• Chirdeye



# Meduza

Optical precision. Rapid response. Total control.

EMPOWERING YOUR FORCES WWW.THIRDEYESYSTEMS.COM



### WHO WE ARE

ThirdEye Systems is a leading company specializing in the development of advanced solutions for security, HLS & defense sector. The company focuses on cutting-edge AI for EO\IR systems, including optical detection and tracking for C-UAV, and advanced tools for protecting strategic assets.

#### OUR VALUES:

#### FIELDS OF ACTIVITY:

Technological Innovation Precision and High Performance Commitment to Quality & Customer Service Adapting to changes in the future battlefield National Security and Border Protection Counter-Drone Defense Tactical Protection Aerial Surveillance









Aero**nautics** 





### Drone Threats- UAS and Aerial Hazards

In recent years, there has been a significant rise in the use of drones for terrorism, criminal activities and espionage purposes. Rapid technological advancements in drone capabilities enable the use of autonomous, hard-to-detect drones, making them more dangerous than ever. Today, the drones threats it's the embodiment of the LIC in the modern era.



#### THREAT CHARACTERISTICS:

#### Silent and Autonomous: Drones that operate independently and stealthily, making them difficult to detect or counter with traditional systems.

#### Long Range:

Ability to penetrate deep into enemy territory and strike strategic target rapidly.

#### Payload Capacity:

Drones capable of carrying dangerous payloads, posing a threat to critical infrastructure and civilian populations.

#### Undetectable

Encrypted Communication Drones Fiber Optic Drones (No RF Emissions) Low Signature Explosive Drones



## Challenges in Drone Detection and Mitigation



#### **Detection Challenges:**

Small, elusive drones that are difficult to detect with traditional radar systems. Autonomous operation without RF or GPS signals makes detection through conventional technologies challenging.



#### Mitigation Challenges

Requires rapid and precise response to neutralize the drone before it breaches sensitive areas. High risk of damage to strategic assets if not addressed in time.



#### Environmental Challenges:

Operating in complex terrain: urban areas, mountainous borders, and critical infrastructure.

### MeduzaX Drone detection Optical Radar

- Rapid deployment & fast assembly
- Tactical & lightweight
- precise recognition by AI edge computing
- Advanced fusion Optical Technology
- Passive without radiation





# Challenges in Drone Detection and Mitigation

#### **Real-Time Response:**

A fast and reliable system enabling action before the threat materializes.

#### Operating in Complex Environments: A tailored solution for several vectors of MO.

#### **Advanced Optical**

**Precision:** Detects small and autonomous drones at long ranges.

#### **Cost-Efficiency:**

A modular solution combining precision with high costeffectiveness.



### Technological Advantages

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#### Edge Computing

By analyzing raw data in real time, we ensure maximum recognition with unparalleled positive detection rates of >94% with minimal FAR <1% without latency Fusion & Data VIS and thermal fusion that considered and analyze the meta-data in real time

#### Unique Algorithms

Leveraging our algorithm based on auto target recognition (ATR) and utilizing our extensive private database of 5.5 million synchronized segmented frames, we ensure precise and efficient detection

#### Originally Designed for Rapid Process

SW and HW were tailored from "day one" in order to provide zero latency and maximal accuracy with low power consumption

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# SystemOverview

- Dual channel VIS + MWIR with a unique mirror mechanism
- Portable (12kg)
- Step & Stare mirror mechanism
- Quick deployment (10-15 minutes max.)
- 24/7, all weather durability (IP 67)
- Standard power supply, or battery pack power supply (12 hours)
- Intuitive user interface, designed with input from experienced users in practical situations
- TRL 9
- All components fit in single rigid case suitable for vehicle transportation and manpack



### System Operational Overview





## MeduzaX Tactical C2

A tactical command and control system enabling real-time management, coordination, and monitoring of battlefield operations, ensuring full control and rapid, precise decision-making. Easy to use, situational awareness enhancement and reduce cognitive pressure



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# Technological Advantages

Immediate Orientation

Maximize Situational Awareness

Prioritize Data





### Certification

מדינת ישראל משרד הביטחון האגף לייצוא ביטחוני State of Israel Ministry of Defense Defense Export & Defense Cooperation

> LK3012242109 Date: December 31<sup>st</sup>, 2024

Major General	
Director Military Intelligence	
KDF	
Kenya	
Dear General,	

#### Re: ThirdEye Systems

We hereby confirm that ThirdEye Systems Ltd. is a developer, manufacturer, and supplier of advanced AI video analytics payloads for defense and HLS applications, among them Meduza-X System, a C-UAV system, for the Israeli Defense Forces (IDF) and for other Armed Forces worldwide.

We hereby confirm that the system is operational and currently active in the IDF.

Sincerely,

Brig. Gen. (Ret.) Yair Kulas Director

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# MeduzaX

Proven technology for staying ahead of evolving threats.





### Vectors of Use





Tactical needs

Jail, Civil

comprehensive System







# Implementation and Effectiveness of the Solution

**High Integration Capability** 

Simple and Efficient Operation

Proven Success in Real-World battle fields

**Future Adaptability** 



# Mitigation

- GNSS Spoofer
- Jammer- directional and omni
- Kinetic
- Drone to Drone
- RF Investigating mode
- Radar proximity compensation





# Relevant Sectors for MeduzaX





#### Critical Infrastructure

Protection for power plants, airports, and sensitive facilities.



#### Borders & Military Sites

Drone detection in complex environments, such as borders and military bases.



#### Public Safety

Safeguarding airports, train stations, and government buildings.



# Relevant Sectors for MeduzaX



Government & Military

Organizations Protecting critical assets like military bases and radar stations.



#### Maritime Security

Detecting aerial threats in naval environments.





# Competitive Analysis

Features	Parameters	MeduzaX Optical scanner	RADAR	RF Detectors	Standard EO/IR
SWAP	Man Portable	v			V
Survivability	Emission level	No Emission V			No Emission V
FOV	Degrees	v	V		
Detection Effectiveness	Hovering Low RCS No RF FOV	v			
Respond time	Visual Verification	Al Based Immediate V		V	V
Situational Awareness	Constant Searching	v	V		



# Recognition Ranges



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Thank you!

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