



## **ODS - Optic Drone Solutions, LLC**

*"High Quality, Superior, Data Rich, Aerial Videos, Photo Images and More"*

*Inspections - Verification - Confirmation - Technical - Assistance*

*7940 Denham Chase, Denham Springs, Louisiana 70726*

Andrew Kennedy +1 225-445-2903 [andrew@opticdronesolutions.com](mailto:andrew@opticdronesolutions.com)

Chad Kennedy +1 985-517-2301 [chad@opticdronesolutions.com](mailto:chad@opticdronesolutions.com)

Website [ods-opticdronesolutions.com](http://ods-opticdronesolutions.com)

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September 29, 2023

## **ODS - Optic Drone Solutions, LLC**

*Professional - Optical Drone Services*

*Sales Presentation*

### **Drone Aircraft Features - Flight Plans - Preparation for all Safety Protocols**

**Drone Aircraft - Mission Flight Planning**

**Is a Crucial Role for every ODS Drone Project, in The Best Interest of our Client - Customers**

**We at ODS Follow and Adhere to all FAA Federal Aviation Administration**

**Rules - Regulations - Guidelines - Safety Protocols**

**It is Recommended to Conduct an Initial Consultation "Kick-Off" Meeting**

**To Discuss - Establish - Coordinate All Drone Observation Targets and Activities**

**Including Job site Safety Protocols - Client Observers & Casual On Lookers - Drone Flying Awareness**

**All Client - Customer Expectations - Are Clearly Recognized and Understood**

### **Our Drone Aircraft Provides an Incredible Suite of Advanced Features**

**3-Axis Camera Gimbal - Controllable & Mechanical Range - Pan/Tilt/Roll**

**Wide Camera - 12mp 1/2" CMOS Image Sensor - (24mm) 3840x2160 Resolution**

**Zoom Camera - 48mp 16x Optical zoom - 200x Digital Hybrid zoom (113-405mm) 3840x2160 Resolution**

**Thermal Camera - Thermographic Resolution Imager DFOV (display field of view 61°) (40mm) 1280x1024 Resolution**

**FPV Camera - First Person View - 1920x1080 Full HD - Starlite Camera - Daylight, Lowlight to Automatic Night Vision**

**All Drone Cameras are Digitally Integrated into the Pilot Smart Remote Controller**

**03 Enterprise Video Transmission - Wi-Fi - Bluetooth - Protocols - IP55 Ingress Rating**

**Unobstructed Maximum Distance - Free of Interference - 15km (9 miles)**

**FCC - Federal Communications Commission - Compliant**

### **Obstacle Detection & Collision Avoidance Sensing Systems**

**Laser Module - Range Finder - Distance Measuring Range 3-1200m (10-3940 ft.) .5-12m (1.5-40 ft. vertical surface)**

**Vision - Obstacle Detection & Collision Avoidance Sensing Systems<sup>[1] [2]</sup>**

**Infrared (reflection) Obstacle Sensing Systems are also Integrated.**

**Aircraft Navigation Lights - Auxiliary Observation Lighting System**

**Multiple Vision Sensing Technologies are being used to detect and avoid obstacles either on their own or combined.**

**Stereo, Monocular, Ultrasonic (Sonar)**

**Time of Flight ToF (pulse or continuous wave light source)**

**and Lidar (Light Detection and Ranging) sensors<sup>[3]</sup>**

**Forward - Upward - Downward - Sideward - Backward Directions - Continuous Measurements**

**Sensor Fusion: Many of the DJI drones combine various sensors into their collision avoidance systems**

**On the DJI drones, this technology is known as ActiveTrack**

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<sup>[1]</sup> [12 Top Collision Avoidance Drones And Obstacle Detection Explained - DroneZon](#)

Source Information

<sup>[2]</sup> [Vision based Obstacle Avoidance System for Autonomous Aerial Systems – IJERT](#)

International Journal of Engineering Research & Technology (Instrumentation Department)

Source Information

<sup>[3]</sup> Drone Manufacturers are Integrating (Fusing) these various sensors together to create the obstacle detection and collision avoidance systems. (Proprietary Information)



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### **Camera Parameters**

**Tap & Go Waypoints - Drone Aircraft Take Off and Landing - Return To Home Features**  
**Depending on the needs for each Mission Flight - Mission Actions**

**Initial Flight Zone "Fly-Around" for Zone Settings**

**Virtual Fence Settings - "No Fly Zone Areas"**

**The Virtual Fence is Completely Customizable**

**It can be Created Pre Flight or during the "Fly-Around" for Zone Settings**  
**To Mark the Zone Boundaries**

**Line of Sight - Drone Travel Flight Zones**

**Initial Hover Waypoints**

**Aircraft Braking - Stopping - Hovering Features**

**Speed and Altitude Settings when Flying within the Virtual Fence**

**POI Points of Interest - Observation Target Captures**

**Aircraft Rotation - Gimbal Pitch - Start/Stop Recording**

**Photo Image Capture - Hover Locations**

**Take Off**

**Aircraft Flight Missions**

**Return To Home**

**Extraordinary - Remarkable - Drone Capabilities**

**Ability to create 2D Maps, 8K Photo Images & Videos in 4K Equivalent and Higher**

### **Virtual Fence Illustrations**

