



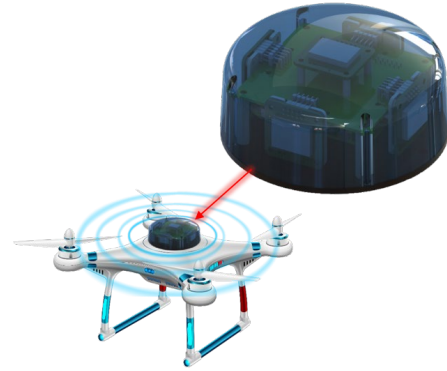
OleaVision360™ Drone Guidance System Info Sheet

First Intelligent Hemispherical Field-of-View Sensor for Drones

Available in Q4 2019 – Patent Pending # 62860509

OleaVision360™, is a patent-pending guidance system for use on drones and other autonomous applications.

Today's drones use onboard computer systems with the assistance of GPS to navigate a path of GPS waypoints in order to reach their destination. However, most drones are blind to their surroundings due to a lack of situational awareness in outdoor applications. Similarly, to date, drones have been unable to maneuver in buildings where GPS is denied.



The OleaVision360™ addresses these issues and more. It is an innovative sensor that can continuously scan the drone's surroundings and the terrain below, using only one ultra-light weight sensor housed in a 100 mm (4-inch square) device. OleaVision360™ provides outstanding situational awareness with a hemispherical field of view (front, back, sides, below and/or above) without the use of rotors or beam-forming technologies. This single, low-cost obstacle avoidance sensor allows the drone to fly around obstacles in front or behind it with one-centimeter accuracy and a detection range of 20 meters (65 feet).

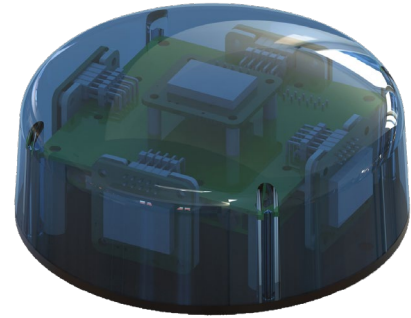
Equipped with OleaVision360™, a drone can accurately sense the terrain below it, offering true terrain following and precision landing assistance without compromising effectiveness. Thanks to Olea's proprietary Life Presence Detection technology, OleaVision360™ can discriminate between animate and in-animate objects.

When used for guidance systems, OleaVision360™ technology provides a substantial advancement in capability for autonomous applications in flight, robotic, industrial and automotive applications.

The OleaVision360™ solution is especially significant for remote inspections in the mining, construction, engineering, agriculture and environmental industries when needing to view from a specific distance or height in order to avoid compromising the existing equipment and sensors already integrated in a drone. Additionally, OleaVision360™ is robust enough to function in harsh or challenging environments including dust, rain, snow and in total darkness without the assistance of any lighting.

OleaVision360™ Patent Pending Guidance System

- 5 integrated 24 GHz Radar Sensors
- Continuously scans surroundings and terrain in harsh environments
- Up to 5 directions of obstacle avoidance
- Uses one ultra-light weight, 100 mm size sensor
- One-centimeter accuracy in anticipation of obstacles
- Detection range of 20 meters (65 feet)
- Discriminates between animate and in-animate objects
- Hemispherical field of view without rotors or beam-forming technologies



Processing, Programming & Memory

- On-board, high-performance 16-bit data acquisition system
- Processor Quad core Cortex-A53 64-bit SoC @ 1.4 GHz; 512MB LPDDR2 SDRAM
- MCU Cortex-M4 32-bit ARM

Connectivity

- CAN Bus Interface (data & power)
- Dual-band 2.4 GHz and 5 GHz wireless LAN, and Bluetooth 4.2/BLE

Power

- 5 volts DC Power source from Drone via CAN bus

Compliance

- Compliance to FCC, CE, ETSI, UL or FDA certifications
- Units are fully RoHS compliant
- Radar subsystem complies with ETSI 300 440 and FCC 15.245 (US version)
 - Radar frequencies:
 - 24.05 – 24.25 GHz (ISM/EU)
 - 24.075 – 24.175 GHz (US/JP)

Software and Data Acquisition, Storage & Analysis

- Licensed Software (delivered with OS-9005)
 - On-board Olea customized firmware/software
 - OleaVision™ Remote Monitoring Dashboard
 - Compatible with DJI Matrice 100 drones
- OleaVision™ Guidance System Machine Learning Algorithms & Analytic software available

Ask us about our capabilities to deliver device features & custom software to meet your requirements

Note: All specifications are subject to change without notice and to verification at time of purchase.

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