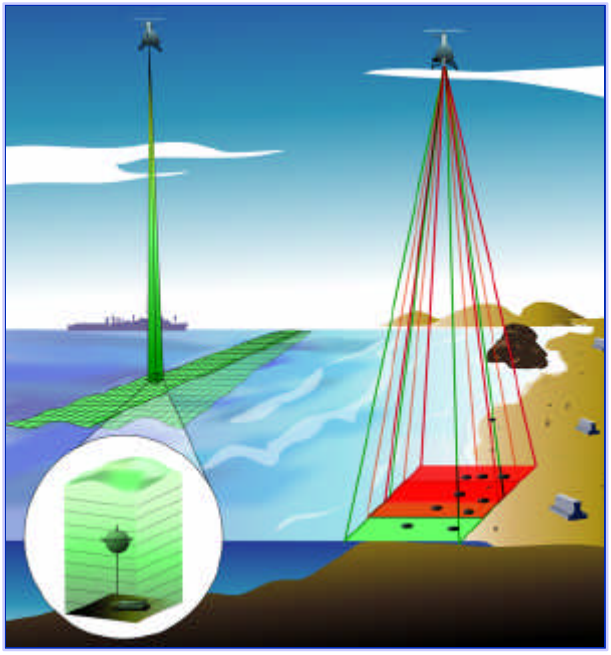
Rapid Overt Airborne Reconnaissance (ROAR)

Date Revised: 31 JAN 03

VENDOR DESCRIPTION

Lite Cycles, Inc. (LCI) is developing a day/night multi-spectral 3D flash imaging LIDAR system that is designed to detect mines on the beach, in the surf zone, and in very shallow water to depths of 40 feet. The sensor utilizes a true 3D camera that captures a 128×128×42 volume image with a single laser pulse to detect mines in the water. A range-gated camera is used to detect mines on the beach and in the water. The laser operates at 524 nm, 690 nm and 790 nm wavelengths, with wavelength selection electronically controllable. The sensor package size, weight, and power budget is compatible with the payload capacity of UAV platforms. Incorporated in the design is a highly compact large-aperture integrated scanner-receiver that enables high-altitude operation with multi-aspect, multi-look interrogation patterns to improve detection under the high-clutter surf-zone environment.



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LIDAR

Hardware	
Power: 2,500 watts	Operating Altitude: 150 ft to 3000 ft
Weight: 250 lbs	Operating Speed: 30 knots to 75 knots
Dimensions: 1ft x 1 ft x 2 ft	Operating Temp.: 0°C to 50°C
Internal Volume: 2 ft^3	Storage Temp.: 0°C to 50°C
On Board storage capacity to handle 0.5 hours on station	
Sensor Type: 3D multispectral and range-gated flash LADAR	
Sensor Field of View: ±6.5°	
Depression Angle: 15° from nadir	Maintainability: 2-level BIT to LRM level