



DRONE DETECTION FOR CRITICAL INFRASTRUCTURE PROTECTION

SCANTER SPHERA – 3D DRONE DETECTION RADAR



TERMA[®]
ALLIES IN INNOVATION



Drones are no longer a military-only threat. Today, they pose serious risks to critical civil infrastructure worldwide. Small, fast, and flying below traditional radar coverage, drones are used for surveillance, sabotage, smuggling, and attacks on vital assets like airports, energy plants, offshore wind farms, seaports, and VIP facilities.

Legacy systems, built for perimeter intrusions or large airborne threats, struggle to detect these small, slow, and evasive targets. As drone technology becomes more accessible, the challenge isn't just detecting one – it's detecting all threats early enough to respond.

SCANTER Sphera is a 3D radar built specifically for that challenge. Delivering unmatched precision and detection range, it enables you to detect, classify, and act – before the threat breaches your defenses.

Seconds Count. SCANTER Sphera Delivers.

When drones approach your critical site, every second matters. SCANTER Sphera gives you the confidence that no drones will approach your site undetected.

Longer detection range
= Improved response time

Accurate classification
= Low false alarm rate

Real-time tracking
= Timely action

Small target separation
= Superior situational awareness

Automated reporting
= Accurate informing, solid investigation

Whether it's a single reconnaissance drone near a VIP facility or a coordinated drone incursion over an energy site, SCANTER Sphera ensures your operators see the threat early – and respond before it's too late.

With pulse-based architecture, SCANTER Sphera is naturally resilient to jamming and electromagnetic interference, ensuring reliable performance even in crowded environments like airports, ports, and offshore facilities.



**SECONDS MATTER.
FULL SITUATIONAL
AWARENESS IN REAL TIME.**

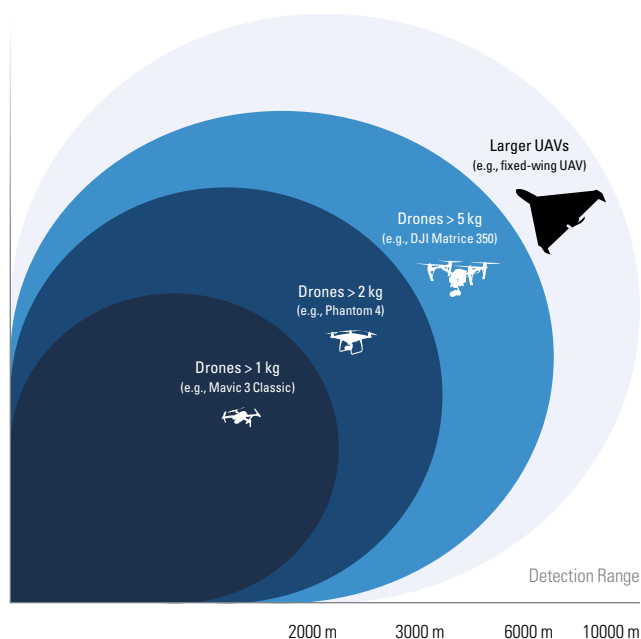
Purpose-Built for Modern Infrastructure Security

The SCANTER Sphera 3D drone detection radar is not a repurposed battlefield system. It's specifically designed for today's evolving threats across civil sectors, with lessons learned from the most complex operational environments:

- 360° seamless 3D detection over land and sea
- Simultaneous tracking of multiple drone types, even in swarms
- AI-based classification using micro-Doppler and kinematic signatures
- All-weather, day-and-night operational capability

At its core is a software-defined radar platform, enabling continuous updates and mission-specific tuning. Adjust detection profiles, load new threat models, and evolve your security posture – without replacing hardware.

SCANTER Sphera extends your reaction window. With up to **50% longer detection range** than comparable systems and the ability to integrate multiple radars, SCANTER Sphera buys your security teams the time they need to assess, act, and secure the site before incidents escalate.





Low Maintenance. Scale Easily. Trust Completely.

