

REDTAIL

LIDAR SYSTEMS

RedTail LiDAR Systems – Scanning the way it was meant to be.™



MISSION
PLANNING



SURVEILLANCE &
RECONNAISSANCE



TARGET
DETECTION



RAPID RUNWAY
REPAIR



CONSTRUCTION
MANAGEMENT



RESOURCE
MANAGEMENT



CORRIDOR
MAPPING

HIGH RESOLUTION 3D IMAGING

The RedTail LiDAR Systems RTL-450 is designed to create high-resolution point clouds from unmanned aerial vehicles. The superior resolution provided by the RTL-450 allows customers to perform enhanced data analytics. The integration of advanced Artificial Intelligence and Machine Learning (AI/ML) algorithms for target detection and classification provides next level autonomy at the edge. The RTL-450 transmits all laser pulses to the ground to optimize point cloud density. LiDAR points are evenly spaced to provide 3D images that are unsurpassed in their clarity.

UAV PLATFORMS

The RTL-450 is designed to be efficiently integrated onto UAVs. The RTL-450 can use the existing architecture of an Unmanned Aerial System (UAS), or can be operated independently via a dedicated ground control station.

Phone **800-25CARON (252-2766)**

Email **sales@caroneast.com**

Learn more at **caroneast.com**



About the **RTL-450**

RTL-450 Specifications

General Characteristics

- LiDAR Unit Weight: 1.9 kg (4.2 lbs)
- Dual GPS Antenna Weight: 295 g (.6 lbs)
- Operating Temperature Range: -10 to 60 °C (14 to 140 °F)
- Reconfigurable Scanning on the Fly (raster scan or line scan)
- Laser Wavelength: 1550 nm
- Field of View (raster scan): 40 degrees horizontal x 30 degrees vertical
- Field of View (line scan): 40 degrees horizontal

Performance Characteristics

- Max Range 20% Reflective (e.g., trees, grass): 120 meters (400 feet)
- Max Range 80% Reflective (e.g., white surfaces): 160 meters (525 feet)
- Absolute Accuracy (RMSE) at 50 m: 3-5cm
- Range Precision: 15 mm (.6 inches)¹

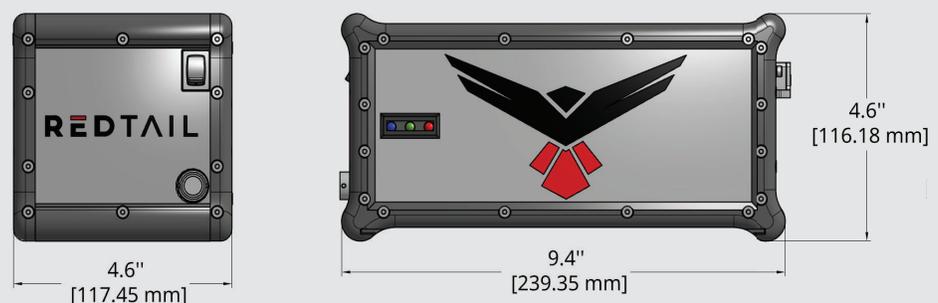
System Operating Parameters

- Line Scans/Second: 200
- Pulse Repetition Rate: 100, 200, or 400 kHz
- Max Returns per Pulse: 3
- Max Measurement Rate: 1 million (measurements/second on ground)

Components

- Scanning Mechanism: Microelectromechanical Mirror (MEMS)
- IMU/GNSS: Applanix APX-18

Dimensions



¹ RedTail LiDAR Systems test conditions, contact for details