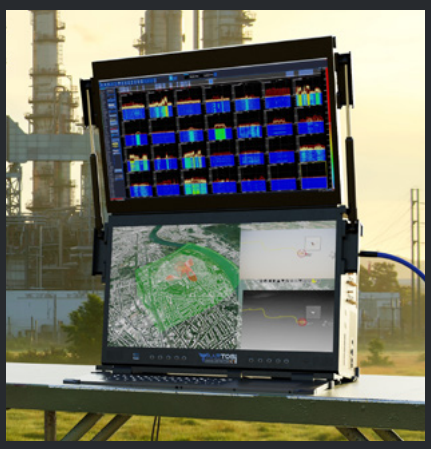
AARTOS™

AARONIA

C-UAS & EW SOLUTIONS

CONFLICT PROVEN cUAS SOLUTIONS – MADE IN GERMANY

DETECT LOCATE COUNTER



DETECT

Detection range up to 80 km (MIL-UAV) / 40 km (consumer UAV)

- Real-time decoding of many drone protocols
- Real-time RF frequency monitoring and tracking (20 MHz to 8 GHz)
- Portable and stationary variants
- Powerful software
- Made in Germany

LOCATE

Precisely locates drones, pilots and homepoints

- Detects and tracks pre-programmed drones with high accuracy
- 360° azimuth with full hemispheric reception (elevation)
- Fully automatic mode possible
- Optional radar and cameras

COUNTER

Portable and stationary variants with up to 10 km jamming range

- Seamless frequency range, selectively from 400 MHz to 6 GHz
- IP65 weather protection, operating temperature -20°C to +60°C
- Portable or stationary
- 4 or 8 sector versions, customizable on demand

The most sophisticated C-UAS system to monitor, detect, and defeat unwanted drones

Aaronia AG introduces its latest drone detection system – the AARTOS™ Generation 6. Designed to detect intruding drones, the system uses real-time directional measurements of a drone's electromagnetic emissions (including its remote control). AARTOS™ users receive accurate warnings and alerts about incoming drones.


Stationary AARTOS™ X2

Drones – more than just a nuisance

Increasingly accessible mini and micro UAVs are a growing threat to national and commercial security. Cheap to buy, simple to fly, and hard to detect, drones are rapidly developing technological threats to military and civilian interests. Current conflicts highlight the dangers of drone attacks and the need for reliable detection systems.


Mobile AARTOS™ X7 Command Center

Detection range

AARTOS™ boasts a detection range that often surpasses the maximum distance between a drone and its operator. Depending on factors like transmitter power, terrain, and drone type, the range can extend up to 80 km.


AARTOS™ X9 MIL-Spec 6x6 Zetros

Early detection

AARTOS™ triggers an alarm as soon as an operator begins transmitting, even before the drone is airborne, enabling countermeasures to be initiated preemptively.

