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ICAROS
Remote Sensing Solutions

AUTONOMOUS DRONE-IN-A-BOX BASED INSPECTION, MONITORING & SURVEILLANCE SOLUTIONS

Icaros is a US remote sensing and geospatial solution provider founded in 2004 and headquartered in Manassas, Virginia. Our technology and know-how enable our clients and partners to utilize remote sensing from both manned aircraft and from drones to solve challenging problems related to transportation, construction, infrastructure, utilities, forestry, inspection, and corridor monitoring. We have expertise in many geospatial disciplines, and where appropriate, align ourselves with strategic partners to ensure that we meet the needs of our customers.

Icaros is an exclusive distributor for Easy Aerial, an American aerospace company, and we are experts in applying advanced Drone-in-a-Box and Beyond Visual Line of Sight (BVLOS) solutions to a wide variety of use cases and deployment requirements. These very high-quality autonomous drones are already in widespread use for security and site inspections/monitoring within both military and industrial applications.

Our primary product is a US made drone-in-a-box system that can be deployed remotely from anywhere in the world. No drone operator or prior experience is needed to execute a pre-planned or on-demand mission.

Our Smart Aerial Monitoring Systems (SAMS) and (SAMS-T) drone-in-a-box systems are produced to the highest standards and are deployed in critical locations on four continents. Icaros and Easy Aerial's passion for innovation in security drives our design efforts and guarantees that these systems are simple and easy to use.

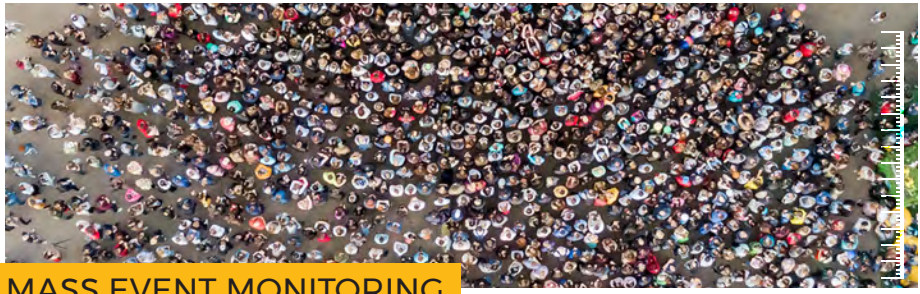
APPLICATIONS

PERIMETER SECURITY

Military Installations, Industrial Facilities, Border Protection

Easy Aerial provides a fully automated, smart perimeter security solution to easily identify and respond to security threats. Our Smart Aerial Monitoring System (SAMS) deploys autonomously via a triggered sensor or as a pre-programmed routine mission Transmitting HD and thermal feeds in real-time, SAMS provides security personnel with an immediate eye in the sky for better, smarter, and faster decision making.

- Fully Autonomous Operation
- Day / Night Operation
- Durable & Weather Resistant
- Auto Target Acquisition & Tracking



MASS EVENT MONITORING

Sports and Entertainment, Crowd Control

Easy Aerial's systems provide persistent aerial surveillance for crowd control, event monitoring, and situational awareness. Our on-demand, quickly deployable eye in the sky provides the invaluable intelligence you need to handle any scenario in real-time. Our Smart Aerial Monitoring System - Tethered (SAMS-T) is a portable tethered drone-in-a-box solution offering unlimited flight time and can be deployed from a stationary location, ground vehicle or watercraft.

- Fully Autonomous Operation
- Tactical & Portable
- Continuous Flight
- Various Payload Capabilities

EMERGENCY RESPONSE

First Responder, Firefighters, Police, Disaster Relief

Whether responding to a fire, conducting a search and rescue mission, providing crowd control, or investigating a crime scene, public safety personnel and first responders demand an in-the-field partner they can count on. Easy Aerial's completely mobile drone-in-a-box solutions provide instant results when and where they are needed. Completely mobile, simply arrive, deploy and monitor – situational awareness has never been so easy.

- < 30 Sec. Response
- Tactical & Portable
- Fully Autonomous Operation
- > 12 Hours Flight Time

COMMERIAL & INDUSTRIAL INSPECTION

Agriculture, Manufacturing Complexes, Industrial Installations, Critical Infrastructure

Easy Aerial offers customized solutions for a range of commercial and industrial applications. Whether monitoring agriculture, assets or infrastructure, we provide systems optimized for your operational requirements. Choose from tethered, untethered free-flight, or hybrid airframe configurations with multiple sensor payload options for unparalleled security, mapping, and inspection missions.

- Preprogrammed Scheduled Inspections
- Easy To Use Operation
- Extended Flight Time & Coverage
- Hd / Thermal / Multi-spectral

SAMS

Smart Aerial Monitoring System

Advanced, affordable, and portable, our autonomous free-flight aerial monitoring system can be configured for a variety of operational requirements.

Not only can the drone automatically deploy from an Easy Guard ground station upon a security trigger such as a vibration sensor, fire alarm, or distress call, it also has the ability to self-deploy and recharge for each scheduled mission. With SAMS, each drone can take off from and land in different Easy Guard ground stations, allowing for long-range inspections and monitoring missions while recharging at multiple locations.

