



Proven Technology

We began in 2014 with the development of our first PD-1 UAS. Faced with a lack of high-quality, accessible components in the market, we set up our own production.

Over time, we started receiving numerous requests for these components separately from UAS, giving rise to the UAS Components project.



ukrspecsystems.com

Learn more about our systems



uascomponents.com

Learn more about components for UAS



BY UKRSPECSYSTEMS

Professional Components
for Unmanned Aerial Systems

Components

2024



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We offer a wide range of EO/IR/LRF gyro-stabilized payloads for fixed-wing and multi-rotor platforms operating at high altitudes. These payloads are ideal for long-range surveillance, search and rescue missions, and security applications.

USG-405 EO/IR/LRF



EO sensor:

Full HD, 1920x1080
60 fps
30x optical zoom
4x digital zoom
CMOS Matrix

IR sensor:

640x512
30 fps
5x optical zoom
LWIR-motorized focus
Uncooled microbolometer



Features:

Laser rangefinder up to 5 km	Coordinate determination
Digital stabilization	Onboard recording
Target tracking	Plug and Play



Size: 190x270 mm (7.5x10.6 in)
Weight: 3,35 kg (7.83 lb)

EO sensor:

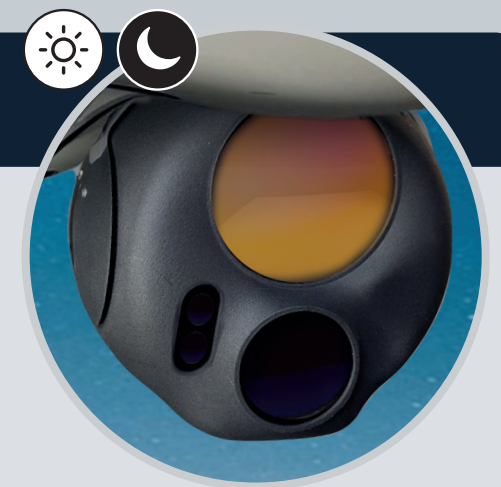
35,5 km Detection	15 km Observation
12 km Recognition	4 km Identification

IR sensor:

6 km Detection	780 km Identification
2 km Recognition	

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-232 EO/IR/LRF



EO sensor:

Full HD, 1280x720
30 fps
30x optical zoom
4x digital zoom
CMOS Matrix

IR sensor:

640x512
30 fps
5x optical zoom
LWIR-motorized focus
Uncooled microbolometer



Features:

Laser rangefinder up to 1,8 km	Coordinate determination
Digital stabilization	Onboard recording
Target tracking	Plug and Play



Size: 138x185 mm (5.43x7.28 in)
Weight: 1,1 kg (2.65 lb)

EO sensor:

35,5 km Detection	15 km Observation
12 km Recognition	4 km Identification

IR sensor:

14 km Detection	1,5 km Identification
4,5 km Recognition	

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-331 EO



Sensor:

Full HD, 1280x720
30 fps
30x optical zoom
4x digital zoom
3-axis gimbal



Features:

Digital stabilization
Coordinate determination
Target tracking
Onboard recording
Plug and Play



Size: 148x162 mm (5.82x6.38 in)
Weight: 800 g (1.7 lb)

35,5 km
Detection

15 km
Observation

12 km
Recognition

4 km
Identification

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-231 EO



Sensor: 60 fps
Full HD, 1920x1080
CMOS Matrix 30x optical zoom
3x digital zoom



Features: Plug and Play
Digital stabilization Coordinate determination
Target tracking Anti-fog
Onboard recording



Size: 109x147 mm (4.3x5.8 in)
Weight: 600 g (1.32 lb)



35,5 km Detection
15 km Observation
12 km Recognition
4 km Identification

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-261 EO



Sensor: 60 fps
Full HD, 1920x1080
CMOS Matrix 10x optical zoom
3x digital zoom



Features: Plug and Play
Digital stabilization Coordinate determination
Target tracking Anti-fog
Onboard recording



Size: 90x119 mm (3.54x4.7 in)
Weight: 300 g (0.66 lb)



5 km Detection
3 km Observation
2 km Recognition
1 km Identification

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-231T IR



Sensor: 30 fps
640x512
Thermal imaging module 4x digital zoom
360° rotation



Features: Plug and Play
Digital stabilization Coordinate determination
Target tracking
Onboard recording



Size: 109x144 mm (4.3x5.7 in)
Weight: 690 g (1.52 lb)



14 km Detection
4,5 km Recognition
1,5 km Identification

*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

USG-261T IR



Sensor: 30 fps
640x512
Thermal imaging module 4x digital zoom
360° rotation



Features: Plug and Play
Digital stabilization Coordinate determination
Target tracking
Onboard recording



Size: 90x128 mm (3.54x5.04 in)
Weight: 390 g (0.86 lb)