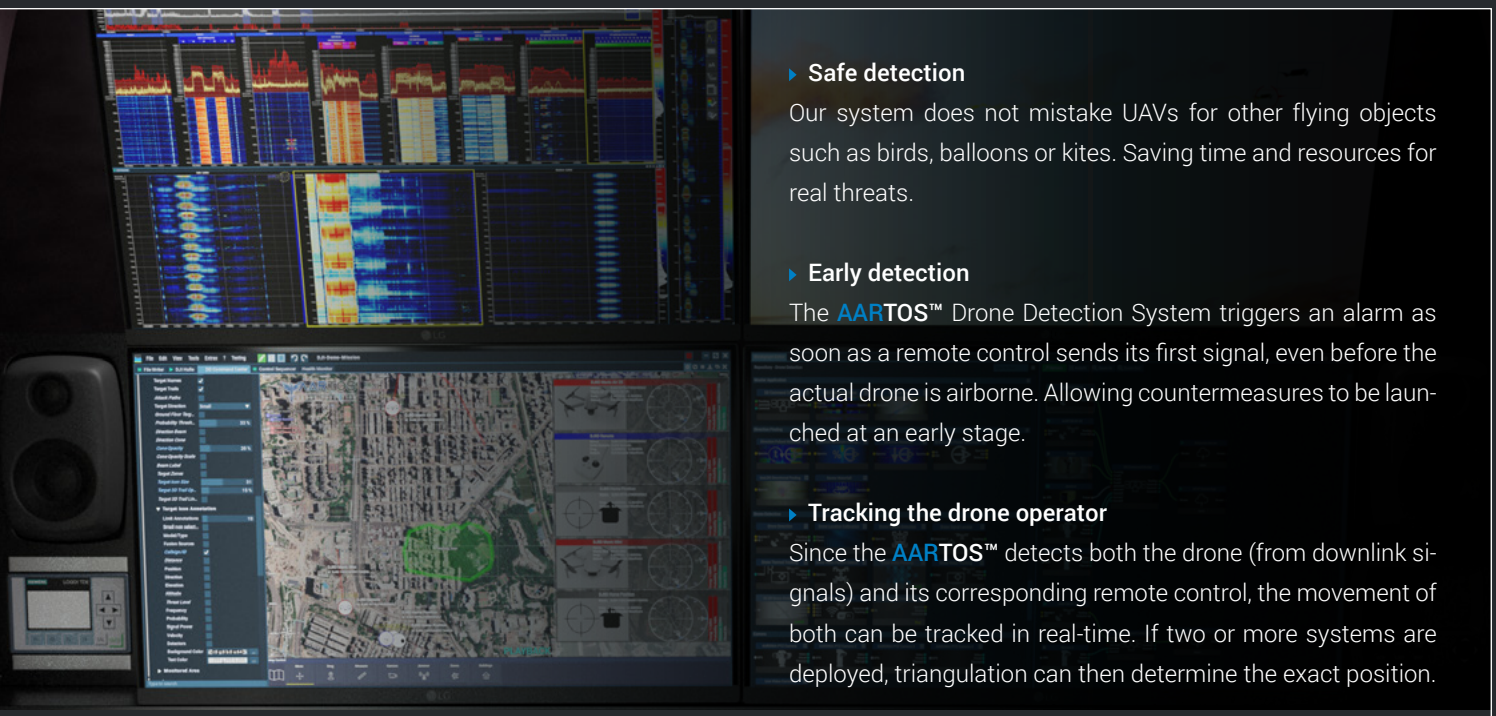
Ready for action when you need it

Aaronia AG's system can be deployed virtually anywhere. AARTOS™ has proven effective in protecting borders, events, residential areas, government facilities, and industrial sites. It is available as a single-site or multiple-site solution, adjustable to the terrain's characteristics.


Mobile AARTOS™ X2

Hardware

AARTOS™ is powered by the IsoLOG® DF antenna array, real-time spectrum analyzers, and a dedicated plug-in for RTSA-Suite PRO software. This combination provides 24/7 monitoring, recording, and uninterrupted data streaming. Compact and flexible, the system can be set up in virtually any environment.



Safe detection

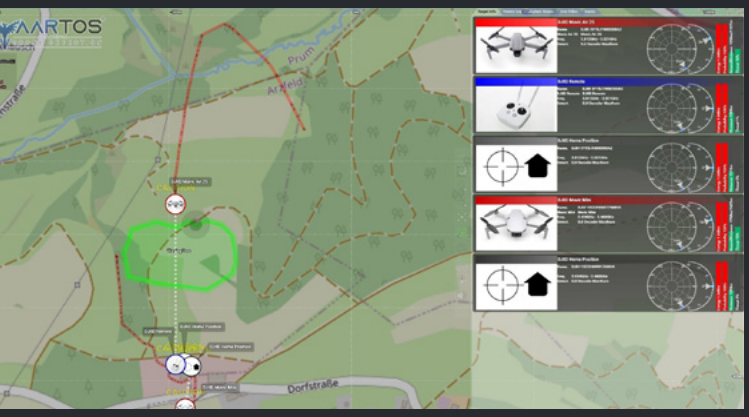
Our system does not mistake UAVs for other flying objects such as birds, balloons or kites. Saving time and resources for real threats.

Early detection

The AARTOS™ Drone Detection System triggers an alarm as soon as a remote control sends its first signal, even before the actual drone is airborne. Allowing countermeasures to be launched at an early stage.

