



RRS184-1A

ELVIRA® Drone Detection Radar

PURPOSE-BUILT TO DETECT DRONES

ELVIRA® combines smart software, with affordable radar, and is built explicitly for drone detection and tracking. For early warning of incoming drones, you need radar. Simply put, no other sensor technology has a wider coverage area than radar. With 360° coverage, ELVIRA® provides you with early warning of approaching drones, in all directions, giving you precious time to react.

The ability to detect drones in the distance is not enough though. Drone detection systems need to work in low visibility conditions, and in urban environments full of obstacles, moving objects, and a just about infinite amount of wireless radio devices.

MULTIPLE TARGETS AND DRONE SWARMS

Drones can be pre-programmed for autonomous flight with no operator and can approach in swarms. Any drone detection system should, therefore, be capable of detecting multiple targets simultaneously. And they should not rely on the drone and controller radio signals, which are only present when the drone is actively controlled.

DRONES NOT BIRDS

Last but not least, any drone detector needs to distinguish drones from other moving objects, like birds, to avoid false alarms.

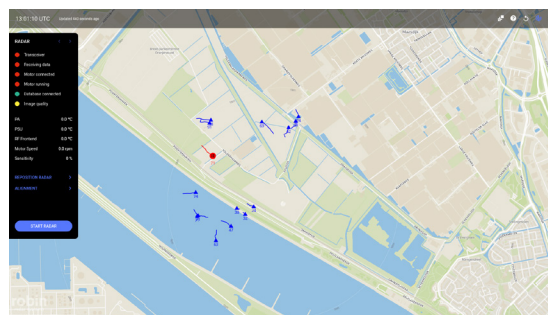
ELVIRA® is our purpose-built drone detection radar, specifically designed to meet all of these challenges.

EASY INTEGRATION

You can integrate ELVIRA®'s tracks and alarms as a layer in your own existing, or 3rd party, security systems and Command and Control (C2) systems. A simple XML broadcast-based interface is included with ELVIRA® as standard. Other protocols, like ASTERIX, are available on request.

MICRO-DOPPLER CLASSIFICATION

The radar's micro-Doppler capability provides the necessary confirmation that a target has mechanical propulsion.



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CAMERA INTEGRATION

Users typically require a visual picture of the target to take further action. ELVIRA® can be equipped with a high-resolution pan-tilt-zoom (PTZ) camera for visual confirmation of the target. When a drone is detected, the camera zooms into its direction for a controller to acquire an image and report details.

WHAT'S INCLUDED

ELVIRA® comes as a complete radar system including radar antenna, processing station and user interface, breakout box and interconnecting power and network cables. The processing station and user interface is available as a laptop, rugged laptop, or 19" rack server.

- Radar Antenna
- Processing Station / User Interface
- Breakout Box
- Cables (Interconnector, power, network)
- Hoisting Attachment
- User Manual
- Certificates

ELVIRA® comes with an optional foot mount. It can also be mounted on a mast.

SPECIFICATIONS

Technology	FMCW, Solid State
Standard Frequency	9650 MHz (X-Band)
Alternative Frequencies	8700, 8900, 9225 MHz*
Power (continuous)	4 Watt / 36 dBm
Instrumented Range	< 5 km
Detection Range Micro-UAV	< 2.7 km
Classification Range Micro-UAV	1.1 km
Main Beam Width	10 ° x 10 °
Azimuth Resolution	1 °
Range Resolution	6.4m
Azimuth Coverage	360 degrees
Elevation Coverage	10 ° (-5 ° -to + 17 °, adjustable)
Track While Scan	Yes
Rotation / Scan Speed	45rpm / Update Rate 0.75 Hz
Classification Method	Micro-Doppler
Dimensions (DxH)	918mm x 1060mm (excl. foot)
Weight	72kg (excl. foot mount, connector, and laptop)
Power	100-240VAC, 50-60Hz, 70W nom, 150W max
Communication	Ethernet, 1000Base-T
Operational Temperature	-20°C to +55°C

NONE OF US IS AS SMART AS ALL OF US

We believe in the power of cooperation between companies, based on the integration of modular systems. ELVIRA® is designed to be the preferred primary radar within a 'system of systems'. ELVIRA® is ready for integration with other detection systems, existing command centres and new forms of intervention.



ELVIRA® comes as a complete radar system including radar antenna, processing station and user interface. It can be controlled with the supplied computer-based software program, web app, or your own C2 system.