SAMS consists of 3 main components:

- Easy Guard (EG)
- Falcon or Osprey Drone
- Easy Remote Monitoring Software (ERMS)

SAMS-T

Smart Aerial Monitoring System - Tethered

The tethered version of SAMS features unlimited flight time and unparalleled data security. The entire operation, from takeoff to landing, is completely autonomous and can be performed remotely without the need for on-site intervention. The system features a 320-foot data-over-power (DOP) enhanced tether for resilient, unjammable data security. This persistent solution can supportcontinuous flight even in extreme weather conditions, and it offers precise hoveringover the ground station even in GPS-denied environments.

SAMS-T consists of 3 main components:

- Easy Guard Tether (EG-T)
- Alpine Swift, Albatross, or Raptor Drone
- Easy Remote Monitoring Software (ERMS)

SAMS-T MINI

Smart Aerial Monitoring System - Tethered

SAMS-T-Mini is an ultra-portable version of the SAMS-T that utilizes a miniature version of the EG-T. The unit is housed within a Pelican 1440 case, and is rucksack portable with a weight of 45 lbs, resulting in rapid adaptability and mobility. The SAMS-T-Mini features a 160 or 320 ft cyber-secure smart tether cable with Data-Over-Power (DOP) technology. Aside from the absence of an enclosed EG, the SAMS-T Mini includes all of the features and drones available for the SAMS-T.

SAMS-T consists of 3 main components:

- Easy Guard Tether (EG-T)
- Alpine Swift, Albatross, or Raptor Drone
- Easy Remote Monitoring Software (ERMS)

EG

Easy Guard

Easy Guard ground station is a smart, independent aircraft hangar for takeoff, landing and charging. It features an automated roof opening and closing system and is made from military-grade materials, rendering it mobile, rugged and weather resilient. Easy Guard's relatively small size and weight allow it to be rapidly mobilized and deployed from stationary and mobile launch sites such as a standard pickup truck or other vehicle configuration. Easy Guard is equipped with numerous sensors and four cameras for situational awareness of the deployment site which aides in its ability to receive a landing UAS while both systems are traveling at up to 25 mph.

5 Sec From Trigger To Airborne | Tactical & Portable | Fully Autonomous Landing & Charging | Rugged & Weather Resistant

Dimensions	1.17m x 1.17m x 0.62m (46" x 46" x 24.5")
Weight	90 Kg (198lb)
Charging	35-40 minutes for full drone battery
Cameras	Internal - Drone inspection External - Motion activated

EG-T

Easy Guard Tether

Easy Guard Tethered ground station has the same features as the EG, with the addition of a 160 to 330 ft. data-over-power (DOP) smart tether-line that supplies constant power and secure two-way communication to the drone throughout the flight. This feature enables unlimited flight time while also transmitting HD video and telemetry, even in extreme weather conditions, and offers precise hovering over the ground station without the need for GPS guidance. As with the EG, EG-T is lightweight and portable and can be deployed from stationary or mobile platforms. The activation and operation are simple and can be performed on-site or from a remote command center.

Both EG and EG-T are MIL-STD-810G standard certified.

Unlimited flight time & < 30 sec deployment | Tactical & Portable | Fully Autonomous landing & takeoff | Rugged & Weather Resistant

Dimensions	1.17m x 1.17m x 0.62m (46" x 46" x 24.5")
Weight	105 Kg (231.5lb)
Charging	Constant Power Supply
Cameras	Internal - Drone inspection External - Motion activated

POWER GUARD

Power Guard is designed to act as a base for EG/EG-T in the bed of a pickup truck or other installation and provide electric power. The Power Guard enables 20 full charges of the drone battery or 12 hours of continuous tethered flight. Power Guard provides auxiliary electric power to the Easy Guard for an extended period of time without the need for an electric power source or fuel-based generator.

Tactical & Portable | Rugged & Weather Resistant

Dimensions	0.96m x 0.96m x 0.3m (38" x 38" x 12")
Weight	226.7 Kg (500lb)
Charging	100V-240V
Total Power	7,200 Wh

ERMS

Easy Remote Monitoring Software

ERMS is a proprietary software system that enables command and control of a single or multiple remotely operated drones, while transmitting high-definition optical and thermal video in real-time. ERMS can be securely accessed anywhere and at any time, enabling users to conduct missions from a command center desktop or in the field with a smartphone, tablet, or proprietary controller.

THE SYSTEM INCLUDES:

- Secure real-time HD and thermal video feeds
- Intuitive user interface for desktop and mobile
- Automatic mission planning and real-time manual mission override capabilities
- Smart geo-fencing
- Automatic, comprehensive data and telemetry logging
- Integrates with any 3rd party alarm software
- Easily integrate output feed into existing monitoring systems

FALCON & ALPINE SWIFT

Falcon is a tactical, military-grade, all-weather capable quadcopter with the ability to fly over 65 MPH and carry a wide range of modular optical and sensor payloads, up to 4.4lb.

