

INSURGENT COMBAT 20 KM DUAL RADAR SYSTEM



Tactical Innovation Artificial Intelligence

- Highest technical advantage for drone combat and insurgent attack.
- Prevent attack from multiple drones from land and air at the same time.
- Detects locations of drones, drone operators and insurgent approach.

Viseum AiRadar Counter Drone System is a versatile tactical 3D radar system that provides unparalleled situational awareness. Viseum AiRadar uses Viseum's deep learning AI software algorithms to detect, track and geo-locate drones that all other radar systems cannot detect. Viseum AiRadar also simultaneously detects terrestrial targets. Viseum AiRadar is a rugged all-weather IP66 solid state radar designed for military and other mission-critical applications.

Contact us on +44 (0)1322 405724 or visit <https://www.iseum.co.uk>

Viseum IMCs have been granted 20 years' patent protection

Any non-Viseum branded IMC system will be noticeably inferior and an illegal copy in breach of International Law

Patent Portfolio - European EP 1 579 399 | United States of America US 7,952,608 B2





Viseum Counter Drone System

Viseum AiRadar uses the latest K_u pulse-Doppler technology that has been optimized for long-range detection even when targets are moving very slowly to avoid detection. The K_u band utilizes 12–18 GHz frequencies resulting in superior range compared to traditional C and X-band radars and is very resistant to radar clutter, resulting in lower false alarm rates. Viseum AiRadar functions even in bad weather and through light foliage like tall grass, camo nets, etc. This allows for detection of targets that would likely go undetected using just imaging technologies such as thermal, visible, SWIR, NIR, NVG, etc.

360° Degree Air to Ground AiRadar

All other radars detect aerial targets but only offer 20° of vertical coverage meaning you can't effectively monitor air and ground targets at the same time. Viseum AiRadar offers either 40° or 120° vertical angles allowing it to detect ground and aerial targets simultaneously.

Viseum AiRadar is a true solid state radar with no moving parts, making it more robust and reliable than traditional antenna radars that rely on a rotator.

Key Features:

- › Temporary vehicle or fixed permanent deployments.
- › Powerful sensor sees day or night in all weather conditions.
- › Detect threats through smoke, dust, clouds and fog.
- › Effective 3D radar modeling to detect and track objects with precision.
- › Ignores non-threat objects such as birds.
- › Simple and intuitive interface designed for ease and speed.
- › High resolution for precise GPS coordinates at long range.
- › Up to 120° vertical angle allows for true detection of aerial targets.

Applications:

- | | |
|----------------------------|-------------------------------|
| › Force Protection. | › Military Compound. |
| › Vehicle Deployment. | › Attack Reconnaissance. |
| › Critical Infrastructure. | › 360° Situational Awareness. |
| › Perimeter Security. | › Oil & Gas Pipelines. |
| › Border Surveillance. | › Homeland Security. |



K_u Band Solid State Radar.



Drone Location Detection 4 km, Jamming 6 km, Direction 10 km.
Person Location Detection 12 km, Vehicle Location Detection 20 km.



Target Positioning.



Mobile Portability.



No ITAR Restrictions.

Contact us on +44 (0)1322 405724 or visit <https://www.viseum.co.uk>

Viseum IMCs have been granted 20 years' patent protection

Any non-Viseum branded IMC system will be noticeably inferior and an illegal copy in breach of International Law

Patent Portfolio - European EP 1 579 399 | United States of America US 7,952,608 B2



Intelligent Embedded AiRadar Processing

The Viseum AiRadar has highly accurate long-range detection, and the Viseum iVOS Software has excellent processing analytics to provide detailed information on the target, such as size, speed, bearing and GPS position. It supports user-defined zones of interest and exclusions that allow for automated monitoring or customized events and triggers. With this operator assisted operation, a 1- or 2-person team is able to manage many multiples of remote sites.

