AARTOS™ GENERATION 6

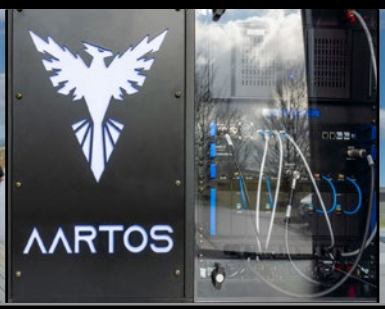
AARONIA

DRONE DETECTION

DDS VEHICLE Solution

A complete & self-sufficient drone detection system that can be integrated into any vehicle

- Ready for use in minutes
- Configurable for different vehicles
- Customizable
- Self-sufficient
- Built-in command center
- Seamless, 360° detection and monitoring



MADE IN GERMANY

drone-detection-system.com

AARONIA AG
WWW.AARONIA.DE

AARTOS™ DDS Vehicle

Highlights

- **Individual installation** possible in almost any vehicles
- **Up to 14 km detection range** with passive RF system
- Long range **3D radars**, up to 8 km
- Fully integrated **optical and thermal camera** solution
- **Real-time** ALL frequency monitoring (NO bands) **to 6 GHz**
- **360°A/90°E full dome coverage** with high tracking accuracy
- **AI** Threat Identification
- Fully integrated programmable **Jammers** up to 6 GHz
- Can detect the **positions of the drone and its pilot**
- Easy to use radio communication system for a more efficient work flow
- Long range speaker, up to 2 km and 360°
- Add-ons like radio communication systems, Northfinder, and more

Applications and Use Cases

- Airport security
- VIP Protection
- Prison security
- Event protection
- Border control
- Yacht and port protection
- Law Enforcement support

AARTOS™ DDS Vehicle

Project design example

Fully automatic camera with tracking function for visible and thermal control of the airspace.

360° direction finding antenna for the detection of drones and drone pilots in real time on the map.

Satellite antenna for internet connections or connection to other racks or locations.

Northfinder and LTE antenna (4G/5G)

Everything is possible!

Use a radar in addition to the passive RF detector.

Complete command center equipment with 4 UHD displays and 2 fully adjustable seats that can be rotated 180°.
Use the radio station to stay in touch with the field team.

19 inch racks for PCs and other electronic components and a generator for an independent power supply.

AARTOS™ DDS Vehicle Integration

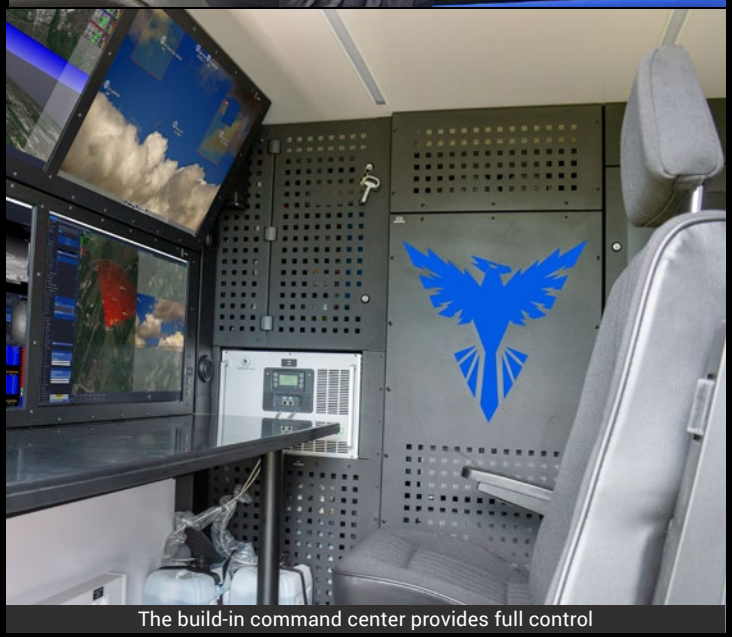
All sensors can be installed in desired vehicles, no matter if van, pickup or truck

The AARTOS™ Drone Detection System is highly flexible and can be integrated into basically any vehicle. Please contact us for further information.

Complete DDS integration in a transporter with RF detection, long range speakers, Northfinder antenna, visual and thermal camera, GPS, air conditioning and more.

