ASN 100

DOMINANCE THROUGH COMPREHENSIVE SITUATIONAL AWARENESS

ASN 100 is a state-of-the-art, autonomous and scalable sensor network for tactical space and object surveillance. This cost-effective yet highly effective acoustic reconnaissance system is a reliable early warning tool for a defined area of operation.

Within the monitored area, the system reliably detects intruders such as persons, vehicles and drones. The detected signatures are analysed in real time, classified and – as far as possible – clearly identified. This is followed by automated command post reporting with precise determination of type, strength, position and direction of movement.

The system consists of flexibly deployable, networked sensor nodes that monitor operational areas autonomously for up to 5 days. A battery extension or external power supply enables significantly longer operating times. The passive sensors operate almost silently, are difficult to detect due to their low multispectral signature and, thanks to their low data rates, present a minimal risk of communication detection.

Integration into an existing sensor-effector network significantly increases the operational value. The connection to command-and-control systems and BMS not only enables comprehensive situational awareness, but also an efficient sensor-to-shooter chain. The reconnaissance data obtained, including the GPS position of the enemy, is immediately forwarded to effectors. The capabilities can be significantly enhanced by additional AI functions. Combining it with other reconnaissance assets, such as UXVs, networked via a uniform information architecture, further increases the value of the reconnaissance results.

The self-sufficient, passive and extremely difficult to detect sensor network generates 360° non-line-of-sight (NLOS) situational awareness, reduces the workload on personnel, extends the effective radius of own forces and provides precise reconnaissance data in real time.

The system architecture allows for easy expansion with additional sensors. The growth into a comprehensive sensor family is an integral part of the product concept. An electro-optical sensor will strategically complement the capabilities of the acoustic sensors in the future.

In addition, the use of quantum sensors is currently being investigated.

KEY FEATURES

- 360° sensor
- Continuous monitoring
- Modular architecture with modular and redundant power supply
- Passive sensor technology
- Detection, classification and identification
- “On the Edge” AI (already implemented, mission-specific AI models can be implemented by the user on the sensor)
- Compact, lightweight, cost-effective
- Interoperability
- Growth potential (EO/PIR, quantum technology, autonomy)
- The access point software merges the detections and classifications into individual displays in the network
- Data compression takes place on the sensor, so that only small amounts of data are transmitted

TECHNICAL DATA	
Parameter	**Specification**
Power supply	
Operating time	At least 120 hours, depending on battery configuration
Battery property	UN38.3
Networking	
Network	MESH network
Range [3]	Up to 250 m
Detection performance [1]	
sUAVs	~100 m
Wheeled vehicles	~200 m
Tracked vehicles	~500 m
Dimensions	
Weight	2.1 to 3 kg, depending on battery configuration
Height	12 cm
Diameter	22 cm
Security	
Third-party access	“Anti-handling” mechanism
Data security	
Data transmission	AES-256 encrypted mesh network communication
Data storage	EMMC memory encryption using LUKS standards
Standards	
Military Standard	MIL-STD-461/MIL-STD-810 compliant
European Standard [2]	EN 300 220 compliant

[1] *Under typical conditions, not classification*
[2] *For civil applications*
[3] *In urban areas, larger in open spaces*

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