4 km Detection
3 km Recognition
1 km Identification

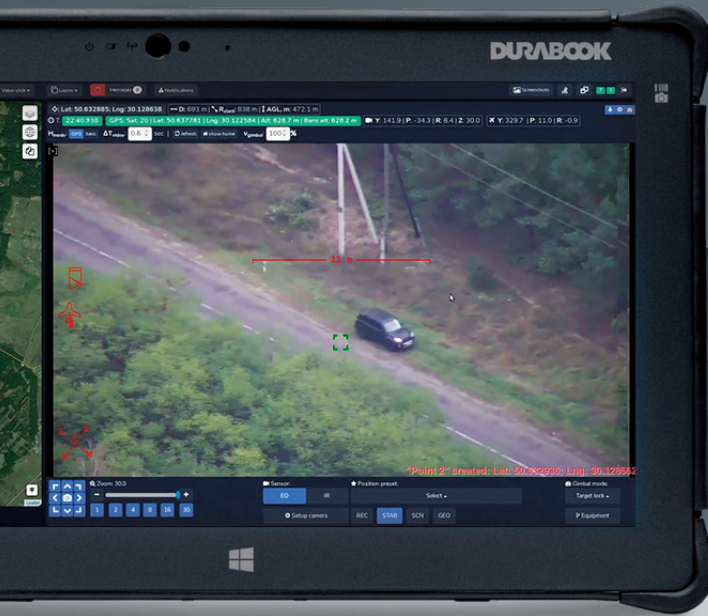
*The maximum actual range of vehicle detection, recognition and identification. Practical range is limited by atmospheric conditions.

Aerowatcher is a user-friendly yet powerful software package designed for EO/IR payload operators. It offers a complete suite of tools to efficiently collect, analyze, and save visual data, as well as generate post-mission reports.

Simplify EO/IR payload operations, saving time and effort

SEE HOW IT WORKS

Video footage from USG-212 EO/IR gimbal installed on PD-2 drone.



Flight Simulator is specialized training software designed to enhance pilots' expertise while reducing the risk of equipment damage to zero. This UAV digital twin solution helps operators master various types of aircraft in different environments.

Hone your flying skills to perfection!

SEE HOW IT WORKS

Scan to see the Flight Simulator by Ukrspesystems in action.



Command Hub

Gain full control over your EO/IR payload with live video feeds and precise adjustments of the gyro-stabilized platform. Customize sensor settings like zoom, sensitivity, and contrast, and keep track of real-time data including object coordinates, distance, and gimbal angles.



Interactive Map

Monitor your drone's current location and the area covered by the gimbal on a live map, complete with detected objects. The moving map provides situational awareness, helping you make informed decisions and plan your next steps.



Objects Tracking

Easily capture and track points of interest with a single click on the video. The system instantly saves the object and displays it on the map along with a photo, ensuring no critical detail is missed.



Augmented Reality

Enhance your view with real-time overlays of street names, objects, and other relevant information directly on the video, providing crucial context and situational awareness.



Instant Reporting

Quickly generate standard PDF reports with just a few clicks, summarizing mission data, object details, and sensor information to streamline your workflow and share insights effortlessly.



Cut the Costs

The Flight Simulator eliminates fuel consumption and prevents wear and tear on UAVs during training sessions, significantly reducing overall expenses and saving on maintenance and operational costs.



Skills Mastery

The simulator supports training for the entire range of UAV models and gimbals. Pilots can practice with the exact equipment they will use in real operations, including emergency scenarios.



Digital Twin Tech

Train in simulated environments that mirror actual mission locations. The simulator replicates real-world geography, landmarks, and various flight conditions, including weather and time of day.



Compact and Insightful

The simulator is easy to transport and deploy, thanks to its carry-on-ready design. It provides performance analytics, helping pilots track progress and identify areas for improvement wherever they are.

Training Scenarios Include

- Flight Under Signal Suppression
- Flight in the Area of Anti-Aircraft Missile Systems
- Object Search and Tracking
- GPS Spoofing
- Weak Communication Levels
- Adverse Weather Conditions
- Loss of Video Stream
- Pitot Tube Icing
- Flight Without GPS
- Engine Shutdown

Our long-range antenna-tracker for UAV maximizes radio communication range between drone and the ground control station and therefore allows using of the maximum potential of the data link.

AT-1

60+ km (37+ mi)
using quadropode

130+ km (81+ mi)
on 5 m mast



AT-2

150+ km (93+ mi)
using quadropode

220+ km (137+ mi)
on 5 m mast



Each antenna can be installed on an electrically powered, telescopic **5-meter mast** to maximize connection range with the drone during long-range missions.

- **Double redundancy**
Two integrated data links to ensure maximum reliability during the mission.
- **Main datalink (C2 link + video)**
Up to 150 km, depending on the configuration.
- **MESH technology support**
You can use a compatible UAV to extend the communication range.
- **Multiple configurations available**
- **AES-256 encryption**
Ensures a safe and secure connection with the UAV.
- **Backup telemetry datalink**
Up to 200 km, depending on the configuration.
- **Built-in video camera**
To visually control the drone during takeoff and landing.
- **Backup battery**
to an additional 2 hours of power.