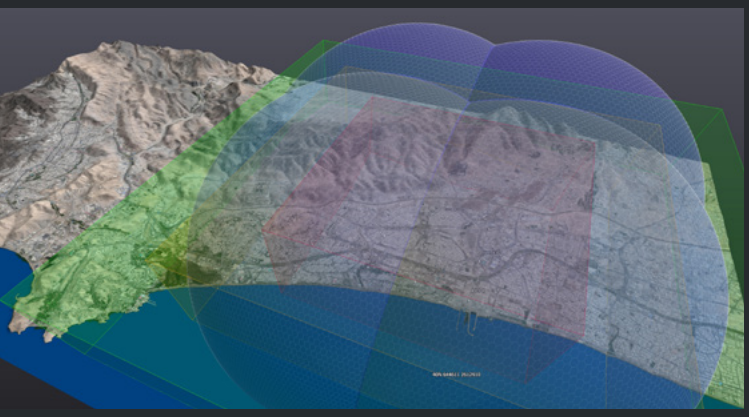
Tracking the drone operator

Since the AARTOS™ detects both the drone (from downlink signals) and its corresponding remote control, the movement of both can be tracked in real-time. If two or more systems are deployed, triangulation can then determine the exact position.



A top-down 2D perspective is the most commonly used visualization technique in drone detection. The program is easy to understand and navigate due to its similarity to common satellite-image-based map solutions.

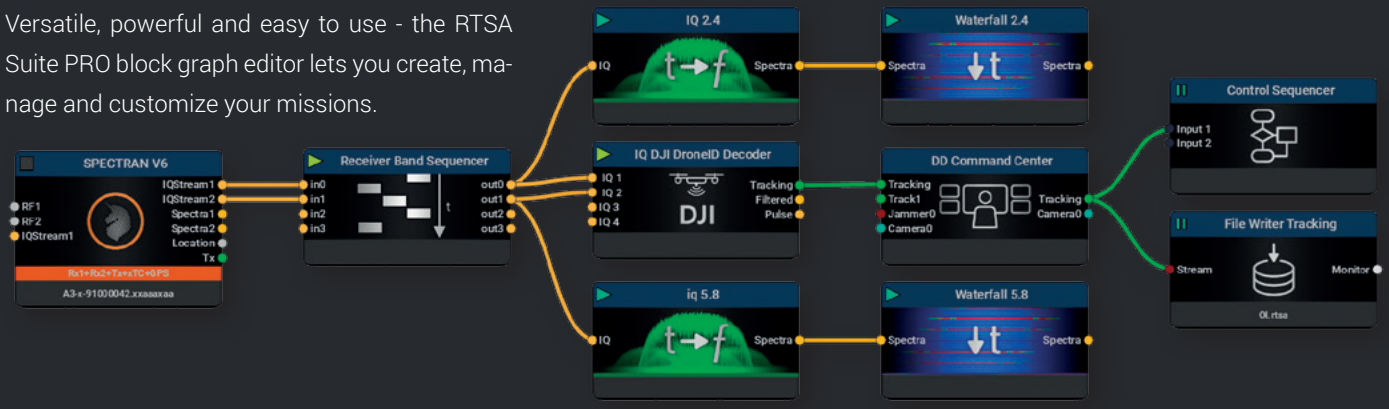
The 3D view expands our capabilities by adding the drone's altitude information (this requires multiple drone detection systems), and making it easier to evaluate distances between different objects on the map.



The topographic mode displays the surrounding terrain's surface, depicting hills, mountains, peaks and valleys.

Combined with our 3D, man-made structures system building system, the topographic view creates the most accurate representation of the surrounding area: AARTOS™ is also able to integrate 3D models of complex areas (e.g. cities, airports, etc.) into its 3D view, improving usability for end users.

Versatile, powerful and easy to use - the RTSA Suite PRO block graph editor lets you create, manage and customize your missions.



X2

The portable and quick-to-use AARTOS™ X2 is a decoding system that exactly shows the position of DJI drones and drone pilots and even their home position.
Alternatively, it is also available as a purely stationary 24/7 monitoring system with mesh capabilites.

X7

A high precision direction finding system combined with a large detection range.
The AARTOS™ X7 consists of a 8 sector IsoLOG® Fox DF 80 antenna array and three spectrum analyzers (Command Center or 19" rack). Perfect for both single-system and multi-grid system setups.

