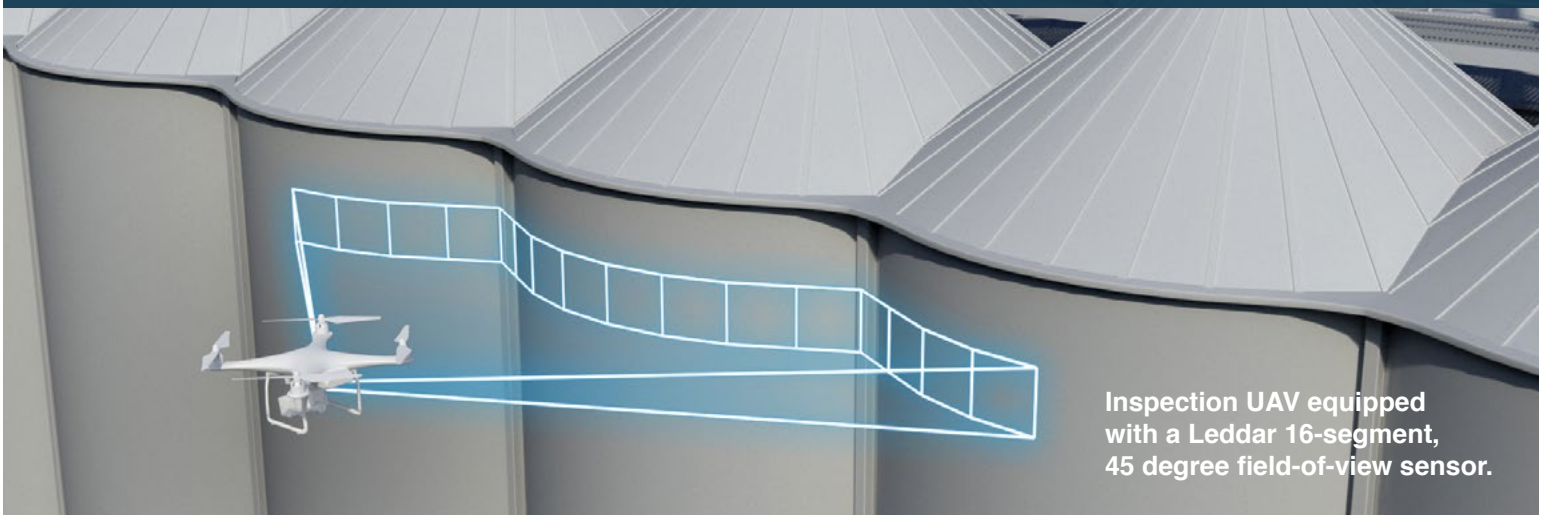
LeddarTech®

SOLUTION OVERVIEW

UAV positioning sensors for structural inspection

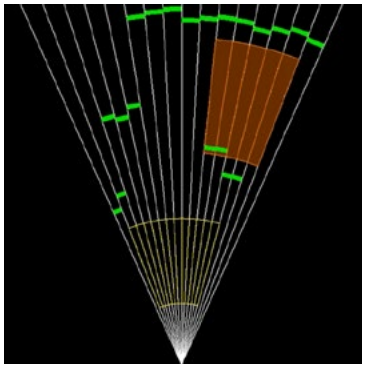
Leddar multi-segment optical sensors provide accurate, precise measurements



Inspection UAV equipped with a Leddar 16-segment, 45 degree field-of-view sensor.

The use of UAVs for the inspection of a variety of structures, such as buildings, large airplanes, bridges, dams or wind turbines, is a rapidly growing field. Yet, existing drone sensors are still unable to provide sufficient and reliable positioning information to ensure precise and safe navigation in proximity of these structures.

As a result, successfully completing an inspection that may require specific distances or positions from the inspected structure can prove to be a challenging mission.