Each vehicle project can be tailored to your individual needs

AARTOS™ Shelter Unimog integration



The build-in command center provides full control

Integrable Sensors

Take control of your airspace

IsoLOG 3D DF-160

AARTOS™ Rack

RF Detector (passive)

The most effective method to locate drones and drone pilots is RF detection. Using the IsoLOG® 3D direction finding antenna, a 360° dome-shaped detection area with a range of up to 14 km can be achieved. The RF detector provides real-time all frequency monitoring up to 6 GHz.

Highlights:

- Can track 3G, 4G and 5G drones
- 360°A / 90°E full dome coverage
- Detection range of up to 14 km
- Locates drones, swarms and drone operators
- High-performance specialized software

Available AARTOS™ versions:

AARTOS™ AARONIA DRONE DETECTION X1

AARTOS™ AARONIA DRONE DETECTION X9

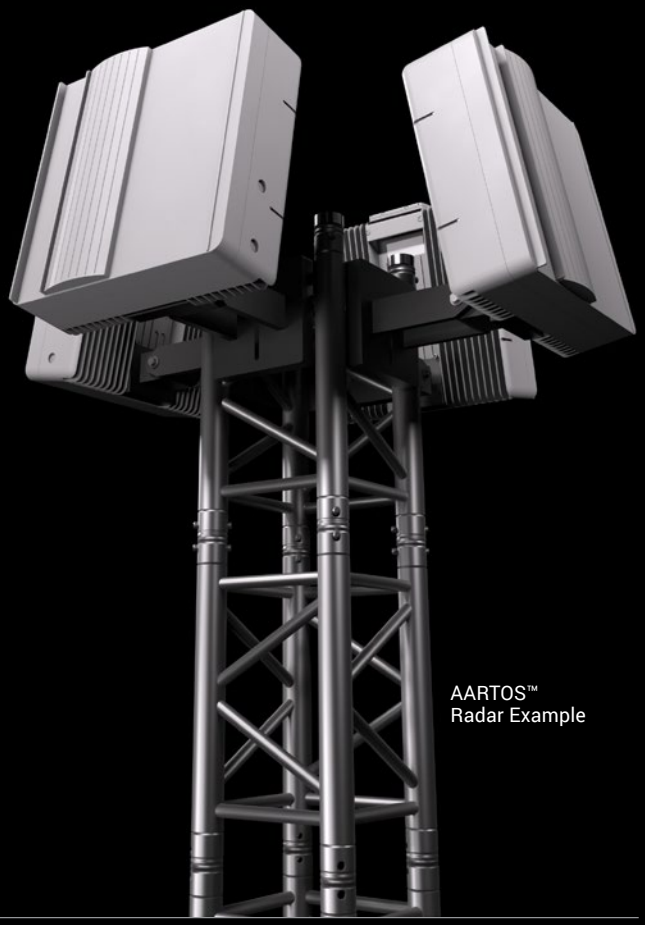
Radars (active)

The AARTOS™ Long Range Radars can automatically determine and display the exact position, flight direction, altitude, speed and classification of an inbound drone. All target flight routes are shown in real-time and in 3D.

Depending on the radar it can distinguish between birds, fixedwing and propeller drones. Multiple alarm areas can be configured.

Highlights:

- 8 km range
- 360° coverage
- 0,1° accuracy
- Locates drones, swarms, and drone operators
- Can distinguish drones from birds and other non-threats