X9

The AARTOS™ X9 combines highest precision and ultra-wideband monitoring real-time detection over multiple frequency bands. It consists of an IsoLOG® DF 160-UA antenna array with 16 sectors and the Command Center or 19" rack, perfect for ultra-high-range drone detection grids.

	X2	X7	X9
Typical range (Consumer/DIY UAV's)	Max. 5 km	2 km - 5 km	Standard: max. 14 km Long range: max. 40 km
Typical range (Military UAV's)	-	-	max. 80 km
Usage	Mobile & stationary	Mobile & stationary	Mobile & stationary
Frequency coverage	2.4 GHz + 5.8 GHz	700 MHz to 6 GHz	400 MHz to 6 GHz (optionally 20 MHz to 8 GHz)
Detection type	Drone protocol decoding	Drone protocol decoding & RF signal detection	Drone protocol decoding & RF signal detection
Tracking type	Drone GPS decoding	Drone GPS decoding & RF signal direction	Drone GPS decoding & RF signal direction
Supported decoding	DJI OcuSync 1-4, DJI WiFi	DJI OcuSync 1-4, DJI WiFi, MAVLink, ADS-B	DJI OcuSync 1-4, DJI WiFi, MAVLink, ADS-B
Typical decoding accuracy	2 - 3 m	2 - 3 m	2 - 3 m
Typical direction finding accuracy	-	4° to 6°	1° to 3°
Antenna Sectors	Omnidirectional	8	16
Multi frequency swarm attack	No	Limited	Yes
Scalable	No (Yes with stationary versions)	Yes	Yes
Recommended grid distance	-	2 km	3 km
Radar and PTZ Camera	No (Yes with stationary versions)	Yes	Yes
Automatic jamming option	No	Yes	Yes

Portable Laptop Analyzer

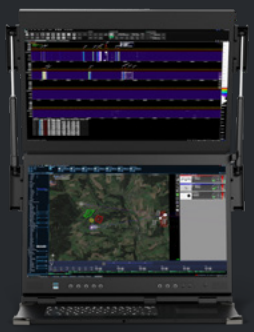
X2

A cost-effective, rugged solution offering broad coverage of the 2.4 GHz and 5.8 GHz frequency bands. Experience unmatched portability, with an optional external power bank extending runtime to 10+ hours. This drone detection system ensures seamless, user-friendly drone tracking — compact, powerful, and ready for immediate deployment.

Stationary Remote Analyzer

X2

A cost-effective, rugged solution providing extensive coverage in the 2.4 GHz and 5.8 GHz frequency bands. Designed for continuous 24/7 operation, this weatherproof outdoor unit delivers reliable drone detection in remote outdoor locations — robust, powerful, and always ready to secure your airspace.



Portable Command Center Analyzer

X1 X9

The AARTOS™ Command Center was designed with the latest and most powerful hardware and can be configured to your personal requirements. Its two 4K depict all the information processed by the RTSA-Suite Pro software. Both its hardware and twin 24" sunlight-readable displays make the Command Center the perfect stationary system.

Portable Rugged 19" Server Rack

X1 X9

The AARTOS™ Rugged Rack is highly versatile and can be used as an indoor or outdoor analyzer, with multiple configurations for remote detection. Or, as part of an antenna-analyzer grid, allowing for coverage of large areas as well as the triangulation of drones and their operators. The rack is waterproof, dustproof, remotely controllable and requires almost no maintenance. Optionally available with active climate control.

Stationary Cooled Outdoor 19" Rack

X1 X9

This IP65 Outdoor Rack is equipped with a double insulated housing plus efficient cooling modules to handle a temperature range from -30° to 60° Celsius. A high-end sand filter enables it to withstand sand storms. The Outdoor Rack resists all environmental conditions and is the best choice for permanent outdoor installations of the AARTOS™ system.

AARTOS™ System Integration

X1 X9

Any vehicle can be customized to match your unique requirements. For example, consider integrating a full drone detection system into a van with RF detection, radars, northfinder antenna, visual and thermal camera, GPS, air conditioning (and more).