Multi-segment Leddar: A new sensing solution for UAVs

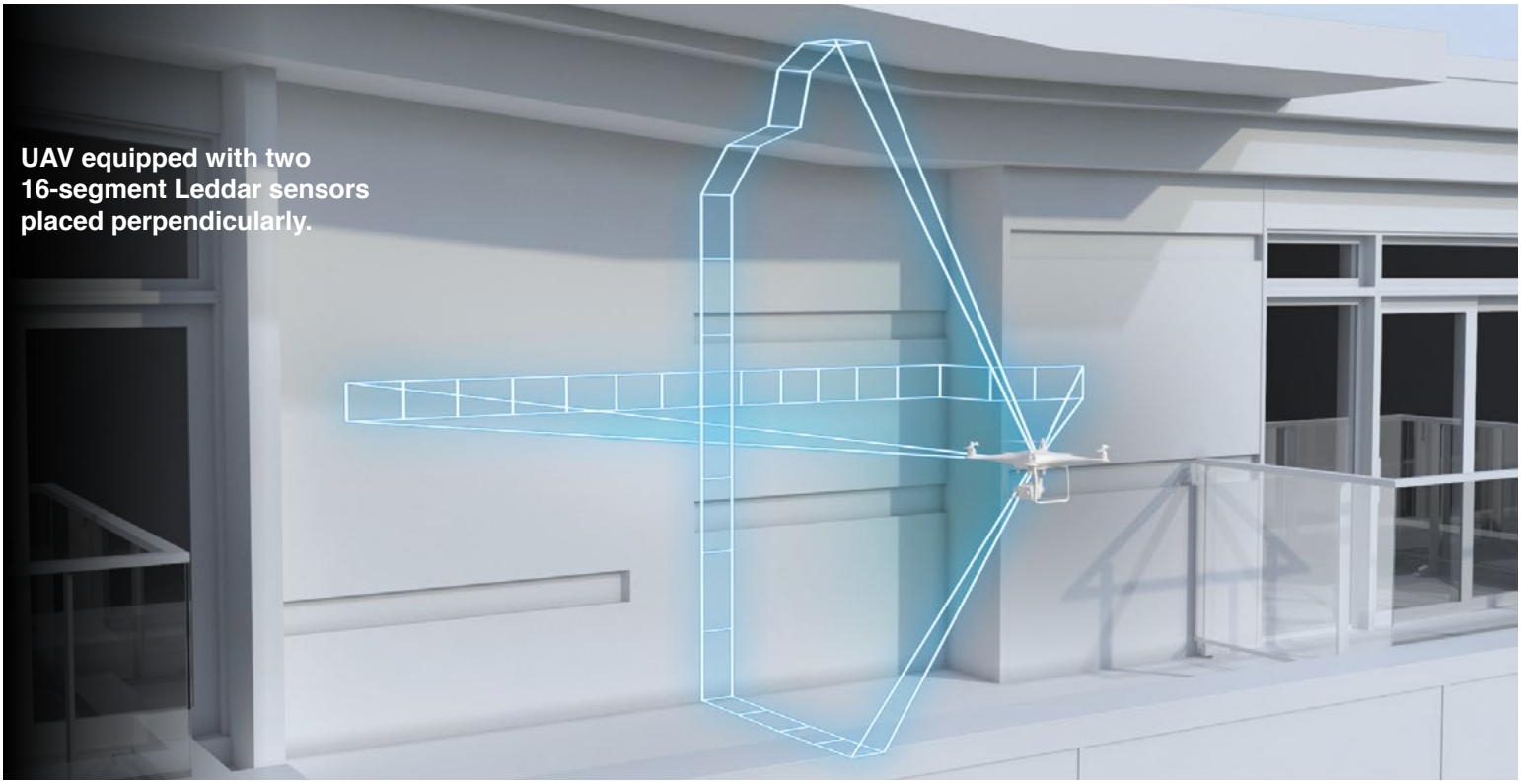
The multi-segment Leddar is a static optical sensor module that combines 16 independent active elements into a single device, providing multiple object detection and distance measurements from a single device. The Leddar sensor generates critical ranging data enabling safe navigation and precise positioning as well as obstacle detection in its field of view.