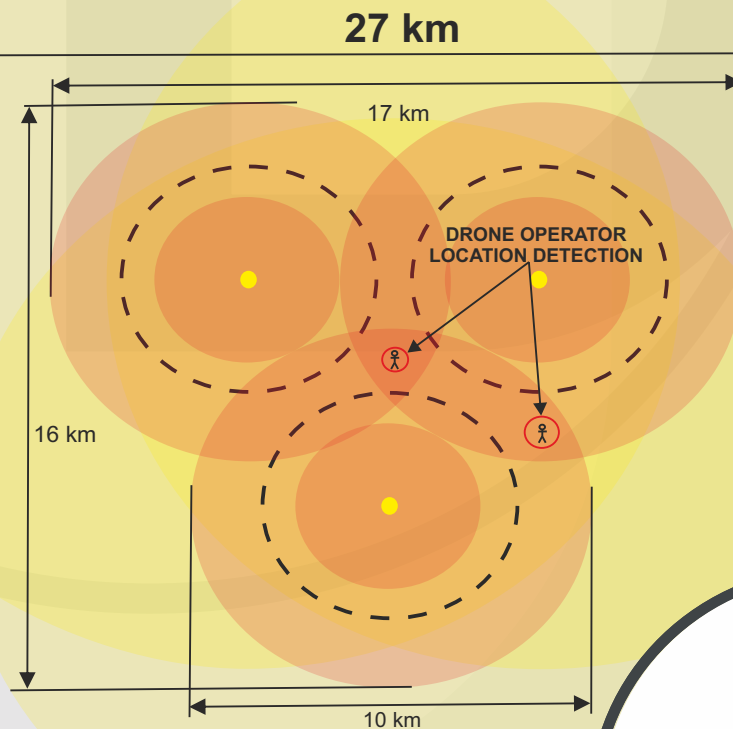
Viseum IMC Auto-Tracking

The Viseum AiRadar can be used as a standalone solution or it can be integrated with long-range thermal and visible zoom cameras. Targets detected by Viseum AiRadar in zones of interest or can be automatically centred on the PTZ camera to provide recognition and identification. The Viseum AiRadar provides real-time GPS coordinates to the PTZ cameras for automated tracking of targets, so that if a target moves out of range of one camera it can be picked up by the next camera, providing seamless target recognition and identification, day or night.



Drone Operator Location Detection - Multiple Deployments Example

Overlapping multiple deployments will also detect drone operator locations with greater accuracy. As a popular deployment this diagram shows just 3 x Viseum AiRadar systems protecting an area the size of 550 km². When the alarm is raised from a remote location, Viseum AiRadars are rapidly deployed on vehicles to protect many 100's of remote sites from attack from both land and air.

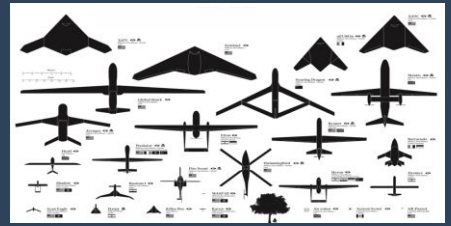


IP Digital Communications

The Viseum AiRadar is a completely digital solution that communicates highly secure using TCIP over RJ45 LAN or WAN (wired or wireless) network. This future-proofed design streamlines the integration and installation process with the Viseum CiVMS, and other third party systems.

Operation Frequency	K _u Band
Performance	
Drone Detection Coverage (0.1 m ² RCS)	10 km early warning, 4 km location.
Person Detection Coverage (1 m ² RCS)	12 km
Vehicle Detection Coverage (10 m ² RCS)	20 km
Drone Jamming Coverage (0.1 m ² RCS)	6 km
Elevation and Azimuth Field of View	120° (±2°)
General	
Power Consumption	<350 W Peak (18–36 V)
Weight	15.6 kg
Dimensions	588 mm × 960 mm × 507 mm
Environmental Certifications	IP66

Note - Radar Cross Section (RCS)



MILITARY GRADE SECURITY

“Outstanding performance” (Senior Officer RAF)

“If I had this tactical advantage during the war I would have saved lives and money.”
 (City Governor Middle East Warzone)

The technical performance and reliability of Viseum's intelligent surveillance solutions, gives the most effective, easily set up and used detection systems.

Contact us on +44 (0)1322 405724 or visit www.viseum.co.uk

Viseum IMCs have been granted 20 years patent protection

Any non-Viseum branded IMC system will be noticeably inferior and an illegal copy in breach of International Law

Patent Portfolio - European EP 1 579 399 | United States of America US 7,952,608 B2

