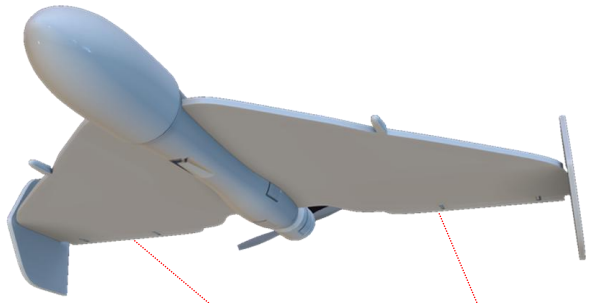


C4i communication

EXPERIENCE THE DIFFERENCE
YOUR SECURITY & SAFETY PRODUCTS

C4I-SKY-INTERCEPTOR

Autonomous Drone Interceptor

Dual Catching Smatching and/or Explosive

AUTONOMOUS DUAL CATCHING SMATCHING AND/OR HIGH-EXPLOSIVE INTERCEPTOR

The drone is a fully autonomous interceptor drone designed to defeat hostile UAVs. From launch to engagement, it executes the complete interception mission using GNSS-independent geospatial navigation, radar vectoring, and EO/IR sensors with AI-based target lock to ensure reliable interception in contested environments.

Drone System Operation

1. **Detection**
   Integrated radar monitors airspace and detects aerial threats
2. **Target Assignment**
   Target selected and engagement authorized via GCS
3. **Launch**
   Vertical launch followed by transition to forward flight
4. **GNSS-Independent Navigation**
   Maintains operation in GNSS-denied environments
5. **Radar Vectoring**
   Transition to full radar guidance once within radar field of view (Radar tracks both target and interceptor and updates pursuit geometry)
6. **Terminal Guidance**
   EO/IR sensors with AI-based target lock and vision tracking
7. **Intercept**
   Proximity sensor initiates high-explosive fragmentation warhead
8. **Engagement Control**
   Operator confirms intercept or wave-off (interceptor recoverable after wave-off)

AUTONOMOUS DUAL CATCHING SMATCHING AND/OR HIGH-EXPLOSIVE INTERCEPTOR

Key Features & Specifications

Datalink & Security

Low-signature, jamming-resilient radio
AES-256 encrypted communication
360 degree electronicaly steered ground antenna

Flight Envelope

Flight distance:	25 km
Radio range: (Cruise)	25 km
Operational altitude:	3,000 m AMSL

Autonomy & Targeting

EO/IR gimballed seeker head
AI-enabled visual target detection & classification
GNSS-independent operational capability

AUTONOMOUS DUAL CATCHING SMATCHING AND/OR HIGH-EXPLOSIVE INTERCEPTOR

Fully Autonomous Interceptor for Class-1 and Class-2 (Shahed)

- Autonomous radar guidance
- Autonomous Visual Intercept with AI Detection and Classification
- GNSS-independent navigation
- Jamming resilient communication
- Equipped with removable High-explosive Warhead
- STANAG compliant ESAD for the warheads firing chain
- Can be used without warhead for trainings

Integrates with ALL Radars and C2 systems. Including

- SAAB G1X, RADA, Robin IRIS, Echodyne, Teledyne
- ATAK, Anduril Lattice, SAAB C2, SkyMap
- and others

HOMELAND BORDER SECURITY

AIRPORTS

OIL & GAS & MINING

PORTS

CONOPS

DETECTION

- Integrates with ground based sensors to detect aerial threats

TARGET ASSIGNMENT

- Target selected and authorised via Command and Control System

INTERCEPTION MISSION

- Automatic vertical takeoff and Initial Guidance based on radar data
- Automatic visual target detection recognition and classification with AI enabled EO/IR gimballed sensors
- Tracks evasive high-maneuvering targets autonomously
- Operator confirmed interception or wave-off
- Automatic warhead engagement based on proximity to target

REUSABLE

- In case of wave-off can be recovered and reused
- Automatic disarm and return
- Automatic landing
- Reusable after battery swap or charging

DESCRIPTION OF THE FUNCTIONALITY AND OPERATING PRINCIPLES OF THE PRODUCT

The quick SKY-INTERCEPTOR system is designed to provide autonomous interception capability against aerial threats, while keeping the operator firmly in control of engagement decisions.