Features

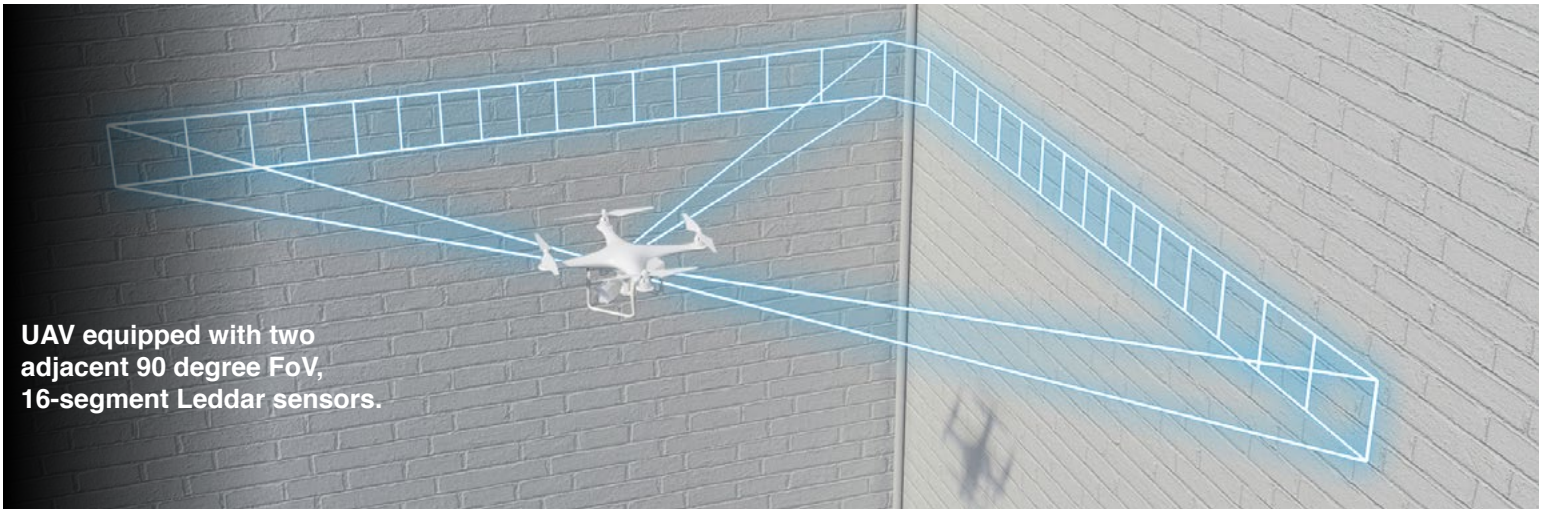
- 16 independent segments
- Short-to medium-detection range
- Simultaneous measurements and multi-object detection
- Wide range of FoV options
- Operating temperature from -45° C to +85° C

Benefits

- Multiple segments that provide rich positioning data
- Reliable operation in all lighting and environmental conditions
- No moving parts for ultimate robustness
- Easy to integrate: includes Leddar Enabler SDK
- Low power consumption



UAV equipped with two 16-segment Leddar sensors placed perpendicularly.



UAV equipped with two adjacent 90 degree FoV, 16-segment Leddar sensors.

LeddarTech: Providing superior UAV spatial awareness

Leddar's patented algorithms result in rapid, continuous and accurate detection and ranging—including lateral discrimination—in the entire field of view and without any moving parts.

By design, Leddar optical time-of-flight solutions provide robust operation day and night and in harsh environmental conditions, such as rain, fog, snow or dust. Their high sensitivity also results in low power consumption and eye-safe illumination.

Stemming from a decade of focused R&D, Leddar sensing technology has already been deployed in many industries and applications.

With its powerful built-in signal processing, large field of view (FoV), and multi-segment and multi-object discrimination, Leddar is simply the best all-around sensor for UAV positioning when performing structural inspections.

Ask us about Leddar sensing technologies for drones-UAVs: leddartech.com/en/contact-us

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