OSPREY

SKYFISH

AMERICAN MADE · BLUE UAS · green uas · NDAA COMPLIANT

Survey Grade Drone for Infrastructure Inspection

- **Best-in-class sensor: Sony Alpha ILX-LR1 and lenses, integrated with drone and ground control station**
- **Long range radio (3 miles, depending on the environment)**
- **15 lb all up weight, compact, portable**
- **Collision avoidance available 2027**
- **Automated in-flight precision geotagging**
- **Location, time, and date scored into every frame for synchronous data**
- **RTK, sub 1-3 cm accuracy**
- **Support for photogrammetry and infrastructure inspection missions**
- **Made in USA, NDAA compliant**

Lightweight quadcopter for superior inspection

The Osprey drone is purpose built to inspect, measure, map, and model critical infrastructure. Get powerful and timely information from a drone that is small, smart, and ready to scale.

Better photos make better models

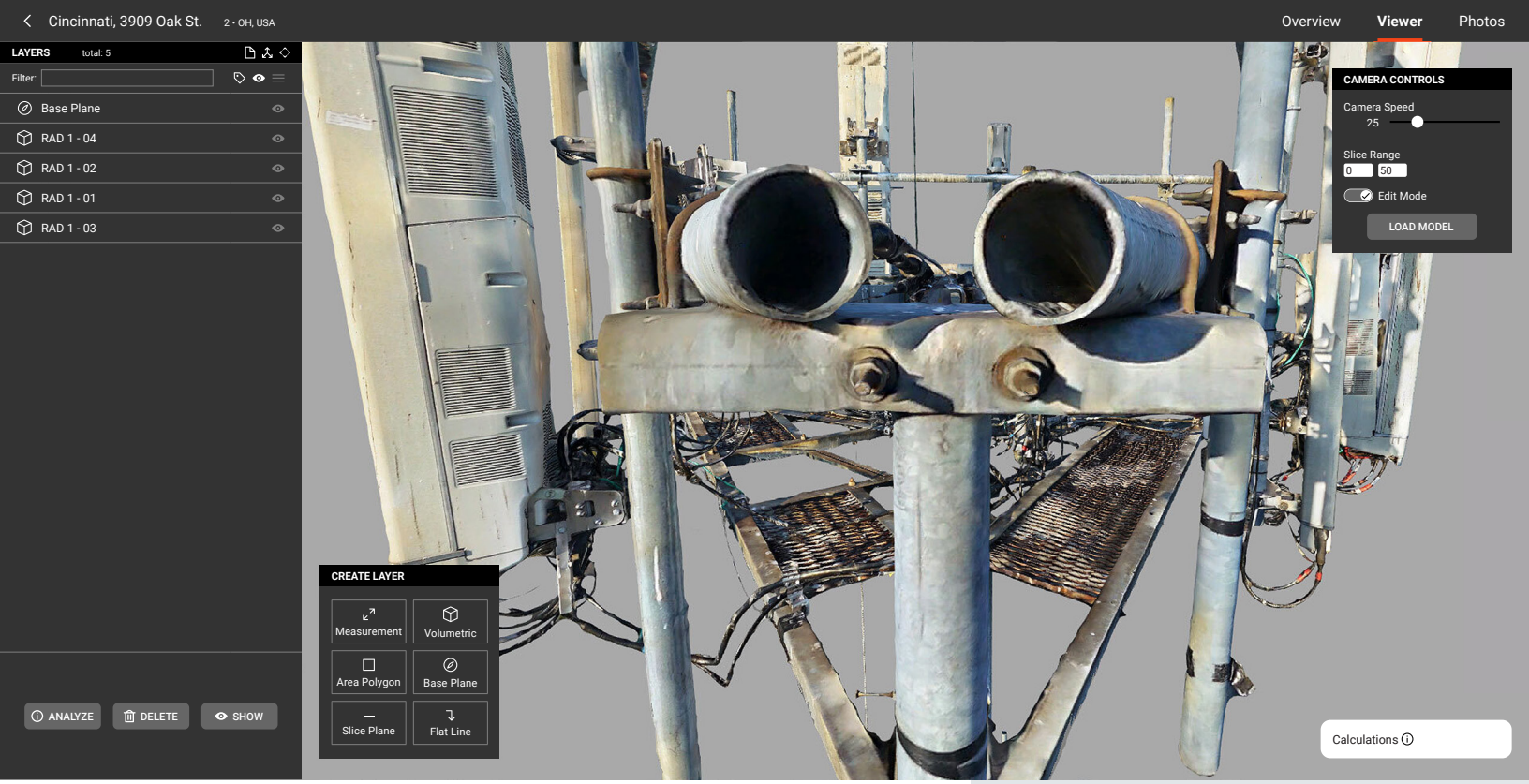
The Osprey is specifically designed to support the SONY ILX-LR1 61-MP camera offering extraordinary sensitivity, resolution, and dynamic range. It has a 61-MP effective megapixel [1] full-frame image sensor, interchangeable E-mount precision lenses, full remote operation and a 35mm full-frame back-illuminated Exmor R™ CMOS image sensor with approximately 61 million effective [1] pixels.

Photogrammetry and digital twins

Using sophisticated algorithms, Skyfish extracts the exact, minute, detailed features from thousands of photos, correlates and triangulates these features, then stitches the photos seamlessly into high fidelity 3D reality models. The result is an exact life-like replication, or “digital twin” of the target infrastructure. Skyfish offers a fully integrated online portal (Skyportal™) for customers to view their digital twins, measure the thickness of steel, measure a cotter pin in a bolt, or the length of a cable to sub-centimeter accuracy inside the model.