	Rod Antennas	IsoLOG® Fox DF 80	IsoLOG® DF 160-UA	Long Range Array
Antenna Type				
Compatible with	X2	X1	X9	X9
Antenna Type	Omnidirectional	Direction finding array (8 sectors)	Direction finding array (16 sectors)	Directional long range (4 sectors)
Frequency Range	2.4 - 2.5 GHz 5.1 - 5.9 GHz	700 MHz to 6 GHz	400 MHz to 8 GHz	2.4 - 2.5 GHz 5.1 - 5.9 GHz
Typ. Tracking Accuracy	2 - 3 m	4° - 6°	1° - 3°	2 - 3 m
Operating Temprature	-40 to +80° C	-30° to +60° C	-30° to +60° C	-20°C - +60°C
IP Rating	IP65	IP65	IP65	IP65

Handheld 4-Band Jammer MJ40

The MJ40 is a potent and portable drone jamming system, featuring 40W output power and an impressive 2 km range. Covering four frequency bands, it ensures adaptability to diverse unmanned aerial vehicles.

With a two-hour battery life, the device provides a reliable and portable solution for countering potential drone threats. Its standout feature is the highest coverage among commercial models, making it a valuable tool for security and defense applications.

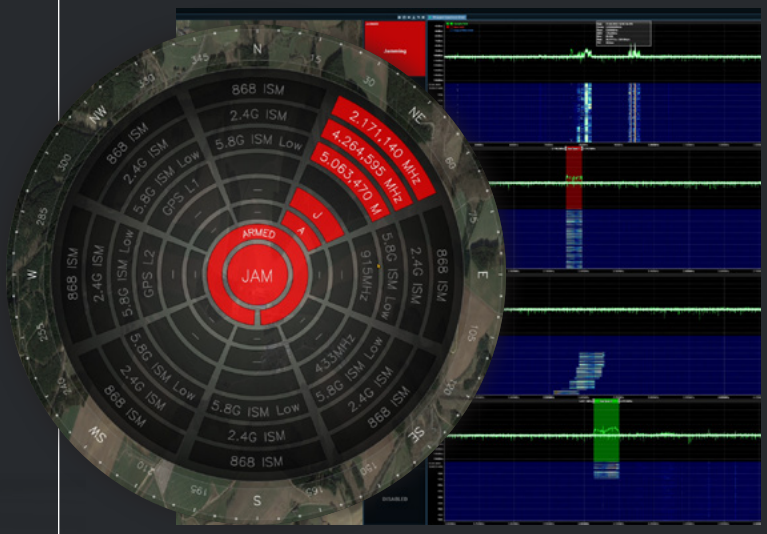
Moreover, the device is customizable on demand, allowing users to tailor its specifications for specific operational needs, enhancing its flexibility and utility in various scenarios.

Fixed Bands Sector Jammer FJ SERIES

By extending the AARTOS™ X7 or X9 to include our "FJ series" stationary jammer with a jamming range of typically 3 km, it creates a system that can reliably and quickly locate and neutralize threats.

With its directional and omnidirectional antennas and a maximum output power of 390W the jammer is capable of countering drones within the most common frequency bands (GPS e.g. upper and lower L-band, 2.4 GHz, 5.2 GHz, 5.8 GHz, etc.).

As with all of our jammers, the interference created is extremely selective, in order to make sure other RF channels are not impaired. In addition, the jammer is directional, and will only jam signals in the direction of the incoming UAV.



SJ SERIES

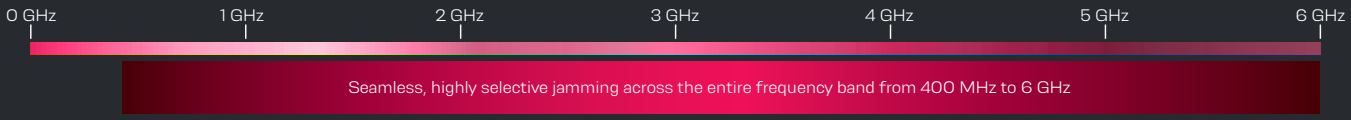
Programmable Smart Sector Jammer

The SJ Jamming Series is an advanced and versatile device, designed to offer comprehensive frequency coverage and smart jamming capabilities. It stands out with its ability to program an unlimited number of channels or bands across the entire frequency spectrum, providing gapless coverage from 400 MHz to 6 GHz.

This makes it exceptionally effective against both commercial and military drones. One of its key features is the impressive operational range of up to 10 kilometers with 360° coverage.

Additionally, customers can choose between different output power versions, either 30 W or 100 W per sector, and the device is available in 4 or 8 sector versions.

