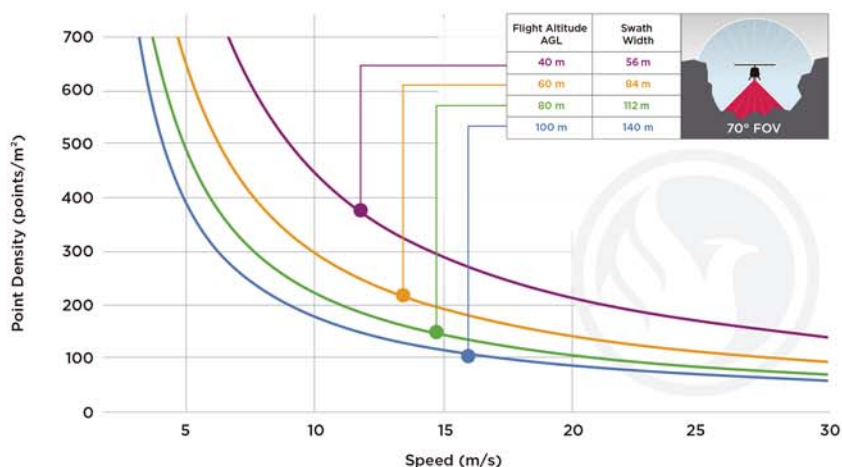
NAVIGATION SYSTEM

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

RECON-A DIMENSIONS (mm)



POINT DENSITY RECON-A



Flight AGL (m)	40	60	80	100
Speed (m/s)	Covered Area: 20% Flightline Overlap (ha/ac)			
6	48/120	73/179	97/239	121/299
10	81/199	121/299	161/399	202/498
Speed (m/s)	Covered Area: 50% Flightline Overlap (ha/ac)			
6	30/75	45/112	60/149	76/187
10	50/125	76/187	101/249	126/311
Imagery GSD	0.98 cm	1.46 cm	1.95 cm	2.44 cm
Swath Width	56 m	84 m	112 m	140 m

1) Flight Altitude Above Ground Level (AGL) 3) Average Point Density calculated based on 80% reflectivity
 2) Assuming 30 min flight time 4) ± 35° field of view

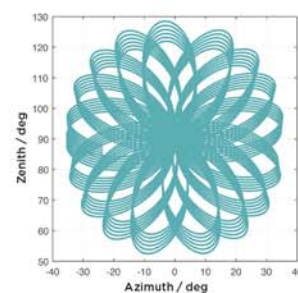
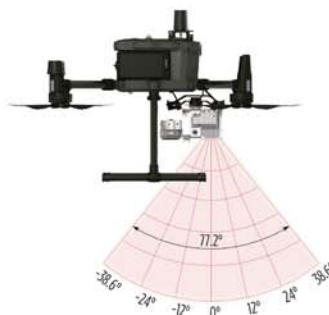
RECON-A FOV / SCAN PATTERN

The RECON-A comes equipped with two scanning modes:

Non-Repetitive Pattern Scan

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.

NON-REPETITIVE (70.4°) →



Repetitive Line Scan

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

REPETITIVE (4.5°) →