Sony ILX-LR1 High-resolution camera

- Interchangeable e-mount precision lenses
- 35mm full-frame (35.7mm x 23.8mm) back illuminated Exmor R™ CMOS sensor
- Natural gradations and realistic colors
- Wide ISO range of 100-32,000



Flies longer

Complex missions can be accomplished with fewer battery changes in the field. Osprey can be configured to fly for up to 30 minutes (45 minutes expected in early 2027), depending on the battery selected. The radio range is 3 miles.

Best-in-class location accuracy

The Skyfish platform has amazing location accuracy with an automated geotagging process that is frame synchronous. We inject highly accurate data into every still frame on the Sony LR1. The Osprey also uses an onboard RTK GPS solution with a stand-alone RTK Base Station (optional). The base-station is survey grade, and can act as a relay to increase the range as required.

Ground control station

Skyfish has customized QGroundControl for flight navigation and integrated it with our proprietary ground control station. The Talon remote controller runs on the same NVIDIA processor as the Skyfish Osprey drone, ensuring seamless interoperability, fewer parts, and simplified maintenance. Our custom-designed PCB removes tablet limitations, maximizes processing power, and provides the flexibility to meet specific customer requirements.

Easy portability

At 15 lb all up weight, Osprey is compact and is ready for field deployment. Osprey transports in a small case (sourced in the USA) for easy portability.

Made in the USA and NDAA compliant

Based in Missoula, MT, Skyfish designs drones, battery systems, airborne guidance, and ground control stations, which provide real-time video and telemetry feeds from the aircraft – all in house, for the past 12 years. Skyfish is fully made in the USA and is NDAA compliant.

Skyportal 3D reality models

Crystal clear and extremely accurate “digital twins” that are measurable within 1/32 of an inch.

Osprey Remote Controller Supports QGroundControl

- Daylight and night readable
- Comfortable to hold, easy to use
- 4 joysticks (2 navigation, 2 sensor control)
- Support for QGroundControl: Intuitive and powerful ground control station for the MAVLink protocol

Technical Specifications

Aircraft

Dimensions (unfolded)	30" L x 30" W x 12" H
Dimensions (folded)	15" L x 15" W x 12" H
Ground clearance	8.5" for payload
Empty weight	~9 lb (no battery, no gimbal/camera)
All up weight	~15 lb
Max. payload	~3.5 lb
Max. air speed	50 mph
Max. ascent/descent speed	Customizable up to 16 ft/s
Max. pitch angle	Customizable to 45°
GPS	RTK capable
Operation temperature	0°F to 115°F (aircraft without payload) 32°F to 104°F (aircraft with payload)
Max service ceiling	10,000 ft MSL
Flight modes	4 modes (Autonomous, Loiter, AltHold, RTL)
Flight time	Up to 30 minutes depending on battery selected (45 minutes expected in 2027)
Propellers (material)	Carbon composite
Propellers (dimensions)	20", 2 CW, 2 CCW
Failsafe behaviors	Comprehensive failsafes for low battery, RC loss, GCS failures, Remote ID, and more

Power

Number of motors	4
Max. instant peak power	6 KW (1.5 KW /motor)
Normal power consumption	1 KW (250 W /motor)
Equivalent KV	330 RPM/V

Battery

Number of battery packs	1
Capacity	24,000 mAh (33,000 mAh in development)
Peak voltage	25 V
Nominal voltage	22.2 V
Life cycles	500+
Connectors	Governed slow start loading

Photogrammetry Camera

Read all specifications

Sensor (make, model)	SONY, ILX-LR1
Weight	243 g / 8.6 oz (camera body only)
Dimensions	4" x 3" x 1 $^{11}/_{16}$"
Lens mount	E-mount
Number of pixels (effective) [1]	Still images ~61 MP max. Movies ~50.8 MP max.
Color temperature range	2500 K – 9900 K

Gimbal

Gimbal (make, model)	Gremsy, Pixy LR
Weight	495 g / 1 lb
Max. controlled rotation speed	Pan axis: 180°/s Tilt axis: 180°/s Roll axis: 180°/s
Controlled rotation range	Pan axis control: ±320° Tilt axis control: +40° ~ -120° Roll axis control: ± 40°

Remote Controller [2]

FORM FACTOR	
Dimensions	335mm x 180mm x 100mm (13.2” x 7.1” x 4”)
Material / Finish	HP Nylon 12 / Black Finish
Weight	1.1 kg (2.5 lb)
Thickness	81mm (3.2”) (without joysticks)
HUMAN INTERFACES	
Joysticks	4 2-Axis joysticks (adds 20mm thickness)
Switches	6 switches with customizable functions (camera shutter trigger, setting flight modes, RTL, etc.)
SCREEN	
Resolution	1920 × 1200 px
Dimensions	8” screen (131.6 x 202.0 mm)
Luminance	500 cd/m2
BATTERY	
Weight	0.23 kg (0.5 lb)
Dimensions	85mm x 77mm x 23mm (3.35” × 3.03” × 0.91”)
Battery Life	Onboard (USB-PD), optional external charger
Charge	3 hrs

[1] Number of effective pixels varies depending on attached lenses and camera settings

[2] Additional technical specifications for the Skyfish Talon controller can be found on our website