With no moving parts and an IP 65 rating, it guarantees a high level of protection against dust and water, making it suitable for a variety of environments. Despite its robust capabilities, the jammer remains relatively portable and can be operated in extreme temperature conditions, ranging from -20° C to +60° C.



	SJ240 SJ800	FJ390	MJ40
	Seemless frequency jamming from 400 MHz to 6 GHz with a 360° coverage and the highest range in our lineup.	The stationary FJ series cover 360° with a range of up to 3 km and up to 7 frequency bands.	This handheld UAV jammer is a potent and portable drone jamming system with 2h battery life and customizable frequency bands.
Typ. Range	4 km / 10 km	3 km	2 km
Antenna(s)	8 directional	4 directional Up to 4 omnidirectional	1 directional
Sectors	8	4	1
Bands	All bands up to 6 GHz	Up to 7	4
Output Power	240W / 800W	390W	40W

EO/MWIR PTZ Cameras

XCAM SERIES

Among the latest additions is the Visual Detection System, a fully integrated optical and thermal drone detection solution that is perfectly matched to the detection mechanisms of AARTOS™.

This option enables the user to spot detected drones, even from afar, and identify potentially dangerous payloads attached to the drone, such as explosives.

Automated AI tracking will continue even if a drone enters autonomous flying mode while it is being tracked by the Visual Detection System.

- Thermal and optical camera for 24/7 protection
- Sophisticated tracking and analysis AI
- Max. camera resolution of 1920 × 1080 px (full HD)
- Max. thermal module resolution of 1280 x 720 px
- Optical: 13 mm to 261.5 mm focal length
- Thermal: 72 mm to 900 mm focal length
- IP67-certified protection

4D UAV Radar

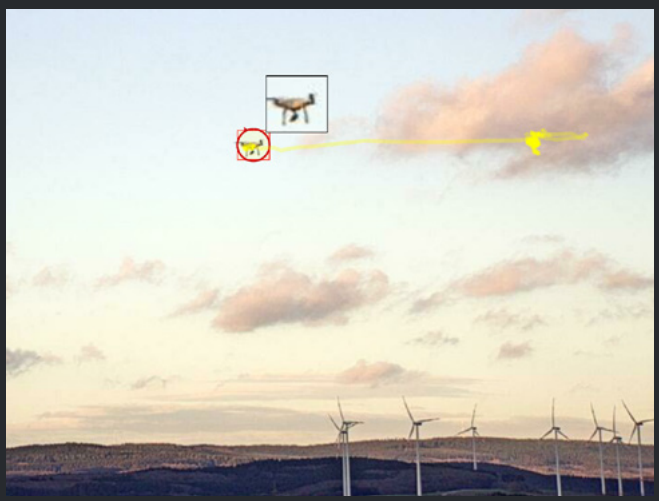
RD SERIES

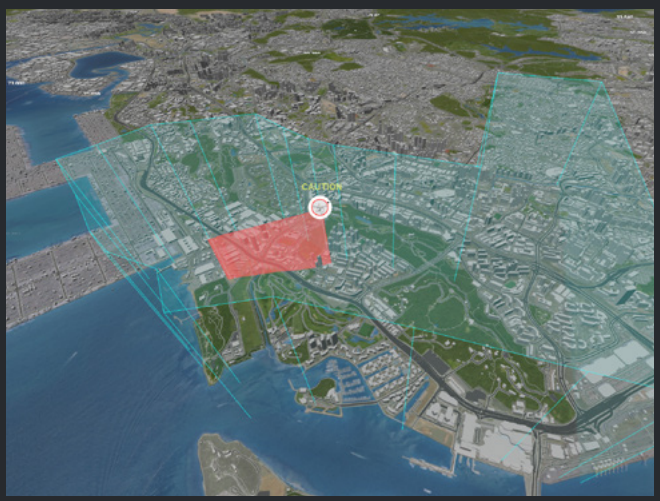
Using an (optional), sophisticated radar system, AARTOS™ can automatically determine and display the exact position, flight direction, altitude, speed and classification of an inbound drone. The trajectory of the flight can also be tracked in real-time as a 3D model.