The Alpine Swift is a tethered version of the Falcon that can carry a 5.5lb payload with unlimited flight time, even in the harshest conditions.

All EA drones are field-proven and built with qualified traceable components. Only American-made parts are used in critical systems, such as communications modules and flight controllers. All drones are designed, built, and tested at Easy Aerial's Brooklyn, NY. headquarters.

FALCON

Weight	3.5 kg (7.7 lb) w/o payload
Payload	2 kg (4.4l b)
Flight Time	45 minutes
Speed	105 km/h (65 mph)
Distance	13 km (8.07 miles)
Endurance	All Weather (Rain, Snow, Fog)

ALPINE SWIFT

Weight	2.6 kg (5.7 lb) w/o payload
Payload	2.5 kg (5.5 lb)
Flight Time	Unlimited
Endurance	All Weather (Rain, Snow, Fog)

Includes an internal battery for emergencies.
Communication over the power line (DOP).

OSPREY & ALABTROSS

Osprey Hexacopter is a durable carbon composite drone with motor redundancy for increased reliability. Its slightly overlapping propellers create a relatively compact form factor. The hex configuration makes the airframe ideal for carrying a variety of large payloads or cargo, up to 6.6lb, over longer distances, in adverse weather conditions.

Albatross is a tethered version of the Osprey and the most versatile and secure system in its class. Featuring unlimited flight time, an unbreachable data connection, and a large 8.5lb payload capacity, Albatross is ideal for extremely long overwatch or surveillance flights carrying multiple payloads in harsh weather conditions. Equipped with three hardpoints, the airframe supports a wide range of payloads including gimballed cameras, floodlights, communications relays, loudspeakers, lidar, radar, and communications jamming systems.

OSPREY

Weight	5.5 kg (12.12 lb) w/o payload
Payload	3.0 kg (6.6 lb)
Flight Time	55 minutes
Speed	100 km/h (62.13 mph)
Distance	20 km (12.4 miles)
Endurance	All Weather (Rain, Snow, Fog)

Encrypted radio communication (LTE for backup possible).

ALBATROSS

Weight	3.0 kg (6.6 lb) w/o payload
Payload	3.8 kg (8.5 lb)
Flight Time	Unlimited
Endurance	All Weather (Rain, Snow, Fog)

Includes an internal battery for emergencies.
Communication over the power line (DOP).

RAPTOR

Raptor is a first-of-its-kind hybrid solution with a versatile payload capacity that combines the unlimited flight capability of a tether with the advanced ability of up to 45 minutes of untethered free-flight. Simply untether and go.

Raptor predominantly operates in tethered mode for prolonged situational awareness missions. Following a command from an operator, a triggered alarm, or if the onboard sensors identify a pre-selected object, the tether is released for a free-flight autonomous or directed ISR mission before returning for a precision landing in the ground station.

RAPTOR

Weight	5.5 kg (12.12 lb) w/o payload
Payload	3.0 kg (6.6 lb)
Tethered	Flight Unlimited
Free Flight	45 Minutes
Speed	20 km (12.4 miles)
Distance	20 km (12.4 miles)
Endurance	All Weather (Rain, Snow, Fog)

Encrypted radio communication (LTE for backup possible)

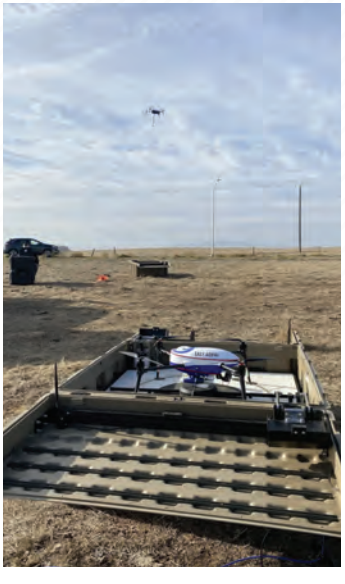
CUSTOMIZED SOLUTIONS FOR YOU

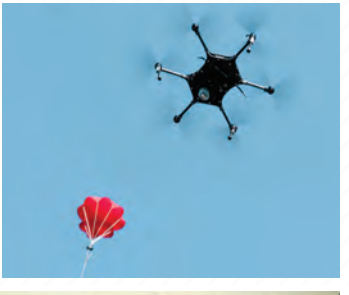
Our proprietary systems are fully customizable and modular. This enables us to use our expertise and knowledge to tailor the right package for you!

In addition, our versatile software can integrate with any security and C2 systems to enable easy and intuitive operation.

We can customize our solution to almost anything, from multiple payloads and telemetry to additional accessories such as flashlights or speakers.

Have something in mind? We will make it happen!





In a world of rapidly changing environments, Icaros leads the way towards finding new and innovative solutions to challenges our customers face. We provide turnkey solutions using Easy Aerials' drone-in-a-box technology integrated with a wide variety of sensors, mission control systems, obstacle sense and avoid technology, image-related artificial intelligence, mapping software and services, and geographic information systems (GIS). Our mission is to provide efficient high-quality, affordable robotic systems that make aerial geospatial information useful and accessible to a wide array of clients, at price points that enable innovative new applications.

ICAROS

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