The SKY-INTERCEPTOR integrates with a radar system that continuously monitors the airspace for aerial threats. Detected targets are displayed to the operator through the Ground Control Station (GCS). The operator selects a target from the radar data and issues a command to initiate tracking.

Upon command, the interceptor drone launches vertically and transitions into forward flight. From this point, the drone operates autonomously: it calculates the optimal interception path using onboard navigation, flight control algorithms, and sensor data. The drone approaches and maintains a tail-follow position behind the designated target, minimizing detection and maximizing strike efficiency.

Throughout the engagement, the operator receives a real-time video feed from the interceptor's EO/IR sensor package via and ground-based antenna system. The operator retains full control of the decision to intercept or wave off.

Unlike many expendable systems, SKY-INTERCEPTOR is reusable. It can be recovered and redeployed, allowing cost-effective and sustainable operations.

In contested electromagnetic environments where GNSS is unavailable, the SKY-INTERCEPTOR remains fully operational by relying on radio-transmitted geospatial guidance. The system continues to use this radio-based geospatial guidance until the interceptor enters the field of view of the integrated ground-based radar system, at which point it transitions to full radar guidance. The integrated radar simultaneously tracks both the target and the interceptor, continuously updating their relative positions to ensure accurate pursuit.

This radar-driven guidance enables SKY-INTERCEPTOR to close the distance with the target even without satellitenavigation.

Only in the final approach phase does the interceptor transition to its onboard EO/IR sensors and AI-based detection locking onto the target for precision strike. This dual-layer guidance — radar vectoring followed by vision-based tracking — guarantees reliable interception against hostile aerial systems even under the most challenging electronic warfare conditions.

CORE C-UAS INTERCEPTOR I DATA SHEET

Max Speed	360 km/h
Max Altitude	10 000 ft
Mission Range	25km
Gimbal Configuration	EO + IR sensors for day and night missions
Warhead	800g
Deployed in	less than 2 minutes
Ambient Temperature	All weather, -30C to +40C
Total weight with warhead	7kg

CORE C-UAS INTERCEPTOR I DATA SHEET

Autonomy in GNSS denied environment	
Approach phase (take-off to detection)	Geospatial data over radio
Target detection	AI enabled
Terminal phase	Proprietary computer vision–based tracking algorithm capable of tracking and intercepting evasive targets

Flight Envelope	
Max Flight Speed	360 km/h
Flight Distance at Cruise Speed	25 km
Radio Range	20 km
Operational Altitude	3000m AMSL
Wind Resistance	15 m/s