AARTOS™
Radar Example

Integrable Sensors

Take control of your airspace

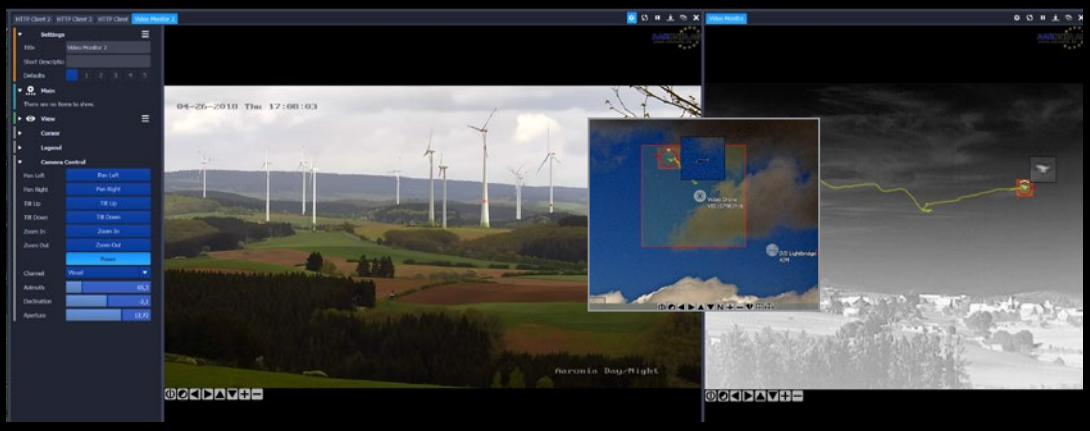
AARTOS™
Camera Examples

Visual and Thermal Cameras

These fully integrable solutions for optical and thermal detection of drones is perfectly aligned with the AARTOS™ RF detection mechanisms. With the AARTOS™ Cam, the user can see the detected drones even from a great distance and identify potentially dangerous payloads attached to the drone, such as explosives.

Highlights:

- Day/Night 360° auto target tracking
- PTZ or 360° panorama camera capabilities up to 160 MP
- Detection verification through single or multiple cameras
- Scaleable system that can be customized to the specific requirement and budget



Anti Drone Jammers

We offer a wide range of jammers for drone defense with an extremely high range of up to 10 km. With up to 800 W output power and a programmable frequency range up to 6 GHz these jammers get rid of any drone.

Fully integrated & automatic programmable 360° versions are available.

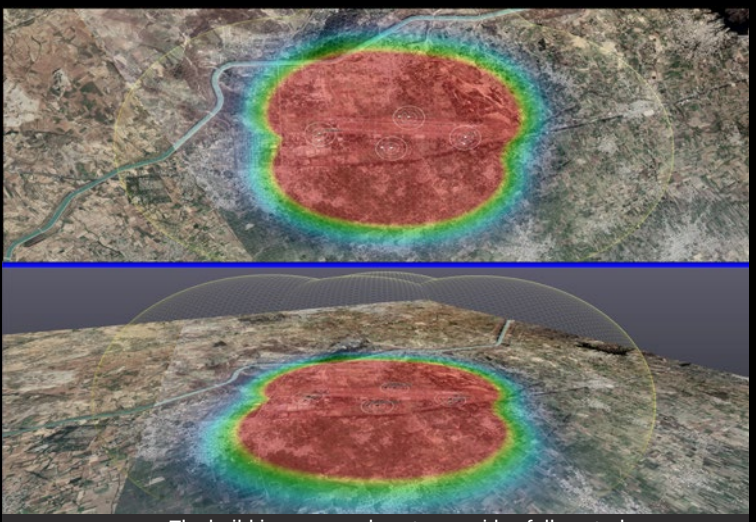
Highlights:

- 10 km range
- Can jam ALL drones within the given frequency range
- Fully programmable frequency range / bands
- 360° ALL frequency directional jammer
- Targeted jamming (automatic or manual)

AARTOS™
jammer example

Command and Control Software

Efficient drone detection supported by an intuitive user interface



The build-in command center provides full control.

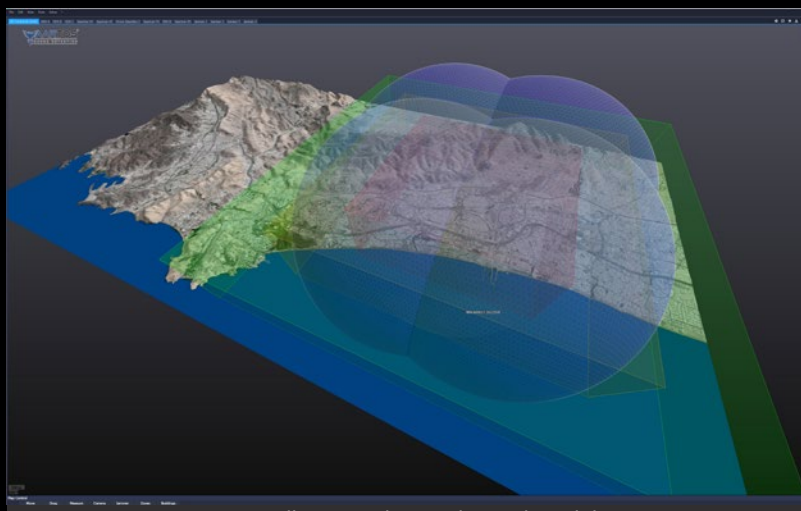
2D Top-Down & 3D View

The top-down 2D perspective is the most commonly used approach for drone detection visualization. Clearly structured, this approach is easy to navigate and is similar to the most common satellite-image based map tools.

