



# RETINA



## NEXT-GENERATION PHOTONICS SENSOR SYSTEM

**RETINA PROJECT** aims to create innovative spectral imagers and chip-based LIDAR sensors and combine them in a versatile multimodal perception system.

The mission is to address the critical demand for performance, cost-efficiency, and customization in key sectors by creating a holistic framework for the agile development of machine learning-based perception algorithms and next-generation hardware solutions.

## APPLICATIONS



### HEALTHCARE

Identifying tumorous cells and monitoring blood perfusion during surgeries.



### AUTOMOTIVE

Enhancing Advanced Driver-Assistance Systems (ADAS) for collision detection in autonomous vehicles.



### AGRICULTURE

Implementing precision viticulture solutions for water stress management and pathogen infection prediction.

## CORE TECHNOLOGIES

Short- and long-range FMCW LiDARs on chip

Vis-NIR-SWIR Spectral Quantum Dot Imagers

Integrated Optical Microfilters

Ultra-Low-Power Camera Modules

Ground, Vehicle, and Drone platforms

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