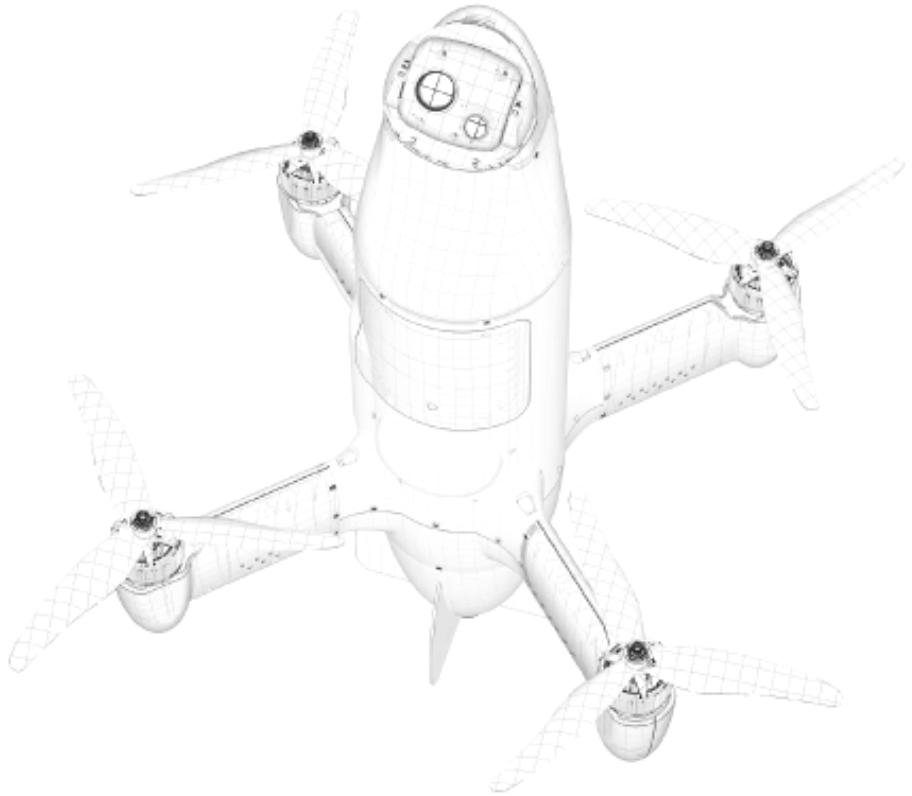
Gimbal Configuration	
EO camera	4K
IR camera	18 mm F1.1 Lens 640x512

Ground Data Terminal (GDT)	
Coverage	360 degrees antenna
Ambient Temperature Range	-40 °C to +40 °C
Mechanical parameters	Antenna weight and size 9,5kg and 352 × 352 × 65 mm

CORE C-UAS INTERCEPTOR I DATA SHEET

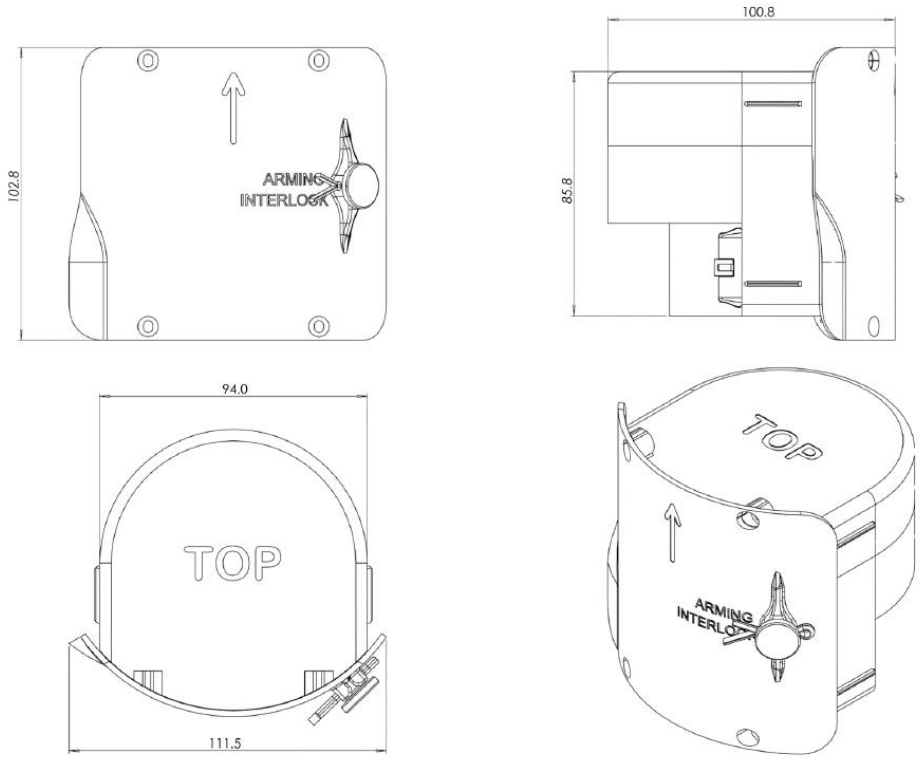
Ground Control Station (GCS)	
Controller	Navigator Tab5 by UXV Technologies
Tablet	Samsung Galaxy Tab Active 5, IP 68, MIL-STD-810H