We offer enhanced communication solutions through Silvus Technologies, our radiotech partner. Built for reliability and high performance, these rugged systems keep your UAVs and operations connected and in control in any environment.

Silvus StreamCaster 4200 Enhanced Plus 2x2 MIMO Radio

Delivering best-in-class performance and efficiency in a miniature package, it's ideal for portable and embedded applications where size, weight, power, or cost are key.

Up to 10 Watts of output power (20W effective performance thanks to TX Eigen Beamforming)

Available in four form factors:

- Rugged "brick" (externally powered)
- Rugged handheld (with twist-lock battery connector)
- Non-rugged OEM module (for embedding in custom products and subsystems)
- Drop-in module (plug-and-play integration into platform subsystems)



Silvus StreamCaster 4400 Enhanced 4x4 MIMO Radio

The SC4400E delivers 4x4 MIMO in a ruggedized package, ideal for fixed infrastructure, vehicular, long-range, and airborne applications where maximum performance is desired.

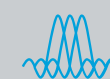
Up to 20 Watts of output power (80W effective performance thanks to TX Eigen Beamforming)

Available in three form factors:

- Rugged with straight RF connectors (designed for horizontal mounting)
- Rugged with right-angle RF connectors (designed for vertical mounting)
- Non-rugged OEM module (for embedding in custom products and subsystems)



ADVANCED RADIO TECHNOLOGIES



MN-MIMO: Mobile Networked – Multiple Input Multiple Output

Utilizes multiple antennas at the transmitter and receiver, enhancing communication with redundancy or increased data rates. For UAVs, this means more reliable, high-capacity links.



COFDM: Coded Orthogonal Frequency Division Multiplexing

Divides broadband channels into narrow subchannels, improving signal robustness and performance in environments with multipath interference.



MANET: Mobile Ad-Hoc Networking

Allows voice, data, and video streaming through a network of mobile devices that communicate directly or relay signals, eliminating the need for fixed infrastructure.

Our launching systems are engineered to support a wide range of UAVs across diverse conditions, offering reliable performance and adaptability for various mission needs.

SCL-1

MAX. AIRCRAFT WEIGHT **14 KG (30,8 LB)**

Bungee Launcher

Max. launch speed: 18 m/s (59 ft/s)

Max. acceleration: 20 G

Launch angle: 13°

Deployment: 15 min

Size: 4,53x1,44x1,25 m (14.9x4.7x4.1 ft)

Weight: 80±4 kg (177±9 lb)



SCL-2

MAX. AIRCRAFT WEIGHT **15 KG (33 LB)**

Bungee Launcher

Max. launch speed: 18 m/s (59 ft/s)

Max. acceleration: 25 G

Launch angle: 15°

Deployment: 15 min

Size: 3,17x1,2x1,07 m (10.4x4x2.3 ft)

Weight: 70±4 kg (155±9 lb)



GLS-1A

MAX. AIRCRAFT WEIGHT **40 KG (88 LB)**

Pneumatic Launcher

Max. launch speed: Up to 20 m/s (65 ft/s)

Max. pumping pressure: 10 bar

Launch angle: 10-15°

Deployment: 15 min

Size: 5,4x2,3x1,6 m (17.7x7.6x5.3 ft)

Weight: 60±4 kg (133±9 lb)



Universal Rechargeable Battery (URB) is designed for use in uninterruptible power supply, reserve lighting, systems of video surveillance, telecom equipment, and more.

URB-220

21 000 mAh
100 charge cycles
Li-Ion battery



Size: 75x95x136 mm (2.95x3.54x5.35 in)

Weight: 1,8 kg (4 lb)

URB-803

63 000 mAh
100 charge cycles
Li-Ion battery



Size: 75x134x267 mm (2.95x5.27x10.5 in)

Weight: 5,5 kg (12.2 lb)

Smart UAV Battery

92 800 mAh
100 charge cycles
Li-Ion-Sil battery



Optimized
Plug & Play Installation

- Battery status monitoring
- Overvoltage protection
- Remote control and diagnostics
- Fast charging

Size: 110x115x378 mm (4.3x4.5x14.8 in)

Weight: 5,5 kg (12.2 lb)

Pitot Tube

Designed to measure static and dynamic air pressures.



- Heated Pitot Tube
- Protective cap
- UAV integration connector
- Protective plug for the integration connector
- Spare parts kit
- Transport packaging
- Adjustment and use instructions



Max. speed: up to 360 km/h (223 mi/h)

Temperature range: -40 °C to +55 °C

Power source: 16-32 V

Connection: CAN protocol

Size: 190x19x19 mm (7.5x0.75x0.75 in)

Weight: 160 g (0.35 lb)