SCANTER Sphera is built for real-world critical infrastructure protection. It requires a minimum of maintenance and scales seamlessly from a single radar to a full network of sensors across your site.

The system integrates via industry-standard interfaces, making it easy to plug into existing security ecosystems, command centers, or into our own C2 system, T.react CIP. Whether for a fixed wind farm installation, a sprawling airport, a busy seaport, or a sensitive government site, SCANTER Sphera adapts to your operational reality.

With its exceptional build quality and low-maintenance design, the radar delivers high uptime in even the harshest environments.

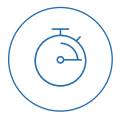
With the SCANTER Sphera, you stay operational, flexible, and always one step ahead.

Key Benefits of SCANTER Sphera



High detection confidence

Reliable AI-based tracking of small, low-flying drones



Fast response time

Act in seconds, not minutes



Resilient performance

Jamming-resistant in complex environments



Mission-set configuration

Adapt detection profiles to specific sites and needs



Easy integration

Works with existing security systems, including T.react CIP from Terma



Full-area coverage

360° 3D situational awareness over land and sea



Technical Specifications

Technology	3D pulsed Doppler radar advanced digital beamforming
Frequency band	X-band
Instrumented/Detection/classification range	10 km / 6 km/ 3 km (target size: NATO Mini) 10 km/ 3.1 km/ 1.9 km (target size: NATO Micro)
Update rate	Down to 1 sec.
Elevation coverage	> 65 deg
Classification method	Multi method classification employing AI based on Micro-Doppler and Kinematics
Tracking method	Multi Hypothesis Tracking
Number of concurrent tracks	250

Data interface	ASTERIX CAT48 (extended with classification)
Physical dimensions	600 mm x 750 mm (upmast equipment)
Weight	40 kg (upmast)
Ambient temperature	-32 deg. to +60 deg. (upmast)
Power consumption	200 W (upmast equipment)
Situational display	Terma TrackViewer • 20 GIS • Target tracking • Alarm Zones • Record/ replay
Multi-radar setup	Up to 8 fused radars

Enhance Situational Awareness with T.react CIP

For sites requiring full sensor fusion and coordinated response management, the SCANTER Sphera integrates seamlessly with the T.react CIP.

T.react CIP is Terma's intelligent Command and Control platform, designed to unify input from multiple sensors – radar, cameras, RF detectors, access control, and more – into one operational picture.

It automates threat prioritization, accelerates operator response, and enables real-time incident tracking and reporting. Together, SCANTER Sphera and T.react CIP provide unmatched situational awareness and layered defense against threats from air, land, and sea.

Stay Ahead, Stay Operational

When drones or intruders target your critical infrastructure, the clock is already ticking. SCANTER Sphera gives you the seconds you need to respond – and the confidence that your protection system will not let you down.

It's not just about seeing the threat.
It's about securing your operations in time.

SCANTER Sphera. Fast, reliable, ready.



Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. Our dedicated and talented global workforce develops and manufactures mission-critical products and solutions that meet rigorous customer requirements.

At Terma, we believe in the premise that creating customer value is not just about strong engineering and manufacturing skills. It is also about being able to apply these skills in the context of our customers' specific needs. Only through close collaboration and dialog can we deliver a level of partnership and integration unmatched in the industry.

Our business activities, products, and systems include: command and control systems; radar systems; self-protection systems for ships and aircraft; space technology; and advanced aerostructures for the aircraft industry.

Terma has decades of hands-on know-how in supporting and maintaining mission-critical systems in some of the world's most hostile areas. Terma Support & Services offers through-life support of all our products to maximize operational availability, enhance platform lifetime, and ensure the best possible cost of ownership.

Headquartered in Aarhus, Denmark, Terma has subsidiaries and operations across Europe, in the Middle East, in Asia Pacific as well as a wholly-owned U.S. subsidiary, Terma Inc., with offices in Washington D.C., Georgia, and Texas.

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