Datalink Configuration	
Data link technology	Electronically steered phased-array radio
Anti-jamming capability	Low-signature with unmatched jamming resilience
Frequency	C-band 4900 MHz - 5900MHz
Encryption	AES-256
Transmission power RF	1W
Ambient temperature range	-20°C to +49°C



WARHEAD I DATA SHEET

Type of explosive	Comp B
UN number	UN 0034
Classification code	1.1 D
Total Warhead Weight	800g
NEQ (TNT equivalent)	0,2 kg TNT



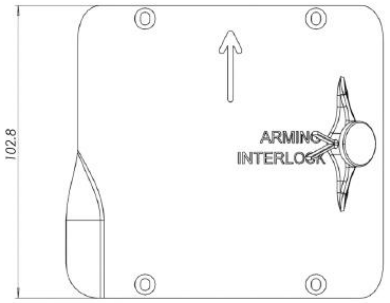
Fragmentation charge	Optional Ad-On
No. of fragments	400
Fragment material	Steel
Fragment diameter	5mm
Average initial velocity	1200 m/s
Fragment roll angle	30 degrees (+/- 15 degrees from the interceptors drone longitudinal axis).
Fragment roll radius (ground detonation)	Forward fragments: 300m Side fragments: 100m
Fragment roll radius (air detonation)	Forward fragments: 600m Side fragments: 100m

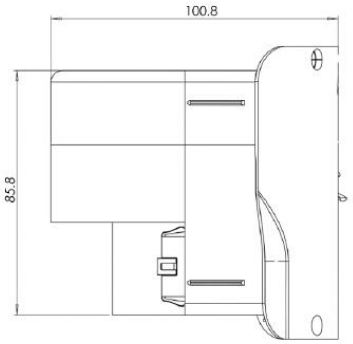
Compliance	STANAG compliant
Safety	- Mechanical transport safety pin; - ESAD with mechanical lock/break system for the warheads firing chain;
Safety distance	300m

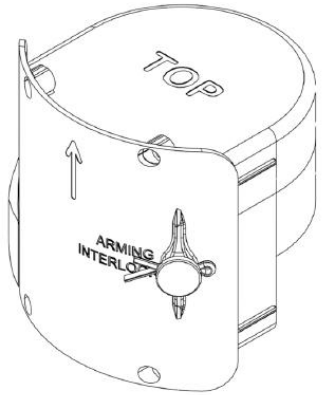
WARHEAD I DATA SHEET

Shipping name	BOMBS with bursting charge
Packaging	Each warhead is packed in airtight protective film, up to 20 warheads per box
Transportation types	The Warheads are suitable for all types of ADR, IATA, and DGR transport, with no range restrictions. The Warheads can be transported in a sealed cabin. Air transport restrictions depend on the regulations of individual carriers.
Transportation requirements	Temperature range: -30°C to +60°C Vibration range during transport: - acceleration amplitude - 40 m/s², - displacement amplitude - 2 mm, - frequency range - 5 ÷ 80 Hz
Handling	Modular, stored separately from the BLAZE interceptor drone

Long term storage requirements	Temperature range: 0°C to +50°C Relative humidity < 80%
Shelflife	- 10 years in the original packaging; - 3 months unpacked;







GROUND CONTROL STATION (GCS) I DATA SHEET

1. OVERVIEW

The Ground Control Station (GCS) is a high-performance communication system designed for reliable operation with Sky Interceptor-series drones. It features a rugged horizontally mounted panel with integrated radio transceiver and antennas. Ideal for static, vehicle-mounted, or vessel installations, the system requires only a single ruggedized combined power + Ethernet cable for fast and reliable deployment in harsh environments.