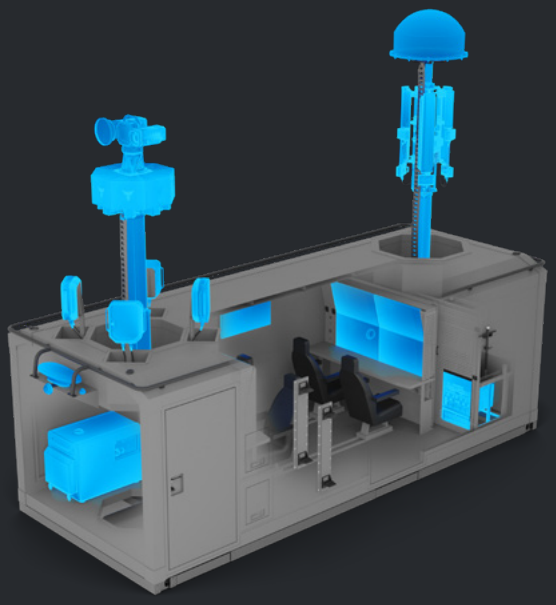
The system distinguishes between birds, fixed-wing drones and propeller drones. When a UAV enters the designated no-fly zone, a multi-alarm can be configured.

Complete customization

The required equipment for AARTOS™ can be configured to match detailed customer requirements. End customers will receive hardware that is tailored to their specific needs, with all components chosen individually. This guarantees optimal drone detection performance in any given terrain or area.







AARTOS™ Shelter Solutions

The AARTOS™ drone detection shelter sets a new benchmark in mobile and off-grid drone detection. Both scalable and easy to operate, it can be set up and deployed in no-time.

The perfect surveillance and drone detection solution for: Events (concerts, parades, sport events etc.), industrial plants, borders or open spaces, airports, correctional facilities or military camps.

The AARTOS™ drone detection shelter is available in two standardized sizes; The Zeppelin FM1 and The Zeppelin FM2. They are easy to handle and deploy on any Unimog or other suitable means of transport. The shelter can be used as a command center, and also as a self-sufficient, remote controllable, contained system.

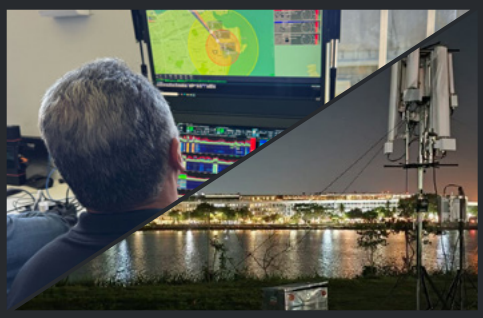
The cabin has two seats for two operators, four 4k monitors to provide a complete overview of the airspace, and the four cameras surrounding the shelter to monitor the environment in 360°.

Fully integrated modular capabilities

The AARTOS™ system is designed for seamless integration into a wide range of vehicles, including vans, pickup trucks, and off-road platforms, making it a versatile solution for mobile drone detection and countermeasure operations. Its compact and modular architecture ensures that the system can be tailored to fit the unique space and power constraints of each vehicle type.

Equipped with the IsoLOG® DF antenna array, real-time spectrum analyzers, and advanced software, AARTOS™ delivers robust detection, tracking, and countermeasure capabilities while maintaining flexibility for deployment in diverse environments.

AARTOS™ supports rapid deployment, allowing vehicles to be operational within minutes, even in challenging conditions. Whether used for border security, VIP protection, or tactical missions, the system ensures reliable performance and unmatched adaptability, enhancing operational efficiency for military and security forces.

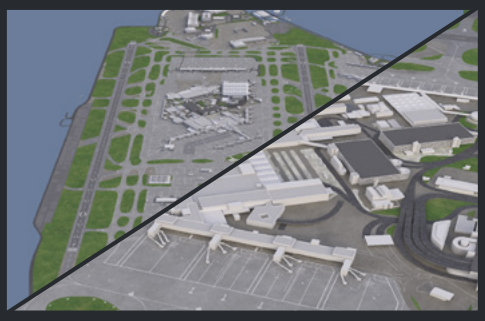


G20 Summit Brazil 2024 & Bali 2022

NATO Summit, Bruessels

North Korea / USA Summit, Singapore

Airpower 2024, Austria



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Formula 1 GP Red Bull Ring, Austria

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