The 3D view expands on the 2D approach by adding the drone's altitude information (this mode requires multiple drone detection systems). In addition, the 3D view makes it easier to evaluate distances between different objects on the map.

3D Topographic View

The topographic mode displays the surrounding terrain's surface, depicting; hills, mountains, peaks and valleys. Combined with our 3D building system that includes man-made structures, the topographic view creates the most accurate representation of the surrounding area.



Users can tilt, turn and zoom the GIS in real time

Realistic view of an airport using 3D models

Advanced 3D Model View

The 3D view is able to integrate 3D models of complex areas (e.g. cities, airports, etc.), greatly improving the usability of the AARTOS™ drone detection system for end users.

Command and Control Software

Software specially adapted to the AARTOS™ hardware

AI-based Camera Tracking

One highlight of the RTSA-Suite PRO software is the optical target tracking via PTZ camera(s). The integrated, AI-based, real-time target recognition allows several targets to be tracked simultaneously. While our optical triangulation calculates the exact GPS position of the target.

Radar-Integration in 3D

An integrated radar and the targets determined by the RF detector are displayed to the user. At the same time, a visual classification (birds, people, car, drone, unknown) is made.

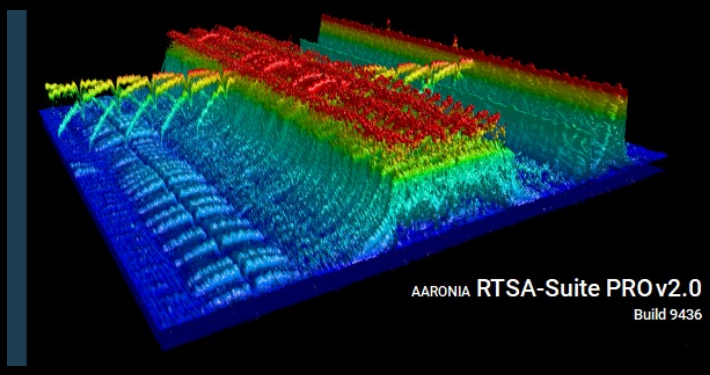
Jammer Setups

In vehicles, installed jammers can be seamlessly integrated into the full system. Each antenna or sector of the jammer can be assigned an individual propagation diagram. This cone can be defined both two-dimensionally and three-dimensionally. When the jammer is activated, the corresponding cone/sector is animated. Enabling the best possible visualization on the tactical display.

RTSA-Suite PRO Software

Get more information about RTSA-Suite PRO Software:

www.drone-detection-system.com/rtsa



Integratable Add-ons

Getting more control with our stable, remote access radio station and loudspeaker

Parabolic Antenna

Radio Relay

AARTOS™ Long Range Speaker

Northfinder

There are many ways to equip a vehicle for use against drones. In addition, for practical purposes, it is advisable in most cases to include a few more features:

For example, an integrated radio station can be very useful to stay in contact with your field team.

To contact a drone pilot or others in case of an emergency or to transmit warnings, it is possible to integrate an AARTOS™ Long Range Speaker into your system. With this 360° speaker system, you can broadcast audio at a distance of up to 2 km.

5G, 4G or satellite antennas can be installed for a fast and secure Internet connection.

A built-in northfinder can provide high precision position data (GPS, Galileo, GLONASS, QZSS, SOG, COG and ROT) with a heading accuracy of 0.4°, three-axis speed monitoring, and immunity to interference.

Our specially developed RTSA-Suite PRO software, which is unbeatable in combination with our hardware, is decisive for excellent detection results.

With this software it is possible to automatically track drones and drone pilots, set up alarm zones and combine RF detection, radar, camera etc. in a reliable and meaningful way.

Please contact us for further information:

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Phone: 06556-900310

HUNDREDS OF INSTALLATIONS **WORLDWIDE**

AARONIA AG
WWW.AARONIA.DE

CUSTOMER GROUPS

- Military & police forces (ground & air)
- Convoys
- Airports
- Power plants
- VIP security services
- Border patrols
- Government buildings (e.g. embassies, correctional facilities)
- Events (concerts, political events, sports etc.)
- Seaports / marinas
- Private properties

AARTOS™ DDS

REFERENCES

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