The system provides 360° radio coverage in a single sealed unit with no moving parts, ensuring maximum reliability and minimal maintenance.

2. RADIO & COMMUNICATION SPECIFICATIONS

Operating Frequency

- 4.9 – 5.9 GHz

Data Throughput

- Up to 2.5 Mbit/s communication link with a single Blaze drone

Encryption

- Built-in AES-256 hardware encryption (CRE2-360 integrated)

3. ELECTRICAL SPECIFICATIONS

Power Consumption

- Maximum: 300 W (antenna system)

Nominal (with single Blaze drone): 120W (antenna system)

Power Supply

- 19–55 VDC supported

4. INTERFACES

Data Interface

- Ethernet 10/100Base-T

Cable System

- Power and Ethernet are provided through a single rugged combined connector, ensuring durability in different environments.
- 30m Ethernet cable with RJ45 connectors.

5. INCLUDED COMPONENTS & ACCESSORIES

Standard GCS Kit

- CRE2-360 antenna
- Tablet for drone control
- 10-meter Y-type cable combining power and Ethernet
- 30m Ethernet cable with RJ45 connectors
- Power cable to connect battery power source
- Power supply to the power antenna from AC 230V socket
- Battery power source
- Tripod for antenna mounting
- Customized transportation case

SKY-INTERCEPTOR VS. OTHER INTERCEPTOR DRONE SYSTEMS

Technology

	SKY-INTERCEPTOR	Other (fixed wing)	Other (multicopter)
Seeker with Dual Cameras for Day and Night	Yes. High resolution EO + Thermal ✅	One camera	One camera
Gimballed seeker	Yes. 2-axis gimbal. Allows for target searching and locking in tight turns ✅	No. Fixed single camera (or 1 axis servo) 🚫	No. Fixed single camera (or 1 axis servo) 🚫
360 degree full range Radio coverage	Yes, phased array antennas with narrow beam forming ✅	No 🚫	No 🚫
Jamming resistant data link	Yes ✅	No 🚫	No 🚫
Digital data link with encryption	Yes. AES-256 ✅	No. Analog video and radio control links 🚫	No. Analog video and radio control links 🚫
High-precision GNSS denied navigation	Yes, with full interception mission support ✅	No. Radio beacons used in some systems offer low precision, not suitable for autonomous missions 🚫	No. Radio beacons used in some systems offer low precision, not suitable for autonomous missions 🚫
Full integration of Radars and C2 systems	Yes. Dual way integration, multiple protocols support. Radar track ingestion, engagement control, blue-force tracking ✅	No. Pilot needs to manually match radar tracks 🚫	No. Pilot needs to manually match radar tracks 🚫
No additional equipment is required to launch the interceptor	Yes, Vertical Take-off from any place, including on-vehicle and on-ship platforms ✅	No. Catapult is required to launch 🚫	Yes ✅
Weather resistant	Yes. Weather resistant build allows for wide range of temperatures and weather conditions, including rain, snow, fog. ✅	Unknown	No. Cheap construction, susceptible to weather elements. 🚫

Autonomy

	SKY-INTERCEPTOR	Other (fixed wing)	Other (multicopter)
Radar guided autonomous flight from take-off until visual target lock	Yes, real-time radar tracks are used for autonomous missions ✅	No. Manual piloting skills required 🚫	No. Manual piloting skills required 🚫
Automatic visual target search and locking	Yes. Uses 2-axis gimbal to scan the environment and automatically lock on visual targets ✅	No. Manual searching 🚫	No. Manual searching 🚫
Autonomous visual follow and interception	Yes, once the target is locked autonomously follows and intercepts it with no radar data required ✅	No. Manual steering, sometimes assisted with computer vision 🚫	No. Manual steering, sometimes assisted with computer vision 🚫
Support for "no-intercept" zones	Yes. Predefined "no-intercept" zones for safe autonomous interceptions ✅	No. Manual control 🚫	No. Manual control 🚫
Autonomous Return-To-Launch	Yes. Supports different autonomous missions and waypoints, including RTL, Go-To, Pre-planned mission path, etc. ✅	No. Manual piloting skills required 🚫	No. Manual piloting skills required 🚫
The system can return and disarm if the mission is aborted	Yes. Full ESAD state control and disarming. Auto lands vertically. ✅	No. Vertical landing is not possible - detonates the warhead in the air 🚫	Can land vertically, by fuse cannot be disarmed

PICTURES

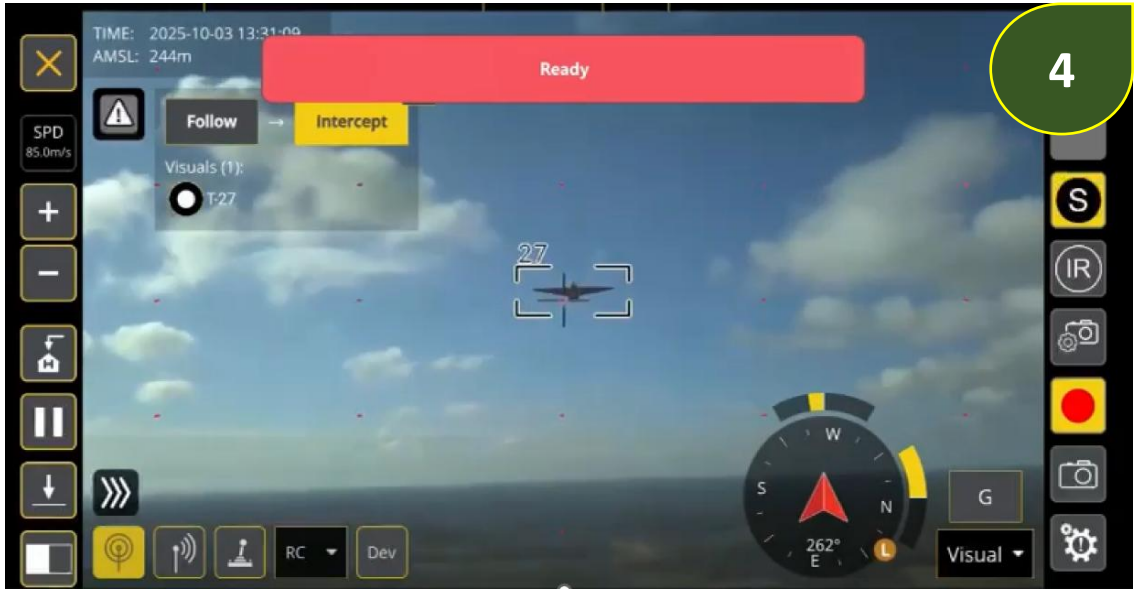
PICTURES

VIDEOS


1
500 m
TIME: 2025-10-03 13:29:42
AMSL: 143m
Follow
Est. target: 233.4m, 32m/s
Radar (1):
T-14 (↑101m, 33m/s)
SPD 40.0m/s
RC
Dev
G
FPV


2
500 m
TIME: 2025-10-03 13:30:22
AMSL: 226m
Follow
Est. target: 239.1m, 40m/s
Radar (1):
T-14 (↑20m, 49m/s)
SPD 60.0m/s
RC
Dev
G
Radar


3
TIME: 2025-10-03 13:30:52
AMSL: 209m
Follow
Intercept
Approach rate: 7.0m/s
Visuals (1):
T-27
SPD 85.0m/s
RC
Dev
G
Visual


4
TIME: 2025-10-03 13:31:09
AMSL: 244m
Ready
Follow
Intercept
Visuals (1):
T-27
SPD 85.0m/s
RC
Dev
G
Visual

C4i communication

LEARN MORE: c4icommunication.com

FOR MORE INFORMATION: contact@c4icommunication.com or +1 (302).981.1340